

CURRICULUM– Professor Pietro Liò

Personal Information

Current Position (University of Cambridge):	Full Professor of Computational Biology (Band 2), Dept of Computer Science and Technology, Faculty of Technology, University of Cambridge
Current Position (Sapienza University):	Full Professor, Dept of Computer, Control and Management Engineering Antonio Ruberti (DIAG), Sapienza University (Rome)
Other Affiliations:	Cambridge Center for AI in Medicine (CCAIM); Fellow and Council Member at Clare Hall College, Cambridge
Contact:	pl219@cam.ac.uk lio@diag.uniroma1.it pietro.lio@uniroma1.it +39 3343696809 +447535874203

Career Summary

Full Professor of Computational Biology (2018); Reader (Associate Professor) (2013); Senior Lecturer (2007); Lecturer in Bioinformatics Algorithms (2004); Director of Studies in Computer Science, Fitzwilliam College (2004–2014). Prior appointments: Research Associate, European Bioinformatics Institute (2002); Research Associate, Dept of Genetics, University of Cambridge (1998–2001); Research Associate in Statistical Epidemiology, Princess Anne Hospital, University of Southampton (1996–1997). Visiting (University of Texas, 2002; Toronto University and Fields Institute, 2004).

Education

PhD (Dottorato) in Nonlinear Dynamics and Complex Systems (U. Firenze); PhD (Dottorato) in Genetics (U. Pavia), MA (Cambridge), undergrad studies of Biology and Electronic Engineering (U. Firenze, 1991-). Currently listed for a Science Doctorate (Sc.D, Cambridge).

Research Interests

Research aims at developing Artificial Intelligence methodology with a focus on the integration of geometric and topological deep learning with large language models and diffusion models. Areas of interest are structure-based molecular design, multi-omics data integration, systems biology, and personalised and precision medicine, biological mechanism discovery and clinical translation.

Honours and Awards

IEEE TCCH Research Innovation Award (2025) • Various Best Paper Awards at top AI conference, for example: ECAI 2025, W3PHIAI-2023, AIAI 2020 • Turing Lecture, Queen's University Belfast (2024) • Turing Lecture, Teesside University (2023) • Fellow of the Academia Europaea (2021) • Fellow of ELLIS – European Lab for Learning & Intelligent Systems (2019) • Fellow of the Asia-Pacific Artificial Intelligence Association (2022) • Listed in Top Italian Scientists (Computer Sciences) • Erdős number: 3

Publications

ORCID: 0000-0001-8956-9815; >700 publications and research outputs | Google Scholar H-index: 97 | >90,00 citations (accessed July 2026) | scholar.google.com/citations?user=4YhNJBEEAAA. Various publications every year at main AI conferences (Neurips, ICLR, ICML, etc).

Highly Cited: Veličković et al., Graph Attention Networks, ICLR 2018 (>23,800 cit.) • Veličković et al., Deep Graph Infomax, ICLR 2019 (>3,700) • Wilson et al., Hematopoietic stem cells, Cell 135(6), 2008 (>2,400) • Roberts et al., ML pitfalls for COVID-19, Nat Mach Intell 3(3), 2021 (>1,100) • Corso et al., Principal Neighbourhood Aggregation, NeurIPS 2020 (>1,000 citations).

Teaching and Supervision (Cambridge)

Courses: Bioinformatics (Part II, Michaelmas) • Geometric Deep Learning (MPhil in Advanced Computing Studies- ACS) • AI and Neurophysiology (MPhil ACS, Easter) • Supervision: 53 PhD students completed, 8 current; co-superv.: 3; >50 MPhil students; >100 Part II/III.

Teaching and Supervision (Sapienza)

Medicine High Technology (HT) course, Policlinico – Università La Sapienza; Supervision (also Co-): 4 Doctorate students (current).

Keynote Talks and Invited (selection)

Distinguished Lecture Series HKU (2026); ACM BCB (2026), World Conference on AI (Shanghai), BiBM 2024 (Lisbon) • GPAI, Global Partnership for AI (Belgrade, 2024) • LOGM (London, 2024) • IEEE CIBCB 2023 (Eindhoven) • OxML 2023 (Oxford) • GSP 2023 (Oxford) • BPAI 2023 (Florence) • BBCC (Naples, 2023) • IEEE AllIoT 2023 • ShanghaiTech SIST Distinguished Lecture, Jiao Tong U. (2022) • MIET 2022 (Bangladesh, plenary) • BPAI 2022 (Florence) • CMBE 2021 (Politecnico Milan) • ICDCN (Kolkata, 2020); Nobel and AI (U. Bicocca, Milano, 2024) • U. Bocconi (Milano, 2024) • AI4H (Padova, 2024) • Turing Institute hypergraphs workshop (2024) • DeepLearning 2023 (Trento) • WIRN 2023 (Vietri) • IEEE MetroLivEnv 2023 (Milano) • Pujiang Innovation Forum (2023) • Physics of Life (Harrogate, 2023) • LARGR, Inria/U. de Lille (2023) • Next Generation Internet, EU (Brussels, 2021) • Future Computing and Networks (Changchun, 2021) • Inst. Picone, Rome (2021).

Current Research Funding

AI and Math, Philanthropic AI (2025–27) • DORIAN GRAY: cognitive impairment prevention in cardiovascular patients, Horizon Europe (2024–28) • WISDOM: chronic immune disease data integration, Horizon Europe (2024–28) • TROPY: ultrafast holographic FTIR microscopy, Horizon Europe (2022–26) • CHARM: coherent Raman imaging for precision medicine, Horizon Europe (2024–28) • GO-Ds21: gene overdosage in Down syndrome, Horizon Europe (2020–25) • PhD fellowships sponsored by G-research, AstraZeneca, GSK (2024–28) • Postdoctoral position, Astex/Milner Therapeutics (2025–27).

Academic Service

Cambridge: Faculty Board, Cambridge CST (2021–23) • C2D3 Steering Committee (2018–) • Degree and MPhil Examiner (2010–24); various Professorship panels incl. DeepMind, Wearable Computing (2019–2025) • International: AI Advisor, GSK (2023–24) • Advisory Panel, Pasteur Institute (2023) • Joint Advisory Panel Canada–Italy AI for Medicine (2026), Science Foundation Ireland (2023) • Various Professorship panels. • Various MPhil External Examiner, U. Newcastle (2018–21).

Outreach and Public

Festival della Scienza, Genova (2025) • Asclepio (2025), Schmidt Data For Science programme • TEDxCambridge: AI and Medicine (2020) • Sutton Trust Summer School – unprivileged students- (2021–23); AI Summer schools at Girton and Homerton Colleges (Cambridge; 2023–2026) • AI SIG, Clare Hall College (2022–24) • Computing schools x Kids • Various articles for the Italian edition of Scientific American.

PUBLICATIONS

Journal articles and periodicals

Ordered by year (descending), then first author and title.

1. Bagnoli, F., Cvetković, T. J., Guazzini, A., Liò, P., & Romei, R. (2026). Modeling the Spreading of Fake News Through the Interactions Between Human Heuristics and Recommender Systems. *Information*, 17(4), 314. [doi:10.3390/info17040314](https://doi.org/10.3390/info17040314)
2. Belcastro, L., Carlucci, C., Cosentino, C., Liò, P., & Marozzo, F. (2026). Enhancing network security using knowledge graphs and large language models for explainable threat detection. *Future Generation Computer Systems*, 176, 108160. [doi:10.1016/j.future.2025.108160](https://doi.org/10.1016/j.future.2025.108160)
3. Ceccarelli, F., Liò, P., Saez-Rodriguez, J., Holden, S. B., & Tanevski, J. (2026). Topography-aware optimal transport for alignment of spatial omics data.. *Cell Rep Methods*, 6(4), 101373. [doi:10.1016/j.crmeth.2026.101373](https://doi.org/10.1016/j.crmeth.2026.101373)
4. Cosentino, C., Gatto, S., Liò, P., & Marozzo, F. (2026). Machine Unlearning: A Perspective, Taxonomy, and Benchmark Evaluation. *Future Internet*, 18(3), 174. [doi:10.3390/fi18030174](https://doi.org/10.3390/fi18030174)
5. Ebrahimi, A., Wiil, U. K., Olsson, T., Liò, P., Kockum, I., Manouchehrinia, A., & Kiani, N. A. (2026). A susceptibility network analysis of disease trajectories leading to multiple sclerosis: A nationwide cohort study.. *Mult Scler*, 13524585261421480. [doi:10.1177/13524585261421480](https://doi.org/10.1177/13524585261421480)
6. Lawrence, E., El-Shazly, A., Seal, S., Joshi, C. K., Liò, P., Bender, A., . . . Greenig, M. (2026). Understanding Biology with Machine Learning: Compression, Intelligibility, and Dependency. *Artificial Intelligence in the Life Sciences*, 100161. [doi:10.1016/j.ailsci.2026.100161](https://doi.org/10.1016/j.ailsci.2026.100161)
7. Li, S., Liò, P., Li, X., Liu, B., & Peng, C. (2026). AutoHGNN: Robust and efficient neural architecture search for hypergraph neural networks. *Knowledge-Based Systems*, 116609. [doi:10.1016/j.knosys.2026.116609](https://doi.org/10.1016/j.knosys.2026.116609)
8. Li, X., Liò, P., Yang, L., Ye, Z., & Peng, C. (2026). Adaptive meta-path-based neural network architecture search for heterogeneous graphs. *Information Sciences*, 751, 123554. [doi:10.1016/j.ins.2026.123554](https://doi.org/10.1016/j.ins.2026.123554)
9. Lomoio, U., Liò, P., Guzzi, P. H., & Veltri, P. (2026). Bidirectional Mamba-2 boosts EEG super-resolution via regression and diffusion.. *Bioinformatics*, 42(5). [doi:10.1093/bioinformatics/btag169](https://doi.org/10.1093/bioinformatics/btag169)
10. Marinoni, A., Liò, P., Barp, A., & Girolami, M. (2026). Improving Embedding of Graphs With Missing Data by Soft Manifolds.. *IEEE Trans Pattern Anal Mach Intell*, 48(3), 2221-2235. [doi:10.1109/TPAMI.2025.3627795](https://doi.org/10.1109/TPAMI.2025.3627795)
11. Purificato, A., Cassarà, G., Siciliano, F., Liò, P., & Silvestri, F. (2026). Sheaf4Rec: Sheaf Neural Networks for Graph-based Recommender Systems. *ACM Transactions on Recommender Systems*, 4(2), 1-26. [doi:10.1145/3742898](https://doi.org/10.1145/3742898)
12. Rowbottom, J., Fresca, S., Liò, P., Schönlieb, C. -B., & Boullé, N. (2026). Multi-Level Monte Carlo training of neural operators. *Computer Methods in Applied Mechanics and Engineering*, 453, 118800. [doi:10.1016/j.cma.2026.118800](https://doi.org/10.1016/j.cma.2026.118800)
13. Su, F., Lai, M. C., Wu, T., Huang, W., Morzy, J., Mahadevegowda, A., Cooper, S., Liò, P., & Ducati, C. (2026). DecurtainNet: A Deep Learning Model and Large-Scale Dataset for Fast Curtaining Artefact Feature Removal in Electron Microscopy. *Nature Portfolio*. <https://doi.org/10.17863/CAM.132427>
14. Vonessen, C., Harris, C., Cretu, M., & Liò, P. (2026). TABASCO: A Fast, Simplified Model for Molecular Generation with Improved Physical Quality. *Transactions on Machine Learning Research*, 2026.
15. Wang, P., Lu, X., Bian, C., & Liò, P. (2026). DVFL: A Lightweight Verifiable Federated Learning System With Dynamic Obfuscation for Resource-Constrained IoT Devices. *IEEE Internet of Things Journal*, 13(8), 16653-16665. [doi:10.1109/jiot.2026.3660245](https://doi.org/10.1109/jiot.2026.3660245)
16. Yuan, R., Liò, P., Shen, X., & Peng, C. (2026). Defending against link prediction by residual path entropy maximization. *Expert Systems with Applications*, 318, 131942. [doi:10.1016/j.eswa.2026.131942](https://doi.org/10.1016/j.eswa.2026.131942)
17. Zahoor, S., Liò, P., Dias, G., & Hasanuzzaman, M. (2026). Integrating probabilistic trees and causal networks for clinical and epidemiological data.. *Artif Intell Med*, 173, 103350. [doi:10.1016/j.artmed.2026.103350](https://doi.org/10.1016/j.artmed.2026.103350)
18. Zhang, X., Lu, X., Zhao, Y., Li, P., Liò, P., & Hui, P. (2026). MBNAD: A dual-role memory bridge network for multivariate time series anomaly detection. *Neurocomputing*, 697, 134171. [doi:10.1016/j.neucom.2026.134171](https://doi.org/10.1016/j.neucom.2026.134171)
19. Zhang, X., Lu, X., Zhao, Y., Liò, P., & Hui, P. (2026). Position Encoding-Enhanced Adaptive Expansion Graph Attention Network for Anomaly Detection in Multivariate Time Series. *IEEE Internet of Things Journal*, 13(6), 12557-12571. [doi:10.1109/jiot.2026.3651286](https://doi.org/10.1109/jiot.2026.3651286)
20. Anand, R., Joshi, C. K., Morehead, A., Jamsab, A. R., Harris, C., Mathis, S. V., . . . Liò, P. (2025). RNA-FrameFlow: Flow Matching for de novo 3D RNA Backbone Design. *Transactions on Machine Learning Research*, 2025-July.
21. Bali, A., Wolter, S., Pelzel, D., Weyer, U., Azevedo, T., Liò, P., . . . Pertzborn, D. (2025). Real-Time Intraoperative Decision-Making in Head and Neck Tumor Surgery: A Histopathologically Grounded Hyperspectral Imaging and Deep Learning Approach.. *Cancers (Basel)*, 17(10). [doi:10.3390/cancers17101617](https://doi.org/10.3390/cancers17101617)
22. Bi, X., Tang, S., Xiao, B., Li, W., Gao, X., & Liò, P. (2025). A Systematic Review of Heart Sound Detection Algorithms: Experimental Results and Insights. *IEEE Transactions on Instrumentation and Measurement*, 74, 1-16. [doi:10.1109/tim.2025.3547082](https://doi.org/10.1109/tim.2025.3547082)
23. Buterez, D., Janet, J. P., Oglic, D., & Liò, P. (2025). An end-to-end attention-based approach for learning on graphs.. *Nat Commun*, 16(1), 5244. [doi:10.1038/s41467-025-60252-z](https://doi.org/10.1038/s41467-025-60252-z)
24. Capitoli, G., Nobile, M. S., Ambags, E. L., L'Imperio, V., Provenzano, M., & Liò, P. (2025). Assisting clinical diagnosis with interpretable fuzzy probabilistic modelling.. *BMC Med Inform Decis Mak*, 25(Suppl 3), 330. [doi:10.1186/s12911-025-03183-5](https://doi.org/10.1186/s12911-025-03183-5)
25. Daneshfar, F., Abdullah, A. A., Abdar, M., & Liò, P. (2025). UMP-Net: Uncertainty-Aware Mixture of Prompts Network for Efficient Instruction Tuning. *Transactions on Machine Learning Research*, 2025-November.
26. Fiore, P., Terlizzi, A., Bardozzo, F., Liò, P., & Tagliaferri, R. (2025). Advancing label-free cell classification with connectome-inspired explainable models and a novel LIVECell-CLS dataset.. *Comput Biol Med*, 192(Pt B), 110274. [doi:10.1016/j.compbiomed.2025.110274](https://doi.org/10.1016/j.compbiomed.2025.110274)
27. Hasan, M., Abdar, M., Khosravi, A., Aickelin, U., Liò, P., Hossain, I., . . . Nahavandi, S. (2025). Survey on Leveraging Uncertainty Estimation Towards Trustworthy Deep Neural Networks: The Case of Reject Option and Post-training Processing. *ACM Computing Surveys*, 57(9), 1-35. [doi:10.1145/3727633](https://doi.org/10.1145/3727633)
28. Joshi, C. K., Jamsab, A. R., Viñas, R., Harris, C., Mathis, S. V., Morehead, A., . . . Liò, P. (2025). gRNAde: Geometric Deep Learning for 3D RNA inverse design.. Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/38827456>

29. Joubbi, S., Micheli, A., Milazzo, P., Ciano, G., Gagné, S. M., Liò, P., . . . Maccari, G. (2025). Enhancing antibody-antigen interaction prediction with atomic flexibility.. *PLoS Comput Biol*, 21(10), e1013576. [doi:10.1371/journal.pcbi.1013576](https://doi.org/10.1371/journal.pcbi.1013576)
30. Li, K., Liang, Y., Liò, P., Ni, W., Dressler, F., Crowcroft, J., & Akan, O. B. (2025). User Isolation Poisoning on Decentralized Federated Learning: An Adversarial Message-Passing Graph Neural Network Approach.. *IEEE Transactions on Neural Networks and Learning Systems*, PP. [doi:10.1109/TNNLS.2025.3636440](https://doi.org/10.1109/TNNLS.2025.3636440)
31. Lomoio, U., Veltri, P., Guzzi, P. H., & Liò, P. (2025). Design and use of a Denoising Convolutional Autoencoder for reconstructing electrocardiogram signals at super resolution.. *Artif Intell Med*, 160, 103058. [doi:10.1016/j.artmed.2024.103058](https://doi.org/10.1016/j.artmed.2024.103058)
32. Lomoio, U., Carbonari, V., Giorgi, F. M., Ortuso, F., Liò, P., Veltri, P., & Guzzi, P. H. (2025). Integrative structural profiling and ligand optimisation across the transthyretin mutational landscape.. *NPJ Syst Biol Appl*, 11(1), 104. [doi:10.1038/s41540-025-00582-2](https://doi.org/10.1038/s41540-025-00582-2)
33. Longa, A., Azzolin, S., Santin, G., Cencetti, G., Liò, P., Lepri, B., & Passerini, A. (2025). Explaining the Explainers in Graph Neural Networks: a Comparative Study. *ACM Computing Surveys*, 57(5), 1-37. [doi:10.1145/3696444](https://doi.org/10.1145/3696444)
34. Lu, X., Zou, L., Mao, Y., Liò, P., & Hui, P. (2025). RPCE: Dynamic Data Replicas Placement Management by Cloud and Edge Collaboration. *IEEE Transactions on Parallel and Distributed Systems*, 37(2), 548-561. [doi:10.1109/tpds.2025.3627553](https://doi.org/10.1109/tpds.2025.3627553)
35. Mamalakis, M., Mamalakis, A., Agartz, I., Mørch-Johnsen, L. E., Murray, G. K., Suckling, J., & Liò, P. (2025). Solving the enigma: Enhancing faithfulness and comprehensibility in explanations of deep networks. *AI Open*, 6, 70-81. [doi:10.1016/j.aiopen.2025.02.001](https://doi.org/10.1016/j.aiopen.2025.02.001)
36. Orka, N. A., Awal, M. A., Liò, P., Pogrebna, G., Ross, A. G., & Moni, M. A. (2025). Quantum deep learning in neuroinformatics: a systematic review. *Artificial Intelligence Review*, 58(5), 134. [doi:10.1007/s10462-025-11136-7](https://doi.org/10.1007/s10462-025-11136-7)
37. Prinzi, F., Barbiero, P., Greco, C., Amorese, T., Cordasco, G., Liò, P., . . . Esposito, A. (2025). Using AI explainable models and handwriting/drawing tasks for psychological well-being. *Information Systems*, 127, 102465. [doi:10.1016/j.is.2024.102465](https://doi.org/10.1016/j.is.2024.102465)
38. Proverbio, D., Buscemi, A., Di Stefano, A., Han, T. A., Castignani, G., & Liò, P. (2025). Can LLMs effectively provide game-theoretic-based scenarios for cybersecurity?. *Frontiers in Computer Science*, 7, 1703586. [doi:10.3389/fcomp.2025.1703586](https://doi.org/10.3389/fcomp.2025.1703586)
39. Rahman, T., Orka, N. A., Khan, A., Liò, P., & Moni, M. A. (2025). Understanding Neurocognition With Deep Learning and MRI: A Systematic Review. *IEEE Transactions on Cognitive and Developmental Systems*, 18(3), 708-725. [doi:10.1109/tcds.2025.3635161](https://doi.org/10.1109/tcds.2025.3635161)
40. Raisa, R. A., Rodela, A. S., Abu Yousuf, M., Azad, A., Alyami, S. A., Liò, P., . . . Moni, M. A. (2025). Corrections to “Deep and Shallow Learning Model-Based Sleep Apnea Diagnosis Systems: A Comprehensive Study”. *IEEE Access*, 13, 48033. [doi:10.1109/access.2025.3551391](https://doi.org/10.1109/access.2025.3551391)
41. Seong, L. W., Liò, P., Taib, N. A., Ganggayah, M. D., & Dhillon, S. K. (2025). Assessment of transformer-based AI in clinical oncology.. *BMC Med Inform Decis Mak*, 26(1), 18. [doi:10.1186/s12911-025-03306-y](https://doi.org/10.1186/s12911-025-03306-y)
42. Singh, V., Khanzadeh, M., Davis, V., Rush, H., Rossi, E., Shrader, J., & Liò, P. (2025). Bayesian Binary Search. *Algorithms*, 18(8), 452. [doi:10.3390/a18080452](https://doi.org/10.3390/a18080452)
43. Taghizad, N., & Liò, P. (2025). A Systematic Review on Integrating Artificial Intelligence for Enhanced Fault Detection in Power Transmission Systems: A Smart Grid Approach. *Computing&AI Connect*, 2(1), 1. [doi:10.69709/caic.2024.103229](https://doi.org/10.69709/caic.2024.103229)
44. Telyatnikov, L., Bucarelli, M. S., Bernardez, G., Zaghen, O., Scardapane, S., & Liò, P. (2025). Hypergraph Neural Networks through the Lens of Message Passing: A Common Perspective to Homophily and Architecture Design. *Transactions on Machine Learning Research*, 2025-February, 1-48.
45. Wang, R., Tian, Y., Liò, P., & Bianconi, G. (2025). Dirac-equation signal processing: Physics boosts topological machine learning.. *PNAS Nexus*, 4(5), pgaf139. [doi:10.1093/pnasnexus/pgaf139](https://doi.org/10.1093/pnasnexus/pgaf139)
46. Wang, P., Lu, X., & Liò, P. (2025). Research on Privacy Protection Technology of “2+2” Verifiable Federated Learning. *IEEE Internet of Things Journal*, 12(13), 24094-24103. [doi:10.1109/jiot.2025.3554155](https://doi.org/10.1109/jiot.2025.3554155)
47. Yan, C., Lu, X., Liò, P., & Hui, P. (2025). EARVP: Efficient Aggregation for Federated Learning With Robustness, Verifiability, and Privacy. *IEEE Transactions on Information Forensics and Security*, 20, 5936-5951. [doi:10.1109/tifs.2025.3576008](https://doi.org/10.1109/tifs.2025.3576008)
48. Yan, C., Lu, X., Liò, P., Hui, P., & He, D. (2025). Self-Simulation and Meta-Model Aggregation-Based Heterogeneous-Graph-Coupled Federated Learning. *IEEE Internet of Things Journal*, 12(1), 198-212. [doi:10.1109/jiot.2024.3462724](https://doi.org/10.1109/jiot.2024.3462724)
49. Yang, Z., Zhang, G., Wu, J., Yang, J., Peng, H., & Liò, P. (2025). Learning From Graph-Graph Relationship: A New Perspective on Graph-Level Anomaly Detection. *IEEE Transactions on Knowledge and Data Engineering*, 38(1), 428-441. [doi:10.1109/tkde.2025.3618929](https://doi.org/10.1109/tkde.2025.3618929)
50. Yang, Z., Zhang, G., Wu, J., Yang, J., Sheng, Q. Z., Xue, S., . . . Liò, P. (2025). State of the Art and Potentialities of Graph-level Learning. *ACM Computing Surveys*, 57(2), 1-40. [doi:10.1145/3695863](https://doi.org/10.1145/3695863)
51. Zaki, J. K., Tomasik, J., McCune, J. A., Bahn, S., Liò, P., & Scherman, O. A. (2025). Explainable Deep Learning Framework for SERS Bioquantification.. *ACS Sens*, 10(9), 6597-6606. [doi:10.1021/acssensors.5c01058](https://doi.org/10.1021/acssensors.5c01058)
52. Bardozzo, F., Terlizzi, A., Simoncini, C., Liò, P., & Tagliaferri, R. (2024). Elegans-AI: How the connectome of a living organism could model artificial neural networks. *Neurocomputing*, 584, 127598. [doi:10.1016/j.neucom.2024.127598](https://doi.org/10.1016/j.neucom.2024.127598)
53. Barucci, A., Ciacci, G., Liò, P., Azevedo, T., Di CENClo, A., Merella, M., . . . Collareta, A. (2024). An explainable Convolutional Neural Network approach to fossil shark tooth identification. *BOLLETTINO DELLA SOCIETA PALEONTOLOGICA ITALIANA*, 63(3), 215-227. [doi:10.4435/BSPI.2024.15](https://doi.org/10.4435/BSPI.2024.15)
54. Buterez, D., Janet, J. P., Kiddle, S. J., Oglic, D., & Liò, P. (2024). Transfer learning with graph neural networks for improved molecular property prediction in the multi-fidelity setting. *Nature Communications*, 15(1). [doi:10.1038/s41467-024-45566-8](https://doi.org/10.1038/s41467-024-45566-8)
55. Ceccarelli, F., Liò, P., & Holden, S. B. (2024). AnnoGCD: a generalized category discovery framework for automatic cell type annotation.. *NAR Genom Bioinform*, 6(4), lqae166. [doi:10.1093/nargab/lqae166](https://doi.org/10.1093/nargab/lqae166)
56. De Luca, V. M., Longa, A., Liò, P., & Passerini, A. (2024). xAI-Drop: Don't Use What You Cannot Explain. *LEARNING ON GRAPHS CONFERENCE*, 269, 22 pages. Retrieved from https://www.webofscience.com/api/gateway?GWVersion=2&SrcApp=ucam_elements_live&SrcAuth=WosAPI&KeyUT=WOS:001595065300016&DestLinkType=FullRecord&DestApp=WOS_CPL
57. Defilippo, A., Veltri, P., Liò, P., & Guzzi, P. H. (2024). Leveraging graph neural networks for supporting automatic triage of patients.. *Sci Rep*, 14(1), 12548. [doi:10.1038/s41598-024-63376-2](https://doi.org/10.1038/s41598-024-63376-2)
58. Gantz, M., Mathis, S. V., Nintzel, F. E. H., Liò, P., & Hollfelder, F. (2024). On synergy between ultrahigh throughput screening and machine learning in biocatalyst engineering.. *Faraday Discuss*, 252(0), 89-114. [doi:10.1039/d4fd00065j](https://doi.org/10.1039/d4fd00065j)
59. Georgiev, D., Wilson, J., Buffelli, D., & Liò, P. (2024). Deep Equilibrium Algorithmic Reasoning. *Unknown Journal*, 33638-33667. [doi:10.52202/079017-1059](https://doi.org/10.52202/079017-1059)
60. Jiang, Y., Ding, Q., Wang, Y. G., Liò, P., & Zhang, X. (2024). Vision graph U-Net: Geometric learning enhanced encoder for medical

- image segmentation and restoration. *Inverse Problems and Imaging*, 18(3), 672-689. doi:10.3934/ipi.2023049
61. Li, K., Zheng, J., Ni, W., Huang, H., Liò, P., Dressler, F., & Akan, O. B. (2024). Biasing Federated Learning With a New Adversarial Graph Attention Network. *IEEE Transactions on Mobile Computing*, 24(3), 2407-2421. doi:10.1109/tmc.2024.3499371
 62. Li, M., Micheli, A., Wang, Y. G., Pan, S., Liò, P., Gnecco, G. S., & Sanguineti, M. (2024). Guest Editorial: Deep Neural Networks for Graphs: Theory, Models, Algorithms, and Applications. *IEEE Transactions on Neural Networks and Learning Systems*, 35(4), 4367-4372. doi:10.1109/tnnls.2024.3371592
 63. Lu, X., Zhao, J., Zhu, S., & Liò, P. (2024). SNDGCN: Robust Android malware detection based on subgraph network and denoising GCN network. *Expert Systems with Applications*, 250, 123922. doi:10.1016/j.eswa.2024.123922
 64. Margeloiu, A., Simidjievski, N., Liò, P., & Jamnik, M. (2024). GCondNet: A Novel Method for Improving Neural Networks on Small High-Dimensional Tabular Data. *Transactions on Machine Learning Research*, 2024.
 65. Moss, J., England, J., & Liò, P. (2024). Deep Kernel Learning of Nonlinear Latent Force Models. *Transactions on Machine Learning Research*, 2024.
 66. Mumenin, N., Abu Yousuf, M., Nashiry, A., Azad, A. K. M., Alyami, S. A., Liò, P., & Moni, M. A. (2024). ASDNet: A robust involution-based architecture for diagnosis of autism spectrum disorder utilising eye-tracking technology. *IET Computer Vision*, 18(5), 666-681. doi:10.1049/cvi2.12271
 67. Raisa, R. A., Rodela, A. S., Abu Yousuf, M., Azad, A., Alyami, S. A., Liò, P., . . . Moni, M. A. (2024). Deep and Shallow Learning Model-Based Sleep Apnea Diagnosis Systems: A Comprehensive Study. *IEEE Access*, 12, 122959-122987. doi:10.1109/access.2024.3426928
 68. Sabari, A., Hasan, I., Alyami, S. A., Liò, P., Ali, S., Moni, M. A., & Azad, A. (2024). LandSin: A differential ML and google API-enabled web server for real-time land insights and beyond. *Software Impacts*, 22, 100718. doi:10.1016/j.simpa.2024.100718
 69. Shen, X., Liò, P., Yang, L., Yuan, R., Zhang, Y., & Peng, C. (2024). Graph Rewiring and Preprocessing for Graph Neural Networks Based on Effective Resistance. *IEEE Transactions on Knowledge and Data Engineering*, 36(11), 6330-6343. doi:10.1109/tkde.2024.3397692
 70. Wang, Z., Ma, J., Gao, Q., Bain, C., Imoto, S., Liò, P., . . . Song, J. (2024). Dual-stream multi-dependency graph neural network enables precise cancer survival analysis. *Med Image Anal*, 97, 103252. doi:10.1016/j.media.2024.103252
 71. Yang, L., Liò, P., Shen, X., Zhang, Y., & Peng, C. (2024). Adaptive multi-scale Graph Neural Architecture Search framework. *Neurocomputing*, 599, 128094. doi:10.1016/j.neucom.2024.128094
 72. Yi, K., Fan, Y., Hamann, J., Liò, P., & Wang, Y. G. (2024). ABCMB: deep delensing assisted likelihood-free inference from CMB polarization maps. *Machine Learning: Science and Technology*, 5(4), 045068. doi:10.1088/2632-2153/ad9af9
 73. Azevedo, T., Bethlehem, R. A. I., Whiteside, D. J., Swaddiwudhipong, N., Rowe, J. B., Liò, P., . . . Alzheimer's Disease Neuroimaging Initiative. (2023). Identifying healthy individuals with Alzheimer's disease neuroimaging phenotypes in the UK Biobank. *Commun Med (Lond)*, 3(1), 100. doi:10.1038/s43856-023-00313-w
 74. Bongini, P., Scarselli, F., Bianchini, M., Dimitri, G. M., Pancino, N., & Liò, P. (2023). Modular Multi-Source Prediction of Drug Side-Effects With DruGNN. *IEEE/ACM Trans Comput Biol Bioinform*, 20(2), 1211-1220. doi:10.1109/TCBB.2022.3175362
 75. Buterez, D., Janet, J. P., Kiddle, S. J., & Liò, P. (2023). MF-PCBA: Multifidelity High-Throughput Screening Benchmarks for Drug Discovery and Machine Learning. *J Chem Inf Model*, 63(9), 2667-2678. doi:10.1021/acs.jcim.2c01569
 76. Buterez, D., Janet, J. P., Kiddle, S. J., Oglic, D., & Liò, P. (2023). Modelling local and general quantum mechanical properties with attention-based pooling. *Commun Chem*, 6(1), 262. doi:10.1038/s42004-023-01045-7
 77. Campbell, A., Spasov, S., Toschi, N., & Liò, P. (2023). DBGDGM: Dynamic Brain Graph Deep Generative Model. *MEDICAL IMAGING WITH DEEP LEARNING*, VOL 227, 227, 1346-1371. Retrieved from https://www.webofscience.com/api/gateway?GWVersion=2&SrcApp=ucam_elements_live&SrcAuth=WosAPI&KeyUT=WOS:001221108600080&DestLinkType=FullRecord&DestApp=WOS_CPL
 78. Charoenkwan, P., Pipattanaboon, C., Nantasenamat, C., Hasan, M. M., Moni, M. A., Liò, P., & Shoombuatong, W. (2023). PSRTTCA: A new approach for improving the prediction and characterization of tumor T cell antigens using propensity score representation learning. *Comput Biol Med*, 152, 106368. doi:10.1016/j.compbimed.2022.106368
 79. Chowdhury, A. A., Mahmud, S. M. H., Hoque, K. K. S., Ahmed, K., Bui, F. M., Liò, P., . . . Al-Zahrani, F. A. (2023). StackFBAS: Detection of fetal brain abnormalities using CNN with stacking strategy from MRI images. *Journal of King Saud University - Computer and Information Sciences*, 35(8), 101647. doi:10.1016/j.jksuci.2023.101647
 80. Del Duca, S., Semenzato, G., Esposito, A., Liò, P., & Fani, R. (2023). The Operon as a Conundrum of Gene Dynamics and Biochemical Constraints: What We Have Learned from Histidine Biosynthesis. *Genes (Basel)*, 14(4). doi:10.3390/genes14040949
 81. Duta, I., Cassarà, G., Silvestri, F., & Liò, P. (2023). Sheaf Hypergraph Networks. *Unknown Journal*, 12087-12099. doi:10.52202/075280-0529
 82. Faruqi, N., Yousuf, M. A., Whaiduzzaman, M., Azad, A., Alyami, S. A., Liò, P., . . . Moni, M. A. (2023). SafetyMed: A Novel IoT Intrusion Detection System Using CNN-LSTM Hybridization. *Electronics*, 12(17), 3541. doi:10.3390/electronics12173541
 83. Georgiev, D., Numeroso, D., Bacciu, D., & Liò, P. (2023). Neural Algorithmic Reasoning for Combinatorial Optimisation. *LEARNING ON GRAPHS CONFERENCE*, VOL 231, 231, 15 pages. Retrieved from https://www.webofscience.com/api/gateway?GWVersion=2&SrcApp=ucam_elements_live&SrcAuth=WosAPI&KeyUT=WOS:001221054300014&DestLinkType=FullRecord&DestApp=WOS_CPL
 84. Giannini, F., Fioravanti, S., Keskin, O., Lupidi, A., Magister, L. C., Liò, P., & Barbiero, P. (2023). Interpretable Graph Networks Formulate Universal Algebra Conjectures. *Unknown Journal*, 13429-13447. doi:10.52202/075280-0590
 85. Islam, M. S., Hasan, K. F., Sultana, S., Uddin, S., Liò, P., Quinn, J. M. W., & Moni, M. A. (2023). HARD C : A novel ECG-based heartbeat classification method to detect arrhythmia using hierarchical attention based dual structured RNN with dilated CNN. *Neural Netw*, 162, 271-287. doi:10.1016/j.neunet.2023.03.004
 86. Kidwai, S., Barbiero, P., Meijerman, I., Tonda, A., Perez-Pardo, P., Liò, P., . . . Lopez-Rincon, A. (2023). A robust mRNA signature obtained via recursive ensemble feature selection predicts the responsiveness of omalizumab in moderate-to-severe asthma. *Clin Transl Allergy*, 13(11), e12306. doi:10.1002/ctlt2.12306
 87. Lishkova, Y., Scherer, P., Ridderbusch, S., Jamnik, M., Liò, P., Ober-Blöbaum, S., & Offen, C. (2023). Discrete Lagrangian Neural Networks with Automatic Symmetry Discovery. *IFAC-PapersOnLine*, 56(2), 3203-3210. doi:10.1016/j.ifacol.2023.10.1457
 88. Longa, A., Lachi, V., Santin, G., Bianchini, M., Lepri, B., Liò, P., . . . Passerini, A. (2023). Graph Neural Networks for Temporal Graphs:

- State of the Art, Open Challenges, and Opportunities. Transactions on Machine Learning Research, 2023.
89. Lu, X., Yang, F., Zou, L., Liò, P., & Hui, P. (2023). An LTE Authentication and Key Agreement Protocol Based on the ECC Self-Certified Public Key. IEEE/ACM Transactions on Networking, 31(3), 1101-1116. [doi:10.1109/tnet.2022.3207360](https://doi.org/10.1109/tnet.2022.3207360)
 90. Lu, X., Liu, C., Zhu, S., Mao, Y., Liò, P., & Hui, P. (2023). RLPTO: A Reinforcement Learning-Based Performance-Time Optimized Task and Resource Scheduling Mechanism for Distributed Machine Learning. IEEE Transactions on Parallel and Distributed Systems, 34(12), 3266-3279. [doi:10.1109/tpds.2023.3317388](https://doi.org/10.1109/tpds.2023.3317388)
 91. Nayan, S. I., Rahman, M. H., Hasan, M. M., Raj, S. M. R. H., Almoayad, M. A. A., Liò, P., & Moni, M. A. (2023). Network based approach to identify interactions between Type 2 diabetes and cancer comorbidities.. Life Sci, 335, 122244. [doi:10.1016/j.lfs.2023.122244](https://doi.org/10.1016/j.lfs.2023.122244)
 92. Petrović, A., Nikolić, M., Bugarić, U., Delibašić, B., & Liò, P. (2023). Controlling highway toll stations using deep learning, queuing theory, and differential evolution. Engineering Applications of Artificial Intelligence, 119, 105683. [doi:10.1016/j.engappai.2022.105683](https://doi.org/10.1016/j.engappai.2022.105683)
 93. Sun, Z., Harit, A., Cristea, A. I., Wang, J., & Liò, P. (2023). MONEY: Ensemble learning for stock price movement prediction via a convolutional network with adversarial hypergraph model. AI Open, 4, 165-174. [doi:10.1016/j.aiopen.2023.10.002](https://doi.org/10.1016/j.aiopen.2023.10.002)
 94. Viñas, R., Joshi, C. K., Georgiev, D., Lin, P., Dumitrascu, B., Gamazon, E. R., & Liò, P. (2023). Hypergraph factorization for multi-tissue gene expression imputation.. Nat Mach Intell, 5(7), 739-753. [doi:10.1038/s42256-023-00684-8](https://doi.org/10.1038/s42256-023-00684-8)
 95. Waqas, M., Aziz, S., Liò, P., Khan, Y., Ali, A., Iqbal, A., . . . Almajhdi, F. N. (2023). Immunoinformatics design of multivalent epitope vaccine against monkeypox virus and its variants using membrane-bound, enveloped, and extracellular proteins as targets.. Front Immunol, 14, 1091941. [doi:10.3389/fimmu.2023.1091941](https://doi.org/10.3389/fimmu.2023.1091941)
 96. Yang, J., Li, X., -X., Liu, F., Nie, D., Liò, P., Qi, H., & Shen, D. (2023). Fast Multi-Contrast MRI Acquisition by Optimal Sampling of Information Complementary to Pre-Acquired MRI Contrast.. IEEE Trans Med Imaging, 42(5), 1363-1373. [doi:10.1109/TMI.2022.3227262](https://doi.org/10.1109/TMI.2022.3227262)
 97. Zou, X., Zhao, X., Liò, P., & Zhao, Y. (2023). Will More Expressive Graph Neural Networks do Better on Generative Tasks?. LEARNING ON GRAPHS CONFERENCE, VOL 231, 231, 26 pages. Retrieved from https://www.webofscience.com/api/gateway?GWVersion=2&SrcApp=ucam_elements_live&SrcAuth=WosAPI&KeyUT=WOS:001221054300038&DestLinkType=FullRecord&DestApp=WOS_CPL
 98. Ahmad, S., Charoenkwan, P., Quinn, J. M. W., Moni, M. A., Hasan, M. M., Liò, P., & Shoombuatong, W. (2022). SCORPION is a stacking-based ensemble learning framework for accurate prediction of phage virion proteins.. Sci Rep, 12(1), 4106. [doi:10.1038/s41598-022-08173-5](https://doi.org/10.1038/s41598-022-08173-5)
 99. Azevedo, T., Campbell, A., Romero-Garcia, R., Passamonti, L., Bethlehem, R. A. I., Liò, P., & Toschi, N. (2022). A deep graph neural network architecture for modelling spatio-temporal dynamics in resting-state functional MRI data.. Med Image Anal, 79, 102471. [doi:10.1016/j.media.2022.102471](https://doi.org/10.1016/j.media.2022.102471)
 100. Buterez, D., Bica, I., Tariq, I., Andrés-Terré, H., & Liò, P. (2022). CellVGAE: an unsupervised scRNA-seq analysis workflow with graph attention networks.. Bioinformatics, 38(5), 1277-1286. [doi:10.1093/bioinformatics/btab804](https://doi.org/10.1093/bioinformatics/btab804)
 101. Charoenkwan, P., Ahmed, S., Nantasenamat, C., Quinn, J. M. W., Moni, M. A., Liò, P., & Shoombuatong, W. (2022). AMYPred-FRL is a novel approach for accurate prediction of amyloid proteins by using feature representation learning.. Sci Rep, 12(1), 7697. [doi:10.1038/s41598-022-11897-z](https://doi.org/10.1038/s41598-022-11897-z)
 102. Charoenkwan, P., Schaduagrath, N., Liò, P., Moni, M. A., Shoombuatong, W., & Manavalan, B. (2022). Computational prediction and interpretation of druggable proteins using a stacked ensemble-learning framework.. iScience, 25(9), 104883. [doi:10.1016/j.isci.2022.104883](https://doi.org/10.1016/j.isci.2022.104883)
 103. Charoenkwan, P., Schaduagrath, N., Hasan, M. M., Moni, M. A., Liò, P., & Shoombuatong, W. (2022). Empirical comparison and analysis of machine learning-based predictors for predicting and analyzing of thermophilic proteins.. EXCLI J, 21, 554-570. [doi:10.17179/excli2022-4723](https://doi.org/10.17179/excli2022-4723)
 104. Charoenkwan, P., Schaduagrath, N., Liò, P., Moni, M. A., Chumnannpuen, P., & Shoombuatong, W. (2022). iAMAP-SCM: A Novel Computational Tool for Large-Scale Identification of Antimalarial Peptides Using Estimated Propensity Scores of Dipeptides.. ACS Omega, 7(45), 41082-41095. [doi:10.1021/acsomega.2c04465](https://doi.org/10.1021/acsomega.2c04465)
 105. Charoenkwan, P., Chumnannpuen, P., Schaduagrath, N., Liò, P., Moni, M. A., & Shoombuatong, W. (2022). Improved prediction and characterization of blood-brain barrier penetrating peptides using estimated propensity scores of dipeptides.. J Comput Aided Mol Des, 36(11), 781-796. [doi:10.1007/s10822-022-00476-z](https://doi.org/10.1007/s10822-022-00476-z)
 106. Charoenkwan, P., Schaduagrath, N., Liò, P., Moni, M. A., Manavalan, B., & Shoombuatong, W. (2022). NEPTUNE: A novel computational approach for accurate and large-scale identification of tumor homing peptides.. Comput Biol Med, 148, 105700. [doi:10.1016/j.combiomed.2022.105700](https://doi.org/10.1016/j.combiomed.2022.105700)
 107. Charoenkwan, P., Schaduagrath, N., Moni, M. A., Liò, P., Manavalan, B., & Shoombuatong, W. (2022). SAPPHIRE: A stacking-based ensemble learning framework for accurate prediction of thermophilic proteins.. Comput Biol Med, 146, 105704. [doi:10.1016/j.combiomed.2022.105704](https://doi.org/10.1016/j.combiomed.2022.105704)
 108. Charoenkwan, P., Chiangjong, W., Nantasenamat, C., Moni, M. A., Liò, P., Manavalan, B., & Shoombuatong, W. (2022). SCMTHP: A New Approach for Identifying and Characterizing of Tumor-Homing Peptides Using Estimated Propensity Scores of Amino Acids.. Pharmaceuticals, 14(1). [doi:10.3390/pharmaceutics14010122](https://doi.org/10.3390/pharmaceutics14010122)
 109. Charoenkwan, P., Nantasenamat, C., Hasan, M. M., Moni, M. A., Liò, P., Manavalan, B., & Shoombuatong, W. (2022). StackDPPIV: A novel computational approach for accurate prediction of dipeptidyl peptidase IV (DPP-IV) inhibitory peptides.. Methods, 204, 189-198. [doi:10.1016/j.ymeth.2021.12.001](https://doi.org/10.1016/j.ymeth.2021.12.001)
 110. Chaturvedi, A., Tiwari, A., Chaturvedi, S., & Liò, P. (2022). System Neural Network: Evolution and Change Based Structure Learning. IEEE Transactions on Artificial Intelligence, 3(3), 426-435. [doi:10.1109/tai.2022.3143778](https://doi.org/10.1109/tai.2022.3143778)
 111. Chen, Y., Schönlieb, C. -B., Liò, P., Leiner, T., Dragotti, P. L., Wang, G., . . . Yang, G. (2022). AI-Based Reconstruction for Fast MRI—A Systematic Review and Meta-Analysis. Proceedings of the IEEE, 110(2), 224-245. [doi:10.1109/jproc.2022.3141367](https://doi.org/10.1109/jproc.2022.3141367)
 112. Coggan, H., Andres Terre, H., & Liò, P. (2022). A novel interpretable machine learning algorithm to identify optimal parameter space for cancer growth.. Front Big Data, 5, 941451. [doi:10.3389/fdata.2022.941451](https://doi.org/10.3389/fdata.2022.941451)
 113. Dhillon, S. K., Ganggayah, M. D., Sinnadurai, S., Liò, P., & Taib, N. A. (2022). Theory and Practice of Integrating Machine Learning and Conventional Statistics in Medical Data Analysis.. Diagnostics (Basel), 12(10). [doi:10.3390/diagnostics12102526](https://doi.org/10.3390/diagnostics12102526)
 114. Dimitri, G. M., Spasov, S., Duggento, A., Passamonti, L., Liò, P., & Toschi, N. (2022). Multimodal and multicontrast image fusion via deep generative models. Information Fusion, 88, 146-160. [doi:10.1016/j.inffus.2022.07.017](https://doi.org/10.1016/j.inffus.2022.07.017)

115. Dimitri, G. M., Meoni, G., Tenori, L., Luchinat, C., & Liò, P. (2022). NMR Spectroscopy Combined with Machine Learning Approaches for Age Prediction in Healthy and Parkinson's Disease Cohorts through Metabolomic Fingerprints. *Applied Sciences*, 12(18), 8954. doi:10.3390/app12188954
116. Lu, X., Liao, Y., Liu, C., Liò, P., & Hui, P. (2022). Heterogeneous Model Fusion Federated Learning Mechanism Based on Model Mapping. *IEEE Internet of Things Journal*, 9(8), 6058-6068. doi:10.1109/jiot.2021.3110908
117. Lu, X., Xue, A., Liò, P., & Hui, P. (2022). Intelligent Decision Making Based on the Combination of Deep Reinforcement Learning and an Influence Map. *Applied Sciences*, 12(22), 11458. doi:10.3390/app122211458
118. Patel, S., & Liò, P. (2022). Efficacy, Safety, and Applications of Skin Protectants. *J Drugs Dermatol*, 21(9), 977-982. doi:10.36849/JDD.6705
119. Schaduengrat, N., Anuwongcharoen, N., Moni, M. A., Liò, P., Charoenkwan, P., & Shoombuatong, W. (2022). StackPR is a new computational approach for large-scale identification of progesterone receptor antagonists using the stacking strategy. *Sci Rep*, 12(1), 16435. doi:10.1038/s41598-022-20143-5
120. Scherer, P., Trębacz, M., Simidjievski, N., Viñas, R., Shams, Z., Terre, H. A., . . . Liò, P. (2022). Unsupervised construction of computational graphs for gene expression data with explicit structural inductive biases. *Bioinformatics*, 38(5), 1320-1327. doi:10.1093/bioinformatics/btab830
121. Tong, C., Rocheteau, E., Veličković, P., Lane, N., & Liò, P. (2022). Predicting Patient Outcomes with Graph Representation Learning. *Studies in Computational Intelligence*, 1013, 281-293. doi:10.1007/978-3-030-93080-6_20
122. Yang, J., Küstner, T., Hu, P., Liò, P., & Qi, H. (2022). End-to-End Deep Learning of Non-rigid Groupwise Registration and Reconstruction of Dynamic MRI. *Front Cardiovasc Med*, 9, 880186. doi:10.3389/fcvm.2022.880186
123. Azevedo, T., Dimitri, G. M., Liò, P., & Gamazon, E. R. (2021). Multilayer modelling of the human transcriptome and biological mechanisms of complex diseases and traits. *NPJ Syst Biol Appl*, 7(1), 24. doi:10.1038/s41540-021-00186-6
124. Banerjee, S., Liò, P., Jones, P., & Cardinal, R. (2021). A class-contrastive human-interpretable machine learning approach to predict mortality in severe mental illness. *npj Schizophrenia*. doi:10.1038/s41537-021-00191-y
125. Barbiero, P., Viñas Torné, R., & Liò, P. (2021). Graph Representation Forecasting of Patient's Medical Conditions: Toward a Digital Twin. *Front Genet*, 12, 652907. doi:10.3389/fgene.2021.652907
126. Bardozzo, F., Liò, P., & Tagliaferri, R. (2021). Signal metrics analysis of oscillatory patterns in bacterial multi-omic networks. *Bioinformatics*, 37(10), 1411-1419. doi:10.1093/bioinformatics/btaa966
127. Bodnar, C., Cangea, C., & Liò, P. (2021). Deep Graph Mapper: Seeing Graphs Through the Neural Lens. doi:10.3389/fdata.2021.680535
128. Bodnar, C., Frasca, F., Wang, Y. G., Otter, N., Montufar, G., Liò, P., & Bronstein, M. M. (2021). Weisfeiler and Lehman Go Topological: Message Passing Simplicial Networks. Retrieved from https://www.webofscience.com/api/gateway?GWVersion=2&SrcApp=ucam_elements_live&SrcAuth=WosAPI&KeyUT=WOS:000683104601003&DestLinkType=FullRecord&DestApp=WOS_CPL
129. Castiglione, F., Deb, D., Srivastava, A. P., Liò, P., & Liso, A. (2021). From Infection to Immunity: Understanding the Response to SARS-CoV2 Through In-Silico Modeling. *Front Immunol*, 12, 646972. doi:10.3389/fimmu.2021.646972
130. Charoenkwan, P., Nantasenamat, C., Hasan, M. M., Moni, M. A., Liò, P., & Shoombuatong, W. (2021). iBitter-Fuse: A Novel Sequence-Based Bitter Peptide Predictor by Fusing Multi-View Features. *International Journal of Molecular Sciences*, 22(16). doi:10.3390/ijms22168958
131. Chen, K., Xu, H., Lei, Y., Liò, P., Li, Y., Guo, H., & Ali Moni, M. (2021). Integration and interplay of machine learning and bioinformatics approach to identify genetic interaction related to ovarian cancer chemoresistance. *Brief Bioinform*, 22(6). doi:10.1093/bib/bbab100
132. Christensen, C. N., Ward, E., Liò, P., & Kaminski, C. (2021). ML-SIM: Universal reconstruction of structured illumination microscopy images using transfer learning. *Biomedical Optics Express*. doi:10.1364/boe.414680
133. Ciravegna, G., Barbiero, P., Giannini, F., Gori, M., Liò, P., Maggini, M., & Melacci, S. (2021). Logic Explained Networks. *Artificial Intelligence*, 103822, 2022. Retrieved from <https://doi.org/10.1016/j.artint.2022.103822>
134. D'Agostino, D., Liò, P., Aldinucci, M., & Merelli, I. (2021). Advantages of using graph databases to explore chromatin conformation capture experiments. *BMC Bioinformatics*, 22(Suppl 2), 43. doi:10.1186/s12859-020-03937-0
135. Dimitri, G. M., Beqiri, E., Czosnyka, M., Ercole, A., Smielewski, P., Liò, P., & CENTER-TBI High Resolution Substudy Participants and Investigators. (2021). Analysis of Cardio-Cerebral Crosstalk Events in an Adult Cohort from the CENTER-TBI Study. *Acta Neurochir Suppl*, 131, 39-42. doi:10.1007/978-3-030-59436-7_9
136. Islam, R., Moni, M. A., Islam, M., Rashed-Al-Mahfuz, S., Islam, S., Hasan, K., . . . Liò, P. (2021). Emotion Recognition From EEG Signal Focusing on Deep Learning and Shallow Learning Techniques. *IEEE Access*, 9, 94601-94624. doi:10.1109/access.2021.3091487
137. Iuliano, A., Occhipinti, A., Angelini, C., De Feis, I., & Liò, P. (2021). COSMONET: An R Package for Survival Analysis Using Screening-Network Methods. *Mathematics*, 9(24), 3262. doi:10.3390/math9243262
138. Jamasb, A. R., Day, B., Cangea, C., Liò, P., & Blundell, T. L. (2021). Deep Learning for Protein-Protein Interaction Site Prediction. *Methods Mol Biol*, 2361, 263-288. doi:10.1007/978-1-0716-1641-3_16
139. Lipov, A., & Liò, P. (2021). A Multiscale Graph Convolutional Network Using Hierarchical Clustering. *Advances in Intelligent Systems and Computing*, 1364, 489-506. doi:10.1007/978-3-030-73103-8_35
140. Lu, X., Fu, S., Jiang, C., & Liò, P. (2021). A Fine-Grained IoT Data Access Control Scheme Combining Attribute-Based Encryption and Blockchain. *Security and Communication Networks*, 2021(1), 1-13. doi:10.1155/2021/5308206
141. Lu, X., Wang, F., Jiang, C., & Liò, P. (2021). A Universal Malicious Documents Static Detection Framework Based on Feature Generalization. *Applied Sciences*, 11(24), 12134. doi:10.3390/app112412134
142. Ma, Z., Xuan, J., Wang, Y. G., Li, M., & Liò, P. (2021). Path integral based convolution and pooling for graph neural networks. *Journal of Statistical Mechanics Theory and Experiment*, 2021(12), 124011. doi:10.1088/1742-5468/ac3ae4
143. Rashed-Al-Mahfuz, M., Moni, M. A., Liò, P., Islam, S. M. S., Berkovsky, S., Khushi, M., & Quinn, J. M. W. (2021). Deep convolutional neural networks based ECG beats classification to diagnose cardiovascular conditions. *Biomed Eng Lett*, 11(2), 147-162. doi:10.1007/s13534-021-00185-w
144. Rocheteau, E., Liò, P., & Hyland, S. (2021). Temporal pointwise convolutional networks for length of stay prediction in the intensive care unit. *Unknown Journal*, 58-68. doi:10.1145/3450439.3451860

145. Scatà, M., Di Stefano, A., La Corte, A., & Liò, P. (2021). A Multiplex Social Contagion Dynamics Model to Shape and Discriminate D2D Content Dissemination. *IEEE Transactions on Cognitive Communications and Networking*, 7(2), 581-593. [doi:10.1109/tccn.2020.3027697](https://doi.org/10.1109/tccn.2020.3027697)
146. Tangherloni, A., Ricciuti, F., Besozzi, D., Liò, P., & Cvejic, A. (2021). Analysis of single-cell RNA sequencing data based on autoencoders.. *BMC Bioinformatics*, 22(1), 309. [doi:10.1186/s12859-021-04150-3](https://doi.org/10.1186/s12859-021-04150-3)
147. Viñas, R., Andrés-Terré, H., Liò, P., & Bryson, K. (2021). Adversarial generation of gene expression data.. *Bioinformatics*. [doi:10.1093/bioinformatics/btab035](https://doi.org/10.1093/bioinformatics/btab035)
148. Viñas, R., Azevedo, T., Gamazon, E. R., & Liò, P. (2021). Deep Learning Enables Fast and Accurate Imputation of Gene Expression.. *Front Genet*, 12, 624128. [doi:10.3389/fgene.2021.624128](https://doi.org/10.3389/fgene.2021.624128)
149. Zubić, N., & Liò, P. (2021). An Effective Loss Function for Generating 3D Models from Single 2D Image Without Rendering. *IFIP Advances in Information and Communication Technology*, 627, 309-322. [doi:10.1007/978-3-030-79150-6_25](https://doi.org/10.1007/978-3-030-79150-6_25)
150. Ahamad, M. M., Aktar, S., Rashed-Al-Mahfuz, M., Uddin, S., Liò, P., Xu, H., . . . Moni, M. A. (2020). A machine learning model to identify early stage symptoms of SARS-Cov-2 infected patients.. *Expert Systems with Applications*, 160, 113661. [doi:10.1016/j.eswa.2020.113661](https://doi.org/10.1016/j.eswa.2020.113661)
151. Bagnoli, F., Lorini, D., & Liò, P. (2020). Modeling Social Groups, Policies and Cognitive Behavior in COVID-19 Epidemic Phases. Basic Scenarios. *Substantia*, 914. [doi:10.13128/substantia-914](https://doi.org/10.13128/substantia-914)
152. Bica, I., Andrés-Terré, H., Cvejic, A., & Liò, P. (2020). Unsupervised generative and graph representation learning for modelling cell differentiation.. *Sci Rep*, 10(1), 9790. [doi:10.1038/s41598-020-66166-8](https://doi.org/10.1038/s41598-020-66166-8)
153. Cangea, C., Velickovic, P., & Liò, P. (2020). XFlow: Cross-Modal Deep Neural Networks for Audiovisual Classification.. *IEEE Trans. Neural Networks Learn. Syst.*, 31, 3711-3720. [doi:10.1109/TNNLS.2019.2945992](https://doi.org/10.1109/TNNLS.2019.2945992)
154. Deasy, J., Liò, P., & Ercole, A. (2020). Dynamic survival prediction in intensive care units from heterogeneous time series without the need for variable selection or curation. *Scientific Reports*, 10(1). [doi:10.1038/s41598-020-79142-z](https://doi.org/10.1038/s41598-020-79142-z)
155. Del Prete, E., Facchiano, A., & Liò, P. (2020). Bioinformatics methodologies for coeliac disease and its comorbidities.. *Brief Bioinform*, 21(1), 355-367. [doi:10.1093/bib/bby109](https://doi.org/10.1093/bib/bby109)
156. Di Stefano, A., Scatà, M., Attanasio, B., La Corte, A., Liò, P., & Das, S. K. (2020). A Novel Methodology for designing Policies in Mobile Crowdsensing Systems. *Pervasive and Mobile Computing*, 67, 101230. [doi:10.1016/j.pmcj.2020.101230](https://doi.org/10.1016/j.pmcj.2020.101230)
157. Kazhdan, D., Shams, Z., & Liò, P. (2020). MARLeME: A Multi-Agent Reinforcement Learning Model Extraction Library. *Unknown Journal*, 00, 1-8. [doi:10.1109/ijcnn48605.2020.9207564](https://doi.org/10.1109/ijcnn48605.2020.9207564)
158. Lu, X., Liao, Y., Liò, P., & Pan, H. (2020). An Asynchronous Federated Learning Mechanism for Edge Network Computing. *Jisuanji Yanjiu Yu Fazhan Computer Research and Development*, 57(12), 2571-2582. [doi:10.7544/issn1000-1239.2020.20190754](https://doi.org/10.7544/issn1000-1239.2020.20190754)
159. Lu, X., Zhang, S., Hui, P., & Liò, P. (2020). Continuous authentication by free-text keystroke based on CNN and RNN. *Computers & Security*, 96, 101861. [doi:10.1016/j.cose.2020.101861](https://doi.org/10.1016/j.cose.2020.101861)
160. Lu, X., Wang, X., Liò, P., & Hui, P. (2020). DADIM: A distance adjustment dynamic influence map model. *Future Generation Computer Systems*, 112, 1122-1130. [doi:10.1016/j.future.2020.06.020](https://doi.org/10.1016/j.future.2020.06.020)
161. Lu, X., Zhou, X., Wang, W., Liò, P., & Hui, P. (2020). Domain-Oriented Topic Discovery Based on Features Extraction and Topic Clustering. *IEEE Access*, 8, 93648-93662. [doi:10.1109/access.2020.2994516](https://doi.org/10.1109/access.2020.2994516)
162. Lu, X., Liao, Y., Liò, P., & Hui, P. (2020). Privacy-Preserving Asynchronous Federated Learning Mechanism for Edge Network Computing. *IEEE Access*, 8, 48970-48981. [doi:10.1109/access.2020.2978082](https://doi.org/10.1109/access.2020.2978082)
163. Merelli, I., Liò, P., Kottenko, I., & D'Agostino, D. (2020). Latest advances in parallel, distributed, and network-based processing. *Concurrency and Computation Practice and Experience*, 32(10). [doi:10.1002/cpe.5683](https://doi.org/10.1002/cpe.5683)
164. Müller, T. T., & Liò, P. (2020). PECLIDES Neuro: A Personalisable Clinical Decision Support System for Neurological Diseases.. *Front Artif Intell*, 3, 23. [doi:10.3389/frai.2020.00023](https://doi.org/10.3389/frai.2020.00023)
165. Nain, Z., Rana, H. K., Liò, P., Islam, S. M. S., Summers, M. A., & Moni, M. A. (2020). Pathogenetic profiling of COVID-19 and SARS-like viruses.. *Briefings in Bioinformatics*. [doi:10.1093/bib/bbaa173](https://doi.org/10.1093/bib/bbaa173)
166. Rakowski, A. G., Veličković, P., Dall'Ara, E., & Liò, P. (2020). ChronoMID-Cross-modal neural networks for 3-D temporal medical imaging data.. *PLoS One*, 15(2), e0228962. [doi:10.1371/journal.pone.0228962](https://doi.org/10.1371/journal.pone.0228962)
167. Rana, H. K., Akhtar, M. R., Islam, M. B., Ahmed, M. B., Liò, P., Huq, F., . . . Moni, M. A. (2020). Machine Learning and Bioinformatics Models to Identify Pathways that Mediate Influences of Welding Fumes on Cancer Progression.. *Sci Rep*, 10(1), 2795. [doi:10.1038/s41598-020-57916-9](https://doi.org/10.1038/s41598-020-57916-9)
168. Tan, C., Zhu, J., & Liò, P. (2020). Arbitrary Scale Super-Resolution for Brain MRI Images. *IFIP Advances in Information and Communication Technology*, 583, 165-176. [doi:10.1007/978-3-030-49161-1_15](https://doi.org/10.1007/978-3-030-49161-1_15)
169. Akter, T., Satu, S., Khan, I., Ali, M. H., Uddin, S., Liò, P., . . . Moni, M. A. (2019). Machine Learning-Based Models for Early Stage Detection of Autism Spectrum Disorders. *IEEE Access*, 7, 166509-166527. [doi:10.1109/access.2019.2952609](https://doi.org/10.1109/access.2019.2952609)
170. Ascolani, G., & Liò, P. (2019). Modeling breast cancer progression to bone: how driver mutation order and metabolism matter.. *BMC Medical Genomics*, 12(Suppl 6). [doi:10.1186/s12920-019-0541-4](https://doi.org/10.1186/s12920-019-0541-4)
171. Bartoszek, K., & Liò, P. (2019). Modelling Trait-dependent Speciation with Approximate Bayesian Computation. *Acta Physica Polonica B Proceedings Supplement*, 12(1), 25. [doi:10.5506/aphyspolbsupp.12.25](https://doi.org/10.5506/aphyspolbsupp.12.25)
172. Di Stefano, A., Scatà, M., Vijayakumar, S., Angione, C., La Corte, A., & Liò, P. (2019). Social dynamics modeling of chrono-nutrition.. *PLoS Comput Biol*, 15(1), e1006714. [doi:10.1371/journal.pcbi.1006714](https://doi.org/10.1371/journal.pcbi.1006714)
173. Ganggabay, M. D., Taib, N. A., Har, Y. C., Liò, P., & Dhillon, S. K. (2019). Predicting factors for survival of breast cancer patients using machine learning techniques.. *BMC Medical Informatics and Decision Making*, 19. [doi:10.1186/s12911-019-0801-4](https://doi.org/10.1186/s12911-019-0801-4)
174. Liò, P., & Zuliani, P. (Eds.) (2019). *Automated Reasoning for Systems Biology and Medicine*. Springer International Publishing. [doi:10.1007/978-3-030-17297-8](https://doi.org/10.1007/978-3-030-17297-8)
175. Müller, T., & Liò, P. (2019). Personalisable Clinical Decision Support System.. *ERCIM News*, 116, 19-20.
176. Parmar, V., & Liò, P. (2019). Multi-omic Network Regression: Methodology, Tool and Case Study. *Studies in Computational Intelligence*, 813, 611-624. [doi:10.1007/978-3-030-05414-4_49](https://doi.org/10.1007/978-3-030-05414-4_49)
177. Rana, H. K., Akhtar, M. R., Islam, M. B., Ahmed, M. B., Liò, P., Quinn, J. M. W., . . . Moni, M. A. (2019). Genetic effects of welding fumes on the development of respiratory system diseases.. *Comput Biol Med*, 108, 142-149. [doi:10.1016/j.combiomed.2019.04.004](https://doi.org/10.1016/j.combiomed.2019.04.004)
178. Rana, H. K., Akhtar, M. R., Ahmed, M. B., Liò, P., Quinn, J. M. W., Huq, F., & Moni, M. A. (2019). Genetic effects of welding fumes on

- the progression of neurodegenerative diseases.. *Neurotoxicology*, 71, 93-101. [doi:10.1016/j.neuro.2018.12.002](https://doi.org/10.1016/j.neuro.2018.12.002)
179. Simidjievski, N., Bodnar, C., Tariq, I., Scherer, P., Andres Terre, H., Shams, Z., . . . Liò, P. (2019). Variational Autoencoders for Cancer Data Integration: Design Principles and Computational Practice.. *Front Genet*, 10, 1205. [doi:10.3389/fgene.2019.01205](https://doi.org/10.3389/fgene.2019.01205)
 180. Spasov, S., Passamonti, L., Duggento, A., Liò, P., Toschi, N., & Alzheimer's Disease Neuroimaging Initiative. (2019). A parameter-efficient deep learning approach to predict conversion from mild cognitive impairment to Alzheimer's disease.. *Neuroimage*, 189, 276-287. [doi:10.1016/j.neuroimage.2019.01.031](https://doi.org/10.1016/j.neuroimage.2019.01.031)
 181. Vignani, R., Liò, P., & Scali, M. (2019). How to integrate wet lab and bioinformatics procedures for wine DNA admixture analysis and compositional profiling: Case studies and perspectives.. *PLoS One*, 14(2), e0211962. [doi:10.1371/journal.pone.0211962](https://doi.org/10.1371/journal.pone.0211962)
 182. Weber, J. M., Liò, P., & Lapkin, A. A. (2019). Identification of strategic molecules for future circular supply chains using large reaction networks. *Reaction Chemistry & Engineering*, 4(11), 1969-1981. [doi:10.1039/c9re00213h](https://doi.org/10.1039/c9re00213h)
 183. Xiaofeng, L., Fangshuo, J., Xiao, Z., Shengwei, Y., Jing, S., & Liò, P. (2019). ASSCA: API sequence and statistics features combined architecture for malware detection. *Computer Networks*, 157, 99-111. [doi:10.1016/j.comnet.2019.04.007](https://doi.org/10.1016/j.comnet.2019.04.007)
 184. Zhu, J., Yang, G., & Liò, P. (2019). Lesion focused super-resolution. *Progress in Biomedical Optics and Imaging*, 10949, 109491L-109491L-6. [doi:10.1117/12.2512576](https://doi.org/10.1117/12.2512576)
 185. Bardozzo, F., Liò, P., & Tagliaferri, R. (2018). A study on multi-omic oscillations in Escherichia coli metabolic networks.. *BMC Bioinformatics*, 19(Suppl 7), 194. [doi:10.1186/s12859-018-2175-5](https://doi.org/10.1186/s12859-018-2175-5)
 186. Benmounah, Z., Meshoul, S., Batouche, M., & Liò, P. (2018). Parallel swarm intelligence strategies for large-scale clustering based on MapReduce with application to epigenetics of aging. *Applied Soft Computing*, 69, 771-783. [doi:10.1016/j.asoc.2018.04.012](https://doi.org/10.1016/j.asoc.2018.04.012)
 187. He, P., Nakano, T., Mao, Y., Liò, P., Liu, Q., & Yang, K. (2018). Stochastic Channel Switching of Frequency-Encoded Signals in Molecular Communication Networks. *IEEE Communications Letters*, 22(2), 332-335. [doi:10.1109/lcomm.2017.2768537](https://doi.org/10.1109/lcomm.2017.2768537)
 188. Iuliano, A., Occhipinti, A., Angelini, C., De Feis, I., & Liò, P. (2018). Combining Pathway Identification and Breast Cancer Survival Prediction via Screening-Network Methods.. *Front Genet*, 9, 206. [doi:10.3389/fgene.2018.00206](https://doi.org/10.3389/fgene.2018.00206)
 189. Liberis, E., Velickovic, P., Sormanni, P., Vendruscolo, M., & Liò, P. (2018). Parapred: antibody paratope prediction using convolutional and recurrent neural networks.. *Bioinformatics*, 34(17), 2944-2950. [doi:10.1093/bioinformatics/bty305](https://doi.org/10.1093/bioinformatics/bty305)
 190. Mancini, A., Eyassu, F., Conway, M., Occhipinti, A., Liò, P., Angione, C., & Pucciarelli, S. (2018). CiliateGEM: an open-project and a tool for predictions of ciliate metabolic variations and experimental condition design.. *BMC Bioinformatics*, 19(Suppl 15), 442. [doi:10.1186/s12859-018-2422-9](https://doi.org/10.1186/s12859-018-2422-9)
 191. Martins, D. P., Barros, M., Pierobon, M., Kandhavelu, M., Liò, P., & Balasubramaniam, S. (2018). Computational Models for Trapping Ebola Virus Using Engineered Bacteria. *IEEE/ACM Transactions on Computational Biology and Bioinformatics*, 15(6). [doi:10.1109/TCBB.2018.2836430](https://doi.org/10.1109/TCBB.2018.2836430)
 192. Saggese, I., Bona, E., Conway, M., Favero, F., Ladetto, M., Liò, P., . . . Mignone, F. (2018). STAbLe: a novel approach to de novo assembly of RNA-seq data and its application in a metabolic model network based metatranscriptomic workflow.. *BMC Bioinformatics*, 19(Suppl 7), 184. [doi:10.1186/s12859-018-2174-6](https://doi.org/10.1186/s12859-018-2174-6)
 193. Scatà, M., Di Stefano, A., La Corte, A., & Liò, P. (2018). Quantifying the propagation of distress and mental disorders in social networks.. *Sci Rep*, 8(1), 5005. [doi:10.1038/s41598-018-23260-2](https://doi.org/10.1038/s41598-018-23260-2)
 194. Veličković, P., Karadžija, L., Lane, N. D., Bhattacharya, S., Liberis, E., Liò, P., . . . Vegreville, M. (2018). Cross-modal Recurrent Models for Weight Objective Prediction from Multimodal Time-series Data. *Unknown Journal*, 178-186. [doi:10.1145/3240925.3240937](https://doi.org/10.1145/3240925.3240937)
 195. Vijayakumar, S., Conway, M., Liò, P., & Angione, C. (2018). Seeing the wood for the trees: a forest of methods for optimization and omic-network integration in metabolic modelling.. *Briefings in Bioinformatics*, 19(6), 1218-1235. [doi:10.1093/bib/bbx053](https://doi.org/10.1093/bib/bbx053)
 196. Xiao, H., Bartoszek, K., & Liò, P. (2018). Multi-omic analysis of signalling factors in inflammatory comorbidities.. *BMC Bioinformatics*, 19(Suppl 15), 439. [doi:10.1186/s12859-018-2413-x](https://doi.org/10.1186/s12859-018-2413-x)
 197. Athanasiadis, E. I., Botthof, J. G., Andres, H., Ferreira, L., Liò, P., & Cvejic, A. (2017). Single-cell RNA-sequencing uncovers transcriptional states and fate decisions in haematopoiesis.. *Nat Commun*, 8(1), 2045. [doi:10.1038/s41467-017-02305-6](https://doi.org/10.1038/s41467-017-02305-6)
 198. Barandalla, M., Shi, H., Xiao, H., Colleoni, S., Galli, C., Liò, P., . . . Lazzari, G. (2017). Global gene expression profiling and senescence biomarker analysis of hESC exposed to H2O2 induced non-cytotoxic oxidative stress.. *Stem Cell Res Ther*, 8(1), 160. [doi:10.1186/s13287-017-0602-6](https://doi.org/10.1186/s13287-017-0602-6)
 199. Bianchi, L., & Liò, P. (2017). Opportunities for community awareness platforms in personal genomics and bioinformatics education.. *Brief Bioinform*, 18(6), 1082-1090. [doi:10.1093/bib/bbw078](https://doi.org/10.1093/bib/bbw078)
 200. Dimitri, G. M., & Liò, P. (2017). DrugClust: A machine learning approach for drugs side effects prediction.. *Comput Biol Chem*, 68, 204-210. [doi:10.1016/j.compbiolchem.2017.03.008](https://doi.org/10.1016/j.compbiolchem.2017.03.008)
 201. Kashaf, S. S., Angione, C., & Liò, P. (2017). Making life difficult for Clostridium difficile: augmenting the pathogen's metabolic model with transcriptomic and codon usage data for better therapeutic target characterization.. *BMC Syst Biol*, 11(1), 25. [doi:10.1186/s12918-017-0395-3](https://doi.org/10.1186/s12918-017-0395-3)
 202. Moni, M. A., & Liò, P. (2017). Genetic Profiling and Comorbidities of Zika Infection.. *J Infect Dis*, 216(6), 703-712. [doi:10.1093/infdis/jix327](https://doi.org/10.1093/infdis/jix327)
 203. Tordini, F., Drocco, M., Misale, C., Milanese, L., Liò, P., Merelli, I., . . . Aldinucci, M. (2017). NuChart-II: The road to a fast and scalable tool for Hi-C data analysis. *The International Journal of High Performance Computing Applications*, 31(3), 196-211. [doi:10.1177/1094342016668567](https://doi.org/10.1177/1094342016668567)
 204. Angione, C., & Liò, P. (2016). Erratum: Predictive analytics of environmental adaptability in multi-omic network models.. *Sci Rep*, 6, 26266. [doi:10.1038/srep26266](https://doi.org/10.1038/srep26266)
 205. Angione, C., Conway, M., & Liò, P. (2016). Multiplex methods provide effective integration of multi-omic data in genome-scale models.. *BMC Bioinformatics*, 17 Suppl 4(Suppl 4), 83. [doi:10.1186/s12859-016-0912-1](https://doi.org/10.1186/s12859-016-0912-1)
 206. Bartocci, E., & Liò, P. (2016). Computational Modeling, Formal Analysis, and Tools for Systems Biology.. *PLoS Comput Biol*, 12(1), e1004591. [doi:10.1371/journal.pcbi.1004591](https://doi.org/10.1371/journal.pcbi.1004591)
 207. Capobianco, E., & Liò, P. (2016). Electronic Health Systems: Golden Mine for Precision Medicine. *The journal of precision medicine*.
 208. Conway, M., Angione, C., & Liò, P. (2016). Iterative Multi Level Calibration of Metabolic Networks. *Current Bioinformatics*, 11(1), 93-105. [doi:10.2174/1574893611666151203222505](https://doi.org/10.2174/1574893611666151203222505)
 209. Felicetti, L., Femminella, M., Reali, G., & Liò, P. (2016). Applications of molecular communications to medicine: A survey. *Nano Communication Networks*, 7, 27-45. [doi:10.1016/j.nancom.2015.08.004](https://doi.org/10.1016/j.nancom.2015.08.004)
 210. Iuliano, A., Occhipinti, A., Angelini, C., De Feis, I., & Liò, P. (2016). Cancer Markers Selection Using Network-Based Cox Regression:

- A Methodological and Computational Practice.. *Front Physiol*, 7, 208. [doi:10.3389/fphys.2016.00208](https://doi.org/10.3389/fphys.2016.00208)
211. Lu, X., Liò, P., & Hui, P. (2016). Distance-Based Opportunistic Mobile Data Offloading.. *Sensors (Basel)*, 16(6). [doi:10.3390/s16060878](https://doi.org/10.3390/s16060878)
 212. Nardi, F., Frati, F., & Liò, P. (2016). Animal inference on human mitochondrial diseases.. *Comput Biol Chem*, 62, 17-28. [doi:10.1016/j.compbiolchem.2016.02.002](https://doi.org/10.1016/j.compbiolchem.2016.02.002)
 213. Narula, P., Piratla, V., Bansal, A., Azad, S., & Liò, P. (2016). Parameter estimation of tuberculosis transmission model using Ensemble Kalman filter across Indian states and union territories. *Infection Disease & Health*, 21(4), 184-191. [doi:10.1016/j.idh.2016.11.001](https://doi.org/10.1016/j.idh.2016.11.001)
 214. Reali, G., & Liò, P. (2016). Simulation Tools for Molecular Communications. *IEEE TCSIM Newsletter*.
 215. Sansom, C., Castiglione, F., & Liò, P. (2016). Metabolic disorders: how can systems modelling help?. *Lancet Diabetes Endocrinol*, 4(4), 306. [doi:10.1016/S2213-8587\(16\)00047-4](https://doi.org/10.1016/S2213-8587(16)00047-4)
 216. Scatà, M., Di Stefano, A., La Corte, A., Liò, P., Catania, E., Guardo, E., & Pagano, S. (2016). Combining evolutionary game theory and network theory to analyze human cooperation patterns. *Chaos, Solitons and Fractals*, 91, 17-24. [doi:10.1016/j.chaos.2016.04.018](https://doi.org/10.1016/j.chaos.2016.04.018)
 217. Scatà, M., Di Stefano, A., Liò, P., & La Corte, A. (2016). The Impact of Heterogeneity and Awareness in Modeling Epidemic Spreading on Multiplex Networks.. *Scientific Reports*, 6, 1-13. [doi:10.1038/srep37105](https://doi.org/10.1038/srep37105)
 218. Schwarz, E., Izmailov, R., Liò, P., & Meyer-Lindenberg, A. (2016). Protein Interaction Networks Link Schizophrenia Risk Loci to Synaptic Function.. *Schizophr Bull*, 42(6), 1334-1342. [doi:10.1093/schbul/sbw035](https://doi.org/10.1093/schbul/sbw035)
 219. Shavit, Y., Walker, B. J., & Liò, P. (2016). Hierarchical block matrices as efficient representations of chromosome topologies and their application for 3C data integration.. *Bioinformatics*, 32(8), 1121-1129. [doi:10.1093/bioinformatics/btv736](https://doi.org/10.1093/bioinformatics/btv736)
 220. Shavit, Y., Merelli, I., Milanesi, L., & Liò, P. (2016). How computer science can help in understanding the 3D genome architecture.. *Brief Bioinform*, 17(5), 733-744. [doi:10.1093/bib/bbv085](https://doi.org/10.1093/bib/bbv085)
 221. Tordini, F., Aldinucci, M., Milanesi, L., Liò, P., & Merelli, I. (2016). The Genome Conformation As an Integrator of Multi-Omic Data: The Example of Damage Spreading in Cancer.. *Front Genet*, 7, 194. [doi:10.3389/fgene.2016.00194](https://doi.org/10.3389/fgene.2016.00194)
 222. Veličković, P., & Liò, P. (2016). Molecular multiplex network inference using Gaussian mixture hidden Markov models. *Journal of Complex Networks*, 4(4), 561-574. [doi:10.1093/comnet/cnv029](https://doi.org/10.1093/comnet/cnv029)
 223. Veličković, P., & Liò, P. (2016). Muxstep: an open-source C++ multiplex HMM library for making inferences on multiple data types.. *Bioinformatics*, 32(16), 2562-2564. [doi:10.1093/bioinformatics/btw196](https://doi.org/10.1093/bioinformatics/btw196)
 224. Angione, C., Pratanwanich, N., & Liò, P. (2015). A Hybrid of Metabolic Flux Analysis and Bayesian Factor Modeling for Multiomic Temporal Pathway Activation.. *ACS Synth Biol*, 4(8), 880-889. [doi:10.1021/sb5003407](https://doi.org/10.1021/sb5003407)
 225. Angione, C., Costanza, J., Carapezza, G., Liò, P., & Nicosia, G. (2015). Analysis and design of molecular machines. *Theoretical Computer Science*, 599, 102-117. [doi:10.1016/j.tcs.2015.01.030](https://doi.org/10.1016/j.tcs.2015.01.030)
 226. Angione, C., Costanza, J., Carapezza, G., Liò, P., & Nicosia, G. (2015). Multi-Target Analysis and Design of Mitochondrial Metabolism.. *PLoS One*, 10(9), e0133825. [doi:10.1371/journal.pone.0133825](https://doi.org/10.1371/journal.pone.0133825)
 227. Angione, C., & Liò, P. (2015). Predictive analytics of environmental adaptability in multi-omic network models.. *Sci Rep*, 5, 15147. [doi:10.1038/srep15147](https://doi.org/10.1038/srep15147)
 228. Ascolani, G., Occhipinti, A., & Liò, P. (2015). Modelling circulating tumour cells for personalised survival prediction in metastatic breast cancer.. *PLoS Comput Biol*, 11(5), e1004199. [doi:10.1371/journal.pcbi.1004199](https://doi.org/10.1371/journal.pcbi.1004199)
 229. Bosi, E., Donati, B., Galardini, M., Brunetti, S., Sagot, M. -F., Liò, P., . . . Fondi, M. (2015). MeDuSa: a multi-draft based scaffolder.. *Bioinformatics*, 31(15), 2443-2451. [doi:10.1093/bioinformatics/btv171](https://doi.org/10.1093/bioinformatics/btv171)
 230. Capobianco, E., & Liò, P. (2015). Comorbidity networks: beyond disease correlations. *Journal of Complex Networks*, 3(3), 319-332. [doi:10.1093/comnet/cnu048](https://doi.org/10.1093/comnet/cnu048)
 231. Di Stefano, A., Scatà, M., La Corte, A., Liò, P., Catania, E., Guardo, E., & Pagano, S. (2015). Quantifying the Role of Homophily in Human Cooperation Using Multiplex Evolutionary Game Theory.. *PLoS One*, 10(10), e0140646. [doi:10.1371/journal.pone.0140646](https://doi.org/10.1371/journal.pone.0140646)
 232. Fondi, M., & Liò, P. (2015). Genome-scale metabolic network reconstruction.. *Methods Mol Biol*, 1231, 233-256. [doi:10.1007/978-1-4939-1720-4_15](https://doi.org/10.1007/978-1-4939-1720-4_15)
 233. Fondi, M., & Liò, P. (2015). Multi -omics and metabolic modelling pipelines: challenges and tools for systems microbiology.. *Microbiol Res*, 171, 52-64. [doi:10.1016/j.micres.2015.01.003](https://doi.org/10.1016/j.micres.2015.01.003)
 234. Liò, P., Miglino, O., Nicosia, G., Nolfi, S., & Pavone, M. (2015). Advances in artificial life: Synthesis and simulation of living systems: Editorial. *Artificial Life*, 21(4), 395-397. [doi:10.1162/ARTL_e_00189](https://doi.org/10.1162/ARTL_e_00189)
 235. Merelli, I., Tordini, F., Drocco, M., Aldinucci, M., Liò, P., & Milanesi, L. (2015). Integrating multi-omic features exploiting Chromosome Conformation Capture data.. *Front Genet*, 6, 40. [doi:10.3389/fgene.2015.00040](https://doi.org/10.3389/fgene.2015.00040)
 236. Moni, M. A., Xu, H., & Liò, P. (2015). CytoCom: a Cytoscape app to visualize, query and analyse disease comorbidity networks.. *Bioinformatics*, 31(6), 969-971. [doi:10.1093/bioinformatics/btu731](https://doi.org/10.1093/bioinformatics/btu731)
 237. Moni, M. A., & Liò, P. (2015). How to build personalized multi-omics comorbidity profiles.. *Front Cell Dev Biol*, 3, 28. [doi:10.3389/fcell.2015.00028](https://doi.org/10.3389/fcell.2015.00028)
 238. Narula, P., Sihota, P., Azad, S., & Liò, P. (2015). Analyzing seasonality of tuberculosis across Indian states and union territories.. *J Epidemiol Glob Health*, 5(4), 337-346. [doi:10.1016/j.jegh.2015.02.004](https://doi.org/10.1016/j.jegh.2015.02.004)
 239. Narula, P., Azad, S., & Liò, P. (2015). Bayesian Melding Approach to Estimate the Reproduction Number for Tuberculosis Transmission in Indian States and Union Territories.. *Asia Pac J Public Health*, 27(7), 723-732. [doi:10.1177/1010539515595068](https://doi.org/10.1177/1010539515595068)
 240. Taffi, M., Taffi, M., Paoletti, N., Liò, P., Pucciarelli, S., & Marini, M. (2015). Bioaccumulation modelling and sensitivity analysis for discovering key players in contaminated food webs: The case study of PCBs in the Adriatic Sea. *Ecological Modelling*, 306, 205-215. [doi:10.1016/j.ecolmodel.2014.11.030](https://doi.org/10.1016/j.ecolmodel.2014.11.030)
 241. Xu, H., Moni, M. A., & Liò, P. (2015). Network regularised Cox regression and multiplex network models to predict disease comorbidities and survival of cancer.. *Comput Biol Chem*, 59 Pt B, 15-31. [doi:10.1016/j.compbiolchem.2015.08.010](https://doi.org/10.1016/j.compbiolchem.2015.08.010)
 242. Ascolani, G., & Liò, P. (2014). Modeling TGF- β in early stages of cancer tissue dynamics.. *PLoS One*, 9(2), e88533. [doi:10.1371/journal.pone.0088533](https://doi.org/10.1371/journal.pone.0088533)
 243. Azad, S., & Liò, P. (2014). Emerging trends of malaria-dengue geographical coupling in the Southeast Asia region.. *J Vector Borne Dis*, 51(3), 165-171. Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/25253208>
 244. Capobianco, E., & Liò, P. (2014). Advances in translational biomedicine from systems approaches.. *Front Genet*, 5, 273. [doi:10.3389/fgene.2014.00273](https://doi.org/10.3389/fgene.2014.00273)

245. Felicetti, L., Femminella, M., Reali, G., & Liò, P. (2014). A Molecular Communication System in Blood Vessels for Tumor Detection. *Unknown Journal*, 1-9. doi:10.1145/2619955.2619978
246. Lu, X., Qu, Z., Liò, P., Hui, P., Li, Q., Lu, P., & Bie, R. (2014). Directional communication with movement prediction in mobile wireless sensor networks. *Personal and Ubiquitous Computing*, 18(8), 1941-1953. doi:10.1007/s00779-014-0793-0
247. Moni, M. A., & Liò, P. (2014). comoR: a software for disease comorbidity risk assessment.. *J Clin Bioinforma*, 4, 8. doi:10.1186/2043-9113-4-8
248. Moni, M. A., & Liò, P. (2014). Network-based analysis of comorbidities risk during an infection: SARS and HIV case studies.. *BMC Bioinformatics*, 15, 333. doi:10.1186/1471-2105-15-333
249. Nardi, F., Liò, P., Carapelli, A., & Frati, F. (2014). MtPAN3: Site-class specific amino acid replacement matrices for mitochondrial proteins of Pancrustacea and Collembola. *Molecular Phylogenetics and Evolution*, 75(1), 239-244. doi:10.1016/j.ympev.2014.02.001
250. Petrov, V., Balasubramaniam, S., Lale, R., Moltchanov, D., Liò, P., & Koucheryavy, Y. (2014). Forward and Reverse coding for chromosome transfer in bacterial nanonetworks. *Nano Communication Networks*, 5(1-2), 15-24. doi:10.1016/j.nancom.2014.04.003
251. Pratanwanich, N., & Liò, P. (2014). Exploring the complexity of pathway-drug relationships using latent Dirichlet allocation.. *Comput Biol Chem*, 53 Pt A, 144-152. doi:10.1016/j.compbiolchem.2014.08.019
252. Pratanwanich, N., & Liò, P. (2014). Pathway-based Bayesian inference of drug-disease interactions.. *Mol Biosyst*, 10(6), 1538-1548. doi:10.1039/c4mb00014e
253. Shavit, Y., & Liò, P. (2014). Combining a wavelet change point and the Bayes factor for analysing chromosomal interaction data.. *Mol Biosyst*, 10(6), 1576-1585. doi:10.1039/c4mb00142g
254. Shavit, Y., Hamey, F. K., & Liò, P. (2014). FisHiCal: an R package for iterative FISH-based calibration of Hi-C data.. *Bioinformatics*, 30(21), 3120-3122. doi:10.1093/bioinformatics/btu491
255. Taffi, M., Paoletti, N., Angione, C., Pucciarelli, S., Marini, M., & Liò, P. (2014). Bioremediation in marine ecosystems: a computational study combining ecological modeling and flux balance analysis.. *Front Genet*, 5, 319. doi:10.3389/fgene.2014.00319
256. Angione, C., Costanza, J., Carapezza, G., Liò, P., & Nicosia, G. (2013). A design automation framework for computational bioenergetics in biological networks.. *Mol Biosyst*, 9(10), 2554-2564. doi:10.1039/c3mb25558a
257. Angione, C., Carapezza, G., Costanza, J., Liò, P., & Nicosia, G. (2013). Design and strain selection criteria for bacterial communication networks. *Nano Communication Networks*, 4(4), 155-163. doi:10.1016/j.nancom.2013.08.001
258. Angione, C., Costanza, J., Carapezza, G., Liò, P., & Nicosia, G. (2013). Pareto epsilon-dominance and identifiable solutions for BioCAD modeling. *Proceedings Design Automation Conference*. doi:10.1145/2463209.2488787
259. Angione, C., Carapezza, G., Costanza, J., Liò, P., & Nicosia, G. (2013). Pareto optimality in organelle energy metabolism analysis.. *IEEE/ACM Trans Comput Biol Bioinform*, 10(4), 1032-1044. doi:10.1109/TCBB.2013.95
260. Angione, C., Carapezza, G., Costanza, J., Liò, P., & Nicosia, G. (2013). Rational design of organelle compartments in cells. *EMBnet. journal*, 18(B), 20-22.
261. Balasubramaniam, S., Ben-Yehuda, S., Pautot, S., Jesorka, A., Liò, P., & Koucheryavy, Y. (2013). A review of experimental opportunities for molecular communication. *Nano Communication Networks*, 4(2), 43-52. doi:10.1016/j.nancom.2013.02.002
262. Balasubramaniam, S., & Liò, P. (2013). Multi-hop conjugation based bacteria nanonetworks.. *IEEE Trans Nanobioscience*, 12(1), 47-59. doi:10.1109/TNB.2013.2239657
263. Brilli, M., Liò, P., Lacroix, V., & Sagot, M. -F. (2013). Short and long-term genome stability analysis of prokaryotic genomes.. *BMC Genomics*, 14, 309. doi:10.1186/1471-2164-14-309
264. Capobianco, E., & Liò, P. (2013). Comorbidity: a multidimensional approach. *Trends in Molecular Medicine*.
265. Castiglione, F., Diaz, V., Gaggioli, A., Liò, P., Mazza, C., Merelli, E., . . . von Ammon, R. (2013). Physio-Environmental Sensing and Live Modeling. *JOURNAL OF MEDICAL INTERNET RESEARCH*, 15(1). doi:10.2196/ijmr.2092
266. Castiglione, F., Tieri, P., De Graaf, A., Franceschi, C., Liò, P., Van Ommen, B., . . . Ernst, M. (2013). The onset of type 2 diabetes: proposal for a multi-scale model.. *JMIR Res Protoc*, 2(2), e44. doi:10.2196/resprot.2854
267. Di Stefano, A., La Corte, A., Leotta, M., Liò, P., & Scatà, M. (2013). It measures like me: An IoTs algorithm in WSNs based on heuristics behavior and clustering methods. *Ad Hoc Networks*, 11(8), 2637-2647. doi:10.1016/j.adhoc.2013.04.011
268. Lu, X., Liò, P., Hui, P., & Jin, H. (2013). A Location Prediction Algorithm for Mobile Communications Using Directional Antennas. *INTERNATIONAL JOURNAL OF DISTRIBUTED SENSOR NETWORKS*, 10 pages. doi:10.1155/2013/418606
269. Lu, X., Hui, P., & Liò, P. (2013). Offloading Mobile Data from Cellular Networks Through Peer-to-Peer WiFi Communication: A Subscribe-and-Send Architecture. *CHINA COMMUNICATIONS*, 10(6), 35-46. Retrieved from https://www.webofscience.com/api/gateway?GWVersion=2&SrcApp=ucam_elements_live&SrcAuth=WosAPI&KeyUT=WOS:000320603600005&DestLinkType=FullRecord&DestApp=WOS_CPL
270. Merelli, I., Liò, P., & Milanesi, L. (2013). Describing the genes social networks relying on chromosome conformation capture data. *EMBnet journal*, 19(B), 73. doi:10.14806/ej.19.b.735
271. Merelli, I., Liò, P., & Milanesi, L. (2013). NuChart: An R Package to Study Gene Spatial Neighbourhoods with Multi-Omics Annotations. *Plos One*, 8(9). doi:10.1371/journal.pone.0075146
272. Moni, M. A., Mariani, S., Poli, G., Liò, P., & Vicenzi, E. (2013). Differential impacts of R5 vs. X4 HIV-1 on the transcriptome of primary CD4₊ T cells. *RETROVIROLOGY*, 10, S39. doi:10.1186/1742-4690-10-S1-P114
273. Shavit, Y., & Liò, P. (2013). CytoHiC: a cytoscape plugin for visual comparison of Hi-C networks.. *Bioinformatics*, 29(9), 1206-1207. doi:10.1093/bioinformatics/btt120
274. Vicenzi, E., Liò, P., & Poli, G. (2013). The puzzling role of CXCR4 in human immunodeficiency virus infection.. *Theranostics*, 3(1), 18-25. doi:10.7150/thno.5392
275. Xie, S., Lawnizak, A. T., Liò, P., & Krishnan, S. (2013). Feature Extraction by Multi-Scale Principal Component Analysis and Classification in Spectral Domain. *Engineering*, 05(10), 268-271. doi:10.4236/eng.2013.510b056
276. Angione, C., Liò, P., & Nicosia, G. (2012). How to Compute with Metabolism in Bacteria?. *ERICM News*, 2012.
277. Bartocci, E., Liò, P., Merelli, E., & Paoletti, N. (2012). Multiple Verification in Complex Biological Systems: The Bone Remodelling Case Study.. *Trans. Comp. Sys. Biology*, 14, 53-76. doi:10.1007/978-3-642-35524-0_3
278. Costanza, J., Carapezza, G., Angione, C., Liò, P., & Nicosia, G. (2012). Robust design of microbial strains.. *Bioinformatics*, 28(23), 3097-3104. doi:10.1093/bioinformatics/bts590

279. Laise, P., Fanelli, D., Liò, P., & Arcangeli, A. (2012). Modeling TGF-beta signaling pathway in epithelial-mesenchymal transition. *AIP ADV*, 2(1), . [doi:10.1063/1.3697962](https://doi.org/10.1063/1.3697962)
280. Liò, P., Paoletti, N., Moni, M. A., Atwell, K., Merelli, E., & Viceconti, M. (2012). Modelling osteomyelitis.. *BMC Bioinformatics*, 13 Suppl 14(Suppl 14), S12. [doi:10.1186/1471-2105-13-S14-S12](https://doi.org/10.1186/1471-2105-13-S14-S12)
281. Liò, P., & Balasubramaniam, S. (2012). Opportunistic routing through conjugation in bacteria communication nanonetwork. *Nano Communication Networks*, 3(1), 36-45. [doi:10.1016/j.nancom.2011.10.003](https://doi.org/10.1016/j.nancom.2011.10.003)
282. Liò, P., Angelini, C., De Feis, I., & Nguyen, V. -A. (2012). Statistical approaches to use a model organism for regulatory sequences annotation of newly sequenced species.. *PLoS One*, 7(9), e42489. [doi:10.1371/journal.pone.0042489](https://doi.org/10.1371/journal.pone.0042489)
283. Lu, X. F., Towsley, D., Liò, P., & Xiong, Z. (2012). An adaptive directional MAC protocol for ad hoc networks using directional antennas. *Science China Information Sciences*, 55(6), 1360-1371. [doi:10.1007/s11432-012-4550-6](https://doi.org/10.1007/s11432-012-4550-6)
284. Lu, X., Pan, H., & Liò, P. (2012). High Delivery Performance Opportunistic Routing Scheme for Delay Tolerant Networks. *CHINA COMMUNICATIONS*, 9(6), 145-153. Retrieved from https://www.webofscience.com/api/gateway?GWVersion=2&SrcApp=ucam_elements_live&SrcAuth=WosAPI&KeyUT=WOS:000305818000014&DestLinkType=FullRecord&DestApp=WOS_CPL
285. Massaro, E., Bagnoli, F., Guazzini, A., & Liò, P. (2012). Information dynamics algorithm for detecting communities in networks. *Communications in Nonlinear Science and Numerical Simulation*, 17(11), 4294-4303. [doi:10.1016/j.cnsns.2012.03.023](https://doi.org/10.1016/j.cnsns.2012.03.023)
286. Nazri, A., & Liò, P. (2012). Investigating meta-approaches for reconstructing gene networks in a mammalian cellular context.. *PLoS One*, 7(1), e28713. [doi:10.1371/journal.pone.0028713](https://doi.org/10.1371/journal.pone.0028713)
287. Paoletti, N., Liò, P., Merelli, E., & Viceconti, M. (2012). Multilevel computational modeling and quantitative analysis of bone remodeling.. *IEEE/ACM Trans Comput Biol Bioinform*, 9(5), 1366-1378. [doi:10.1109/TCBB.2012.51](https://doi.org/10.1109/TCBB.2012.51)
288. Peng, C., Jin, X., Wong, K. -C., Shi, M., & Liò, P. (2012). Collective human mobility pattern from taxi trips in urban area.. *PLoS One*, 7(4), e34487. [doi:10.1371/journal.pone.0034487](https://doi.org/10.1371/journal.pone.0034487)
289. Peng, C., Jin, X., Wong, K. C., Shi, M., & Liò, P. (2012). Correction: Collective Human Mobility Pattern from Taxi Trips in Urban Area.. *PLoS One*, 7(8). [doi:10.1371/annotation/f0d48839-ed4b-4cb2-822a-d449a6b4fa5d](https://doi.org/10.1371/annotation/f0d48839-ed4b-4cb2-822a-d449a6b4fa5d)
290. Umeton, R., Stracquadanio, G., Papini, A., Costanza, J., Liò, P., & Nicosia, G. (2012). Identification of sensitive enzymes in the photosynthetic carbon metabolism.. *Adv Exp Med Biol*, 736, 441-459. [doi:10.1007/978-1-4419-7210-1_26](https://doi.org/10.1007/978-1-4419-7210-1_26)
291. Xie, S., Lawniczak, A. T., Krishnan, S., & Liò, P. (2012). Wavelet Kernel Principal Component Analysis in Noisy Multiscale Data Classification. *International Scholarly Research Notices*, 2012(1), 1-13. [doi:10.5402/2012/197352](https://doi.org/10.5402/2012/197352)
292. Bagnoli, F., & Liò, P. (2011). HOW THE MUTATIONAL-SELECTION INTERPLAY ORGANIZES THE FITNESS LANDSCAPE. *J NONLINEAR MATH PHY*, 18, 265-286. [doi:10.1142/S1402925111001532](https://doi.org/10.1142/S1402925111001532)
293. Balasubramaniam, S., Leibnitz, K., Liò, P., Botvich, D., & Murata, M. (2011). Biological Principles for Future Internet Architecture Design. *IEEE COMMUN MAG*, 49(7), 44-52.
294. Balocco, C., & Liò, P. (2011). Assessing ventilation system performance in isolation rooms. *ENERG BUILDINGS*, 43(1), 246-252. [doi:10.1016/j.enbuild.2010.09.020](https://doi.org/10.1016/j.enbuild.2010.09.020)
295. Giampieri, E., Remondini, D., de Oliveira, L., Castellani, G., & Liò, P. (2011). Stochastic analysis of a miRNA-protein toggle switch.. *Mol Biosyst*, 7(10), 2796-2803. [doi:10.1039/c1mb05086a](https://doi.org/10.1039/c1mb05086a)
296. Gilks, W. R., Nye, T. M. W., & Liò, P. (2011). A Variance-Components Model for Distance-Matrix Phylogenetic Reconstruction. *STAT APPL GENET MOL*, 10(1), . [doi:10.2202/1544-6115.1574](https://doi.org/10.2202/1544-6115.1574)
297. Hebenstreit, D., Gu, M., Haider, S., Turner, D. J., Liò, P., & Teichmann, S. A. (2011). EpiChIP: gene-by-gene quantification of epigenetic modification levels.. *Nucleic Acids Res*, 39(5), e27. [doi:10.1093/nar/gkq1226](https://doi.org/10.1093/nar/gkq1226)
298. Kitchovitch, S., & Liò, P. (2011). Community structure in social networks: applications for epidemiological modelling.. *PLoS One*, 6(7), e22220. [doi:10.1371/journal.pone.0022220](https://doi.org/10.1371/journal.pone.0022220)
299. Liò, P., Merelli, E., Paoletti, N., & Viceconti, M. (2011). A combined process algebraic and stochastic approach to bone remodeling. *Electronic Notes in Theoretical Computer Science*, 277(1), 41-52. [doi:10.1016/j.entcs.2011.09.034](https://doi.org/10.1016/j.entcs.2011.09.034)
300. Liò, P., & Verma, D. (2011). Biologically inspired networking and sensing: Algorithms and architectures. *Biologically Inspired Networking and Sensing Algorithms and Architectures*, 1-297. [doi:10.4018/978-1-61350-092-7](https://doi.org/10.4018/978-1-61350-092-7)
301. Umeton, R., Stracquadanio, G., Sorathiya, A., Papini, A., Liò, P., & Nicosia, G. (2011). Design of robust metabolic pathways. *Proceedings Design Automation Conference*, 747-752. [doi:10.1145/2024724.2024892](https://doi.org/10.1145/2024724.2024892)
302. Aldinucci, M., Bracciali, A., & Liò, P. (2010). Formal Synthetic Immunology. *Ercim News*, 82, 40-41.
303. Balocco, C., & Liò, P. (2010). Modelling infection spreading control in a Hospital isolation room. *Journal of Biomedical Science and Engineering*, 3(7), 653-663. [doi:10.4236/jbise.2010.37089](https://doi.org/10.4236/jbise.2010.37089)
304. Botta, M., Haider, S., Leung, I. X. Y., Liò, P., & Mozziconacci, J. (2010). Intra- and inter-chromosomal interactions correlate with CTCF binding genome wide.. *Mol Syst Biol*, 6, 426. [doi:10.1038/msb.2010.79](https://doi.org/10.1038/msb.2010.79)
305. Guazzini, A., Liò, P., Bagnoli, F., Passarella, A., & Conti, M. (2010). Cognitive network dynamics in chatlines. *Procedia Computer Science*, 1(1), 2355-2362. [doi:10.1016/j.procs.2010.04.265](https://doi.org/10.1016/j.procs.2010.04.265)
306. Kitchovitch, S., & Liò, P. (2010). Risk perception and disease spread on social networks. *Procedia Computer Science*, 1(1), 2345-2354. [doi:10.1016/j.procs.2010.04.264](https://doi.org/10.1016/j.procs.2010.04.264)
307. Liò, P., & Song, Y. (2010). A new approach for epileptic seizure detection: sample entropy based feature extraction and extreme learning machine. *Journal of Biomedical Science and Engineering*, 3(6), 556-567. [doi:10.4236/jbise.2010.36078](https://doi.org/10.4236/jbise.2010.36078)
308. Liò, P., & Verma, D. (2010). Biologically Inspired Networking. *IEEE NETWORK*, 24(3), 4.
309. Liò, P., & Verma, D. (2010). Guest Editorial: Biologically inspired networking. *IEEE Network*, 24(3), 4. [doi:10.1109/MNET.2010.5464220](https://doi.org/10.1109/MNET.2010.5464220)
310. Liò, P., Guazzini, A., Passarella, A., & Conti, M. (2010). Modeling perisaccadic time perception. *Journal of Biomedical Science and Engineering*, 3(12), 1133-1142. [doi:10.4236/jbise.2010.312147](https://doi.org/10.4236/jbise.2010.312147)
311. Lu, X. F., Wicker, F. D., Towsley, D., Xiong, Z., & Liò, P. (2010). Detection Probability Estimation of Directional Antennas and Omni-Directional Antennas. *WIRELESS PERS COMMUN*, 55(1), 51-63. [doi:10.1007/s11277-009-9785-1](https://doi.org/10.1007/s11277-009-9785-1)
312. Sorathiya, A., Bracciali, A., & Liò, P. (2010). An integrated modelling approach for R5-X4 mutation and HAART therapy assessment. *SWARM INTELL-US*, 4(4), 319-340. [doi:10.1007/s11721-010-0046-4](https://doi.org/10.1007/s11721-010-0046-4)
313. Sorathiya, A., Bracciali, A., & Liò, P. (2010). Formal reasoning on qualitative models of coinfection of HIV and Tuberculosis and HAART therapy.. *BMC Bioinformatics*, 11 Suppl 1(Suppl 1), S67. [doi:10.1186/1471-2105-11-S1-S67](https://doi.org/10.1186/1471-2105-11-S1-S67)

314. Bianchi, L., & Liò, P. (2009). La legge e il DNA. Le Scienze, Italian Edition Scientific American, (September 2009). Retrieved from <http://www.lescienze.it/>
315. Brilli, M., Fondi, M., Liò, P., & Fani, R. (2009). The Origin and Evolution of Nitrogen Fixation Genes. ORIGINS LIFE EVOL B, 39(3-4), 310-311.
316. Carla Balocco, C. B., Liò, P., & Luca Sani. (2009). Simulazione di un sistema di ventilazione per il controllo degli agenti eziologici nei reparti infettivi. Un caso reale. CDA CONDIZIONAMENTO DELL'ARIA RISCALDAMENTO REFRIGERAZIONE, May 2009(May 2009), 1-9.
317. Fondi, M., Emiliani, G., Liò, P., Gribaldo, S., & Fani, R. (2009). The evolution of histidine biosynthesis in archaea: insights into the his genes structure and organization in LUCA.. J Mol Evol, 69(5), 512-526. [doi:10.1007/s00239-009-9286-6](https://doi.org/10.1007/s00239-009-9286-6)
318. Lee, U., Magistretti, E., Gerla, M., Bellavista, P., Liò, P., & Lee, K. W. (2009). Bio-inspired multi-agent data harvesting in a proactive urban monitoring environment. AD HOC NETW, 7(4), 725-741. [doi:10.1016/j.adhoc.2008.03.009](https://doi.org/10.1016/j.adhoc.2008.03.009)
319. Leung, I. X. Y., Hui, P., Liò, P., & Crowcroft, J. (2009). Towards real-time community detection in large networks. PHYS REV E, 79(6), . [doi:10.1103/PhysRevE.79.066107](https://doi.org/10.1103/PhysRevE.79.066107)
320. Liò, P. (2009). Modeling space and clocks constraints in visual information processing. Frontiers in Neuroinformatics, 3. [doi:10.3389/conf.neuro.11.2009.08.137](https://doi.org/10.3389/conf.neuro.11.2009.08.137)
321. Lu, X. F., Towsley, D., Liò, P., Wicker, F., & Xiong, Z. (2009). Minimizing Detection Probability Routing in Ad Hoc Networks Using Directional Antennas. EURASIP J WIREL COMM, . [doi:10.1155/2009/256714](https://doi.org/10.1155/2009/256714)
322. Milanesi, L., Romano, P., Castellani, G., Remondini, D., & Liò, P. (2009). Trends in modeling Biomedical Complex Systems.. BMC Bioinformatics, 10 Suppl 12(Suppl 12), I1. [doi:10.1186/1471-2105-10-S12-I1](https://doi.org/10.1186/1471-2105-10-S12-I1)
323. Nguyen, V. A., Koukolikova-Nicola, Z., Bagnoli, F., & Liò, P. (2009). Noise and non-linearities in high-throughput data. J STAT MECH-THEORY E, . [doi:10.1088/1742-5468/2009/01/P01014](https://doi.org/10.1088/1742-5468/2009/01/P01014)
324. Schwarz, E., Leweke, F. M., Bahn, S., & Liò, P. (2009). Clinical bioinformatics for complex disorders: a schizophrenia case study.. BMC Bioinformatics, 10 Suppl 12(Suppl 12), S6. [doi:10.1186/1471-2105-10-S12-S6](https://doi.org/10.1186/1471-2105-10-S12-S6)
325. van der Wath, R. C., Wilson, A., Laurenti, E., Trumpp, A., & Liò, P. (2009). Estimating dormant and active hematopoietic stem cell kinetics through extensive modeling of bromodeoxyuridine label-retaining cell dynamics.. PLoS One, 4(9), e6972. [doi:10.1371/journal.pone.0006972](https://doi.org/10.1371/journal.pone.0006972)
326. Brilli, M., Mengoni, A., Fondi, M., Bazzicalupo, M., Liò, P., & Fani, R. (2008). Analysis of plasmid genes by phylogenetic profiling and visualization of homology relationships using Blast2Network.. BMC Bioinformatics, 9, 551. [doi:10.1186/1471-2105-9-551](https://doi.org/10.1186/1471-2105-9-551)
327. Brilli, M., Fani, R., & Liò, P. (2008). Current trends in the bioinformatic sequence analysis of metabolic pathways in prokaryotes.. Brief Bioinform, 9(1), 34-45. [doi:10.1093/bib/bbm051](https://doi.org/10.1093/bib/bbm051)
328. Cheng, T. M. K., Lu, Y. -E., Vendruscolo, M., Liò, P., & Blundell, T. L. (2008). Prediction by graph theoretic measures of structural effects in proteins arising from non-synonymous single nucleotide polymorphisms.. PLoS Comput Biol, 4(7), e1000135. [doi:10.1371/journal.pcbi.1000135](https://doi.org/10.1371/journal.pcbi.1000135)
329. Kershenbaum, A., Pappas, V., Lee, K. W., Liò, P., Sadler, B., & Verma, D. (2008). A biologically-inspired MANET architecture. Proceedings of SPIE the International Society for Optical Engineering, 6981. [doi:10.1117/12.783462](https://doi.org/10.1117/12.783462)
330. Liò, P., & Bishop, M. (2008). Modeling sequence evolution.. Methods Mol Biol, 452, 255-285. [doi:10.1007/978-1-60327-159-2_13](https://doi.org/10.1007/978-1-60327-159-2_13)
331. Lu, X., Wicker, F., Leung, I., Liò, P., & Xiong, Z. (2008). A location prediction algorithm for directional communication. Iwcmc 2008 International Wireless Communications and Mobile Computing Conference, 159-164. [doi:10.1109/IWCMC.2008.28](https://doi.org/10.1109/IWCMC.2008.28)
332. Bagnoli, F., Liò, P., & Sguanci, L. (2007). Risk perception in epidemic modeling.. Phys Rev E Stat Nonlin Soft Matter Phys, 76(6 Pt 1), 061904. [doi:10.1103/PhysRevE.76.061904](https://doi.org/10.1103/PhysRevE.76.061904)
333. Bianchi, L., & Liò, P. (2007). Forensic DNA and bioinformatics. BRIEF BIOINFORM, 8(2), 117-128. [doi:10.1093/bib/bbm006](https://doi.org/10.1093/bib/bbm006)
334. Brilli, M., Fani, R., & Liò, P. (2007). MotifScorer: using a compendium of microarrays to identify regulatory motifs. BIOINFORMATICS, 23(4), 493-495. [doi:10.1093/bioinformatics/btl607](https://doi.org/10.1093/bioinformatics/btl607)
335. Caretta-Cartozo, C., De Los Rios, P., Piazza, F., & Liò, P. (2007). Bottleneck genes and community structure in the cell cycle network of S. pombe. Plos Computational Biology, 3(6), 0968-0976. [doi:10.1371/journal.pcbi.0030103](https://doi.org/10.1371/journal.pcbi.0030103)
336. Chen, F., Archambault, V., Kar, A., Liò, P., D'Avino, P. P., Sinka, R., . . . Glover, D. M. (2007). Multiple protein phosphatases are required for mitosis in Drosophila. CURR BIOL, 17(4), 293-303. [doi:10.1016/j.cub.2007.01.068](https://doi.org/10.1016/j.cub.2007.01.068)
337. Liò, P. (2007). Topological and dynamical properties of genetic and social networks. PAMM, 7(1), 2070007-2070008. [doi:10.1002/pamm.200700842](https://doi.org/10.1002/pamm.200700842)
338. Papetti, C., Liò, P., Ruber, L., Patarnello, T., & Zardoya, R. (2007). Antarctic fish mitochondrial genomes lack ND6 gene. J MOL EVOL, 65(5), 519-528. [doi:10.1007/s00239-007-9030-z](https://doi.org/10.1007/s00239-007-9030-z)
339. van der Wath, E., Moutsianas, L., van der Wath, R., Visagie, A., Milanesi, L., & Liò, P. (2007). Grid methodology for identifying co-regulated genes and transcription factor binding sites. IEEE T NANOBIOSCI, 6(2), 162-167. [doi:10.1109/TNB.2007.897470](https://doi.org/10.1109/TNB.2007.897470)
340. Weston, E. M., Friday, A. E., & Liò, P. (2007). Biometric evidence that sexual selection has shaped the hominin face.. PLoS One, 2(8), e710. [doi:10.1371/journal.pone.0000710](https://doi.org/10.1371/journal.pone.0000710)
341. Ambesi-Impiombato, A., Bansal, M., Liò, P., & di Bernardo, D. (2006). Computational framework for the prediction of transcription factor binding sites by multiple data integration.. BMC Neurosci, 7 Suppl 1(Suppl 1), S8. [doi:10.1186/1471-2202-7-S1-S8](https://doi.org/10.1186/1471-2202-7-S1-S8)
342. Bagnoli, F., Liò, P., & Sguanci, L. (2006). Modeling viral coevolution: HIV multi-clonal persistence and competition dynamics. PHYSICA A, 366(1), 333-346. [doi:10.1016/j.physa.2005.10.055](https://doi.org/10.1016/j.physa.2005.10.055)
343. Fani, R., Brilli, M., & Liò, P. (2006). Inference from proteobacterial operons shows piecewise organization: a reply to Price et al.. J Mol Evol, 63(4), 577-580. [doi:10.1007/s00239-006-0074-2](https://doi.org/10.1007/s00239-006-0074-2)
344. Nye, T. M. W., Liò, P., & Gilks, W. R. (2006). A novel algorithm and web-based tool for comparing two alternative phylogenetic trees. BIOINFORMATICS, 22(1), 117-119. [doi:10.1093/bioinformatics/bti720](https://doi.org/10.1093/bioinformatics/bti720)
345. Sguanci, L., Bagnoli, F., & Liò, P. (2006). Mathematical Model of HIV superinfection dynamics and R5 to X4 switch. Retrieved from https://doi.org/10.1007/11885191_14
346. Fani, R., Brilli, M., & Liò, P. (2005). The origin and evolution of operons: The piecewise building of the proteobacterial histidine operon. J MOL EVOL, 60(3), 378-390. [doi:10.1007/s00239-004-0198-1](https://doi.org/10.1007/s00239-004-0198-1)
347. Piazza, F., & Liò, P. (2005). Statistical analysis of simple repeats in the human genome. PHYSICA A, 347, 472-488. [doi:10.1016/j.physa.2004.08.038](https://doi.org/10.1016/j.physa.2004.08.038)
348. Liò, P., & Goldman, N. (2004). Phylogenomics and bioinformatics of SARS-CoV. TRENDS MICROBIOL, 12(3), 106-111.
349. Rustici, G., Mata, J., Kivinen, K., Liò, P., Penkett, C. J., Burns, G., . . . Bähler, J. (2004). Periodic gene expression program of the

- fission yeast cell cycle. *Nature Genetics*, 36(8), 809-817.
[doi:10.1038/ng1377](https://doi.org/10.1038/ng1377)
350. Tadesse, M. G., Vannucci, M., & Liò, P. (2004). Identification of DNA regulatory motifs using Bayesian variable selection. *BIOINFORMATICS*, 20(16), 2553-2561.
[doi:10.1093/bioinformatics/bth282](https://doi.org/10.1093/bioinformatics/bth282)
 351. Liò, P. (2003). Dimensionality and dependence problems in statistical genomics.. *Brief Bioinform*, 4(2), 168-177.
[doi:10.1093/bib/4.2.168](https://doi.org/10.1093/bib/4.2.168)
 352. Liò, P. (2003). Il genoma della Sars. *Le Scienze Italian Edition of Scientific American*, June 2003(June 2003). Retrieved from <http://www.lescienze.it/>
 353. Liò, P. (2003). Statistical bioinformatic methods in microbial genome analysis. *BIOESSAYS*, 25(3), 266-273.
[doi:10.1002/bies.10231](https://doi.org/10.1002/bies.10231)
 354. Liò, P. (2003). Wavelets in bioinformatics and computational biology: state of art and perspectives. *BIOINFORMATICS*, 19(1), 2-9.
 355. Liò, P. (2002). Investigating the relationship between genome structure, composition, and ecology in prokaryotes. *MOL BIOL EVOL*, 19(6), 789-800.
 356. Liò, P., & Goldman, N. (2002). Modeling mitochondrial protein evolution using structural information.. *J Mol Evol*, 54(4), 519-529.
[doi:10.1007/s00239001-0052-7](https://doi.org/10.1007/s00239001-0052-7)
 357. Liò, P. (2002). Una vita per le proteine. *Le Scienze Italian Edition of Scientific American*, February 2002(February 2002).
 358. Skaer, N., Pistillo, D., Gibert, J. M., Liò, P., Wulbeck, C., & Simpson, P. (2002). Gene duplication at the achaete-scute complex and morphological complexity of the peripheral nervous system in Diptera. *TRENDS GENET*, 18(8), 399-405.
 359. Bogani, P., Simoni, A., Liò, P., Germinario, A., & Buiatti, M. (2001). Molecular variation in plant cell populations evolving in vitro in different physiological contexts.. *Genome*, 44(4), 549-558. Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/11550888>
 360. Liò, P. (2001). Dal Genoma al Fisioma. Retrieved from <http://www.lescienze.it/>
 361. Liò, P. (2001). Le nuove sfide della filogenesi molecolare. *Le Scienze Italian Edition of Scientific American*, February 2001(February 2001).
 362. Massingham, T., Davies, L. J., & Liò, P. (2001). Analysing gene function after duplication. *BIOESSAYS*, 23(10), 873-876.
 363. Vannucci, M., & Liò, P. (2001). Non-decimated wavelet analysis of biological sequences: applications to protein structure and genomics. *Sankhyā: The Indian Journal of Statistics, Series B*, 63b2, 218-233.
 364. Whelan, S., Liò, P., & Goldman, N. (2001). Molecular phylogenetics: state-of-the-art methods for looking into the past. *TRENDS GENET*, 17(5), 262-272.
 365. Fani, R., Gallo, R., & Liò, P. (2000). Molecular evolution of nitrogen fixation: the evolutionary history of the nifD, nifK, nifE, and nifN genes.. *J Mol Evol*, 51(1), 1-11.
[doi:10.1007/s002390010061](https://doi.org/10.1007/s002390010061)
 366. Hagelberg, E., Goldman, N., Liò, P., Whelan, S., Schiefenöhovel, W., Clegg, J. B., & Bowden, D. K. (2000). Evidence for mitochondrial DNA recombination in a human population of island Melanesia: correction. *P ROY SOC LOND B BIO*, 267(1452), 1595-1596.
 367. Liò, P., & Vannucci, M. (2000). Finding pathogenicity islands and gene transfer events in genome data. *BIOINFORMATICS*, 16(10), 932-940.
 368. Liò, P. (2000). Siamo uomini non DNA robot..
 369. Liò, P., & Vannucci, M. (2000). Wavelet change-point prediction of transmembrane proteins.. *Bioinformatics*, 16(4), 376-382.
[doi:10.1093/bioinformatics/16.4.376](https://doi.org/10.1093/bioinformatics/16.4.376)
 370. Thomas, N. S., Wilkinson, J., Liò, P., Doull, I., Morton, N. E., & Holgate, S. T. (2000). [Genetic factors involved in asthma and atopy. Studies in British families].. *Rev Mal Respir*, 17(1 Pt 2), 177-182. Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/10902131>
 371. Thomas, N. S., Wilkinson, J., Liò, P., Doull, I., Morton, N. E., & Holgate, S. T. (2000). Investigation of the genetic factors underlying asthma and atopy in outbred UK populations. *Revue Des Maladies Respiratoires*, 17(1 BIS), 177-182.
 372. Hagelberg, E., Goldman, N., Liò, P., Whelan, S., Schiefenöhovel, W., Clegg, J. B., & Bowden, D. K. (1999). Evidence for mitochondrial DNA recombination in a human population of island Melanesia.. *Proc Biol Sci*, 266(1418), 485-492.
[doi:10.1098/rspb.1999.0663](https://doi.org/10.1098/rspb.1999.0663)
 373. Liò, P., & Goldman, N. (1999). Using protein structural information in evolutionary inference: transmembrane proteins.. *Mol Biol Evol*, 16(12), 1696-1710.
[doi:10.1093/oxfordjournals.molbev.a026083](https://doi.org/10.1093/oxfordjournals.molbev.a026083)
 374. Mori, E., Liò, P., Daly, S., Damiani, G., Perito, B., & Fani, R. (1999). Molecular nature of RAPD markers from *Haemophilus influenzae* Rd genome.. *Res Microbiol*, 150(2), 83-93. [doi:10.1016/s0923-2508\(99\)80026-6](https://doi.org/10.1016/s0923-2508(99)80026-6)
 375. Liò, P., Goldman, N., Thorne, J. L., & Jones, D. T. (1998). PASSML: combining evolutionary inference and protein secondary structure prediction.. *Bioinformatics*, 14(8), 726-733.
[doi:10.1093/bioinformatics/14.8.726](https://doi.org/10.1093/bioinformatics/14.8.726)
 376. Liò, P., & Ruffo, S. (1998). Searching for genomic constraints. *NUOVO CIMENTO D*, 20(1), 113-127.
 377. Bogani, P., Liò, P., Intrieri, M. C., & Buiatti, M. (1997). A physiological and molecular analysis of the genus *Nicotiana*.. *Mol Phylogenet Evol*, 7(1), 62-70. [doi:10.1006/mpev.1996.0356](https://doi.org/10.1006/mpev.1996.0356)
 378. Dewar, J., Wheatley, A., Wilkinson, J., Holgate, S. T., Thomas, N. S., Liò, P., . . . Hall, I. P. (1997). Association of the Gln 27 beta 2-adrenoceptor polymorphism and IgE variability in asthmatic families.. *Chest*, 111(6 Suppl), 78S-79S.
[doi:10.1378/chest.111.6_supplement.78s](https://doi.org/10.1378/chest.111.6_supplement.78s)
 379. Fani, R., Tamburini, E., Mori, E., Lazcano, A., Liò, P., Barberio, C., . . . Polsinelli, M. (1997). Paralogous histidine biosynthetic genes: evolutionary analysis of the *Saccharomyces cerevisiae* HIS6 and HIS7 genes.. *Gene*, 197(1-2), 9-17. [doi:10.1016/s0378-1119\(97\)00146-7](https://doi.org/10.1016/s0378-1119(97)00146-7)
 380. Liò, P. (1997). Comparison of multipoint analyses for complex inheritance: IDDM and asthma. *Annals of Human Genetics*, 61(6), 541-542.
 381. Liò, P., & Morton, N. E. (1997). Comparison of parametric and nonparametric methods to map oligogenes by linkage.. *Proc Natl Acad Sci U S A*, 94(10), 5344-5348. [doi:10.1073/pnas.94.10.5344](https://doi.org/10.1073/pnas.94.10.5344)
 382. Liò, P. (1997). Correlation methods for genomic constraints analysis. *Annals of Human Genetics*, 61(6), 542.
 383. Alifano, P., Fani, R., Liò, P., Lazcano, A., Bazzicalupo, M., Carlomagno, M. S., & Bruni, C. B. (1996). Histidine biosynthetic pathway and genes: structure, regulation, and evolution.. *Microbiol Rev*, 60(1), 44-69. [doi:10.1128/mr.60.1.44-69.1996](https://doi.org/10.1128/mr.60.1.44-69.1996)
 384. Bogani, P., Simoni, A., Liò, P., Scialpi, A., & Buiatti, M. (1996). Genome flux in tomato cell clones cultured in vitro in different physiological equilibria. II. A RAPD analysis of variability.. *Genome*, 39(5), 846-853. [doi:10.1139/g96-107](https://doi.org/10.1139/g96-107)
 385. Liò, P., Politi, A., Ruffo, S., & Buiatti, M. (1996). Analysis of genomic patchiness of *Haemophilus influenzae* and *Saccharomyces cerevisiae* chromosomes.. *J Theor Biol*, 183(4), 455-469. [doi:10.1006/jtbi.1996.0235](https://doi.org/10.1006/jtbi.1996.0235)
 386. Liò, P., Politi, A., Buiatti, M., & Ruffo, S. (1996). High statistics block entropy measures of DNA sequences.. *J Theor Biol*, 180(2), 151-160. [doi:10.1006/jtbi.1996.0091](https://doi.org/10.1006/jtbi.1996.0091)

- 387.** Bagnoli, F., & Liò, P. (1995). Selection, mutations and codon usage in a bacterial model.. *J Theor Biol*, 173(3), 271-281.
[doi:10.1006/jtbi.1995.0062](https://doi.org/10.1006/jtbi.1995.0062)
- 388.** Fani, R., Liò, P., & Lazcano, A. (1995). Molecular evolution of the histidine biosynthetic pathway.. *J Mol Evol*, 41(6), 760-774.
[doi:10.1007/BF00173156](https://doi.org/10.1007/BF00173156)
- 389.** VICARIO, F., VENDRAMIN, G. G., ROSSI, P., Liò, P., & GIANNINI, R. (1995). ALLOZYME, CHLOROPLAST DNA AND RAPD MARKERS FOR DETERMINING GENETIC-RELATIONSHIPS BETWEEN ABIES-ALBA AND THE RELIC POPULATION OF ABIES NEBRODENSIS. *THEOR APPL GENET*, 90(7-8), 1012-1018.
- 390.** Fani, R., Liò, P., Chiarelli, I., & Bazzicalupo, M. (1994). The evolution of the histidine biosynthetic genes in prokaryotes: a common ancestor for the hisA and hisF genes.. *J Mol Evol*, 38(5), 489-495. [doi:10.1007/BF00178849](https://doi.org/10.1007/BF00178849)
- 391.** Liò, P., Ruffo, S., & Buiatti, M. (1994). Third codon G + C periodicity as a possible signal for an "internal" selective constraint.. *J Theor Biol*, 171(2), 215-223.
[doi:10.1006/jtbi.1994.1225](https://doi.org/10.1006/jtbi.1994.1225)

Conferences, proceedings and edited-volume contributions

Ordered by year (descending), then first author and title.

392. Buscemi, A., Proverbio, D., Di Stefano, A., Han, T. A., Castignani, G., & Liò, P. (2026). Strategic Communication and Language Bias in Multi-agent LLM Coordination. *Lecture Notes in Computer Science*, 16355, 289-301. [doi:10.1007/978-981-95-4963-4_24](https://doi.org/10.1007/978-981-95-4963-4_24)
393. Giannetti, C., Trappolini, G., Tonello, N., Silvestri, F., & Liò, P. (2026). The Mechanics of Interference: Defusing Distractors in RAG via Sparse Autoencoder Interventions. In *Findings of the Association for Computational Linguistics: ACL 2026* (pp. 11999-12007). Association for Computational Linguistics. [doi:10.18653/v1/2026.findings-acl.583](https://doi.org/10.18653/v1/2026.findings-acl.583)
394. Koszut, S., Nallaperuma-Herzberg, S., & Liò, P. (2026). Decoding the Stressed Brain with Geometric Machine Learning. *Lecture Notes in Computer Science*, 16039, 3-16. [doi:10.1007/978-3-032-00656-1_1](https://doi.org/10.1007/978-3-032-00656-1_1)
395. Levin, M., Vali, M., Vali, S., Liò, P., Weiss, S. M., & Thum, M.-Y. (2026). Late-Fusion of 2D Ultrasound and IVF Cycle Data for Predicting Clinical Pregnancy Outcomes. In P. Andreev, W. Van Woensel, J. Holmes, & A. Sauré (Eds.), *Artificial Intelligence in Medicine* (pp. 301-311). Springer Nature Switzerland. [doi:10.1007/978-3-032-30710-1_37](https://doi.org/10.1007/978-3-032-30710-1_37)
396. Li, M., Fang, Y., Shen, D., Feng, H., Zhuang, X., Xia, K., & Liò, P. (2026). High-Pass Matters: Theoretical Insights and Sheaflet-Based Design for Hypergraph Neural Networks. In *Proceedings of the AAAI Conference on Artificial Intelligence Vol. 40* (pp. 23039-23046). Association for the Advancement of Artificial Intelligence (AAAI). [doi:10.1609/aaai.v40i27.39469](https://doi.org/10.1609/aaai.v40i27.39469)
397. Li, M., Wang, Y., Gao, C., Bai, L., Fang, Y., Zhuang, X., & Liò, P. (2026). Permutation Equivariant Framelet-based Hypergraph Neural Networks. *Proceedings of the AAAI Conference on Artificial Intelligence*, 40(27), 23079-23086. [doi:10.1609/aaai.v40i27.39474](https://doi.org/10.1609/aaai.v40i27.39474)
398. Mamo, T. H., Hasanuzzaman, M., Wang, H., & Liò, P. (2026). ECG-SurvHF: Adversarial Transformer Modeling for Heart Failure Risk Prediction. In *Artificial Intelligence in Medicine* (pp. 285-295). Springer Nature Switzerland.
399. Marozzo, F., Belcastro, L., Cosentino, C., & Liò, P. (2026). Balanced and Token-Efficient Summarization of User Reviews via Stratified Sampling and Large Language Models. In *Machine Learning and Knowledge Discovery in Databases. Research Track (Lecture Notes in Computer Science, Vol. 16016, pp. 290-306)*. Springer. [doi:10.1007/978-3-032-06078-5_17](https://doi.org/10.1007/978-3-032-06078-5_17)
400. Nallaperuma-Herzberg, S., Balse, R., Koszut, S., Liò, P., Bevan, A., & Bekinschtein, T. (2026). Building Emotional Intelligence into Digital Therapy AI Agents through Neurofeedback. In *Neuro for AI & AI for Neuro: Towards Multi-Modal Natural Intelligence* (pp. 149-154). *Proceedings of Machine Learning Research*. Retrieved from <https://doi.org/10.17863/CAM.123923>
401. Prinzi, F., Ceccarelli, F., Holden, S. B., Liò, P., & Vitabile, S. (2026). The Importance of Temporal Integration in DCE-MRI for Improved Breast Cancer Diagnosis. In *Socially Aware and Responsible AI Applications (Smart Innovation, Systems and Technologies, Vol. 460, pp. 45-54)*. Springer. [doi:10.1007/978-981-95-4076-1_3](https://doi.org/10.1007/978-981-95-4076-1_3)
402. Sun, Z., Harit, A., Cristea, A., Donnelly, C. A., & Liò, P. (2026). GLANCE: Graph Logic Attention Network with Cluster Enhancement for Heterophilous Graph Representation Learning. *Lecture Notes in Computer Science*, 16297, 51-62. [doi:10.1007/978-981-95-5009-8_4](https://doi.org/10.1007/978-981-95-5009-8_4)
403. Zahoor, S., Liò, P., Dias, G., & Hasanuzzaman, M. (2026). Translating Genes into Insight: Causal Genomics for Diabetes Risk Prediction. In *Artificial Intelligence in Healthcare (Lecture Notes in Computer Science, Vol. 16038, pp. 245-262)*. Springer. [doi:10.1007/978-3-032-00652-3_18](https://doi.org/10.1007/978-3-032-00652-3_18)
404. Bardozzo, F., Fiore, P., Liò, P., & Tagliaferri, R. (2025). FP-Elegans M1: Feature Pyramid Reservoir Connectome Transformers and Multi-backbone Feature Extractors for MEDMNIST2D-V2. In *Lecture Notes in Computer Science Vol. 15276* (pp. 111-120). Springer Nature. [doi:10.1007/978-3-031-89704-7_9](https://doi.org/10.1007/978-3-031-89704-7_9)
405. Bergna, R., Calvo-Ordoñez, S., Opolka, F. L., Liò, P., & Hernandez-Lobato, J. M. (2025). UNCERTAINTY MODELING IN GRAPH NEURAL NETWORKS VIA STOCHASTIC DIFFERENTIAL EQUATIONS. *13th International Conference on Learning Representations ICLR 2025*, 84237-84253.
406. Buscemi, A., Proverbio, D., Di Stefano, A., Han, T. A., Castignani, G., & Liò, P. (2025). FAIRGAME: A Framework for AI Agents Bias Recognition Using Game Theory. *Frontiers in Artificial Intelligence and Applications*. [doi:10.3233/faia251300](https://doi.org/10.3233/faia251300)
407. Caso, F., Trappolini, G., Bacciu, A., Liò, P., & Silvestri, F. (2025). Renormalized Graph Representations for Node Classification. In *2025 International Joint Conference on Neural Networks (IJCNN) Vol. 00* (pp. 1-8). Institute of Electrical and Electronics Engineers (IEEE). [doi:10.1109/ijcnn64981.2025.11228915](https://doi.org/10.1109/ijcnn64981.2025.11228915)
408. Cosentino, C., Defilippo, A., Guzzi, P. H., Liò, P., & Iuliano, A. (2025). Denoising Probabilistic Diffusion Models, ResNet, and Class Activation Maps for Healthcare Imaging. In *2025 IEEE International Workshop on Metrology for Living Environment (MetroLivEnv) Vol. 00* (pp. 515-520). Institute of Electrical and Electronics Engineers (IEEE). [doi:10.1109/metrolivenv64961.2025.11107113](https://doi.org/10.1109/metrolivenv64961.2025.11107113)
409. Cretu, M., Harris, C., Igashov, I., Schneuing, A., Segler, M., Correia, B., . . . Liò, P. (2025). SYNFLOWNET: DESIGN OF DIVERSE AND NOVEL MOLECULES WITH SYNTHESIS CONSTRAINTS. In *13th International Conference on Learning Representations ICLR 2025* (pp. 87172-87197).
410. Defilippo, A., Guzzi, P. H., Veltri, P., & Liò, P. (2025). GraphNet: A Novel Method Based on Graph Neural Networks for Emergency Healthcare Management. In *Artificial Intelligence in Medicine (Lecture Notes in Computer Science, Vol. 15735, pp. 132-136)*. Springer. [doi:10.1007/978-3-031-95841-0_25](https://doi.org/10.1007/978-3-031-95841-0_25)
411. Dong, T., Jamnik, M., & Liò, P. (2025). Neural Reasoning for Sure Through Constructing Explainable Models. In *Proceedings of the AAAI Conference on Artificial Intelligence Vol. 39* (pp. 11598-11606). Association for the Advancement of Artificial Intelligence (AAAI). [doi:10.1609/aaai.v39i11.33262](https://doi.org/10.1609/aaai.v39i11.33262)
412. Duta, I., & Liò, P. (2025). SPHINX: Structural Prediction using Hypergraph Inference Network. *INTERNATIONAL CONFERENCE ON MACHINE LEARNING*, 267, 14884-14901. Retrieved from https://www.webofscience.com/api/gateway?GWVersion=2&SrcApp=ucam_elements_live&SrcAuth=WosAPI&KeyUT=WOS:001693104000271&DestLinkType=FullRecord&DestApp=WOS_CPL
413. Joshi, C. K., Jamasb, A. R., Viñas, R., Harris, C., Mathis, S. V., Morehead, A., . . . Liò, P. (2025). GRNADE: GEOMETRIC DEEP LEARNING FOR 3D RNA INVERSE DESIGN. In *13th International Conference on Learning Representations ICLR 2025* (pp. 56390-56415).
414. Komorowska, U. J., Vargas, F., Rondina, A., Liò, P., & Jamnik, M. (2025, July 13). NMA-tune: Generating Highly Designable and Dynamics Aware Protein Backbones. In *International Conference on Machine Learning, ICML 2025*. ACM.
415. Li, M., Fang, Y., Wang, Y., Feng, H., Gu, Y., Bai, L., & Liò, P. (2025). Deep Hypergraph Neural Networks with Tight Framelets. In *Proceedings of the AAAI Conference on Artificial Intelligence Vol. 39* (pp. 18385-18392). Association for the Advancement of Artificial Intelligence (AAAI). [doi:10.1609/aaai.v39i17.34023](https://doi.org/10.1609/aaai.v39i17.34023)

416. Li, M., Cheng, Y., Bai, L., Cao, F., Lu, K., Liang, J., & Liò, P. (2025). EduLLM: Leveraging Large Language Models and Framelet-Based Signed Hypergraph Neural Networks for Student Performance Prediction. In INTERNATIONAL CONFERENCE ON MACHINE LEARNING Vol. 267 (pp. 34119-34143). Retrieved from https://www.webofscience.com/api/gateway?GWVersion=2&SrcApp=ucam_elements_live&SrcAuth=WosAPI&KeyUT=WOS:001693137400137&DestLinkType=FullRecord&DestApp=WOS_CPL
417. Li, K., Zheng, J., Ni, W., Huang, H., Liò, P., Dressler, F., & Akan, O. B. (2025). Explainable Graph Attention-Driven Fairness Manipulation for Federated Learning in EdgeloT. In 2025 IEEE/CIC International Conference on Communications in China (ICCC) Vol. 00 (pp. 1-6). Institute of Electrical and Electronics Engineers (IEEE). doi:10.1109/iccc65529.2025.11148705
418. Li, M., Gu, Y., Wang, Y., Fang, Y., Bai, L., Zhuang, X., & Liò, P. (2025). When Hypergraph Meets Heterophily: New Benchmark Datasets and Baseline. In Proceedings of the AAAI Conference on Artificial Intelligence Vol. 39 (pp. 18377-18384). Association for the Advancement of Artificial Intelligence (AAAI). doi:10.1609/aaai.v39i17.34022
419. Lu, X., Li, Y., & Liò, P. (2025). MSPSL: An Efficient Multi-Server Parallel Split Learning. In 2025 IEEE 45th International Conference on Distributed Computing Systems Workshops (ICDCSW) Vol. 00 (pp. 717-724). Institute of Electrical and Electronics Engineers (IEEE). doi:10.1109/icdcs63273.2025.00131
420. Lu, X., Li, Y., & Liò, P. (2025). Split Learning Privacy Protection Method Based on Differential Computing. In 2025 IEEE Symposium on Computers and Communications (ISCC) Vol. 00 (pp. 1-6). Institute of Electrical and Electronics Engineers (IEEE). doi:10.1109/iscc65549.2025.11326069
421. Mamalakis, M., de Vareilles, H., Murray, G. K., Liò, P., & Suckling, J. (2025). The Explanation Necessity for Healthcare AI. In 2025 IEEE Symposium on Trustworthy, Explainable and Responsible Computational Intelligence (CITREx Companion) Vol. 00 (pp. 1-5). Institute of Electrical and Electronics Engineers (IEEE). doi:10.1109/citrexcompanion65208.2025.10981502
422. Nallaperuma, S., Balse, R., & Liò, P. (2025, September 8). Fine-Tuning Open-Source LLMs on Multi-Turn CBT Conversations. In 2nd International Conference on Artificial Intelligence in Healthcare (AliH 2025). Jesus College, University of Cambridge, UK.
423. Nallaperuma, S., Balse, R., Koszut, S., Liò, P., Bekinschtein, T., & Bevan, A. (2025, September 8). Towards an Empathetic and Meta-Cognitive Digital Therapy Framework. In 2nd International Conference on Artificial Intelligence in Healthcare (AliH 2025). Jesus College, University of Cambridge, UK.
424. Norcliffe, A., Lee, C., Imrie, F., van der Schaar, M., & Liò, P. (2025). Stochastic Encodings for Active Feature Acquisition. INTERNATIONAL CONFERENCE ON MACHINE LEARNING, 267, 46784-46814. Retrieved from https://www.webofscience.com/api/gateway?GWVersion=2&SrcApp=ucam_elements_live&SrcAuth=WosAPI&KeyUT=WOS:001693162000076&DestLinkType=FullRecord&DestApp=WOS_CPL
425. Pertl, L., Xuanyuan, H., & Liò, P. (2025). Superposition in Graph Neural Networks. Proceedings of Machine Learning Research, 322.
426. Petruzzellis, F., Cornelio, C., & Liò, P. (2025). Hierarchical Planning for Complex Tasks with Knowledge Graph-RAG and Symbolic Verification. INTERNATIONAL CONFERENCE ON MACHINE LEARNING, 267, 49105-49127. Retrieved from https://www.webofscience.com/api/gateway?GWVersion=2&SrcApp=ucam_elements_live&SrcAuth=WosAPI&KeyUT=WOS:001693162000161&DestLinkType=FullRecord&DestApp=WOS_CPL
427. Satu, M. S., Arefin, M. S., Liò, P., & Kaiser, M. S. (2025). Preface. Lecture Notes in Networks and Systems, 1235 LNNS, xvii-xviii.
428. Sun, Z., Harit, A., Yu, J., Wang, J., & Liò, P. (2025). Advanced Hypergraph Mining for Web Applications Using Sphere Neural Networks. In Companion Proceedings of the ACM on Web Conference 2025 (pp. 1316-1320). Association for Computing Machinery (ACM). doi:10.1145/3701716.3715577
429. Zhou, G., Azevedo, T., Quaegebeur, A., Pansuwan, T., Rittman, T., & Liò, P. (2025). Uncertainty-Aware Tau Detection in Progressive Supranuclear Palsy Using Object Detection Models. In 2025 14th International Symposium on Image and Signal Processing and Analysis (ISPA) Vol. 00 (pp. 139-144). Institute of Electrical and Electronics Engineers (IEEE). doi:10.1109/ispa66905.2025.11259454
430. Zhu, S., Lu, X., & Liò, P. (2025). Proactive Network Defense with Multi-Objective Hierarchical Reward-Driven Reinforcement Learning. In 2025 IEEE International Conference on Blockchain Technology and Information Security (ICBCTIS) Vol. 00 (pp. 1-5). Institute of Electrical and Electronics Engineers (IEEE). doi:10.1109/icbctis66509.2025.11387190
431. Zuo, K., Jiang, Y., Mo, F., & Liò, P. (2025). KG4Diagnosis: A Hierarchical Multi-Agent LLM Framework with Knowledge Graph Enhancement for Medical Diagnosis. AAAI BRIDGE PROGRAM ON AI FOR MEDICINE AND HEALTHCARE, 281, 195-204. Retrieved from https://www.webofscience.com/api/gateway?GWVersion=2&SrcApp=ucam_elements_live&SrcAuth=WosAPI&KeyUT=WOS:001595157000022&DestLinkType=FullRecord&DestApp=WOS_CPL
432. Ali, R., Kulyte, P., Borde, H. S. D. O., & Liò, P. (2024). Metric Learning for Clifford Group Equivariant Neural Networks. GEOMETRY-GROUNDED REPRESENTATION LEARNING AND GENERATIVE MODELING WORKSHOP, GRAM AT ICML 2024, 251, 14 pages. Retrieved from https://www.webofscience.com/api/gateway?GWVersion=2&SrcApp=ucam_elements_live&SrcAuth=WosAPI&KeyUT=WOS:001479783300010&DestLinkType=FullRecord&DestApp=WOS_CPL
433. Bazaga, A., Liò, P., & Micklem, G. (2024). HyperBERT: Mixing Hypergraph-Aware Layers with Language Models for Node Classification on Text-Attributed Hypergraphs. Unknown Journal, 9181-9193. doi:10.18653/v1/2024.findings-emnlp.537
434. Bazaga, A., Liò, P., & Micklem, G. (2024). LANGUAGE MODEL KNOWLEDGE DISTILLATION FOR EFFICIENT QUESTION ANSWERING IN SPANISH. 2nd Tiny Papers Track at Iclr 2024 Tiny Papers @ Iclr 2024.
435. Bazaga, A., Liò, P., & Micklem, G. (2024). UNSUPERVISED PRETRAINING FOR FACT VERIFICATION BY LANGUAGE MODEL DISTILLATION. 12th International Conference on Learning Representations Iclr 2024.
436. Ceccarelli, F., Giusti, L., Holden, S., & Liò, P. (2024). Integrating Structure and Sequence: Protein Graph Embeddings via GNNs and LLMs. In 13th International Conference on Pattern Recognition Applications and Methods. doi:10.5220/0012453600003654
437. Ceccarelli, F., Prinzi, F., Liò, P., Vitabile, S., & Holden, S. B. (2024). MUGI-MRI: Enhancing Breast Cancer Classification through Multiplex Graph Neural Networks in DCE-MRI. In 2024 International Joint Conference on Neural Networks (IJCNN) Vol. 00 (pp. 1-8). Institute of Electrical and Electronics Engineers (IEEE). doi:10.1109/ijcnn60899.2024.10650117
438. Ceccarelli, F., Holden, S. B., & Liò, P. (2024, June 30). MUGI-MRI: Enhancing Breast Cancer Classification through Multiplex Graph Neural Networks in DCE-MRI. In The International Joint Conference on Neural Networks (IJCNN). Yokohama, Japan.
439. Denker, A., Vargas, F., Padhy, S., Didi, K., Mathis, S., Dutordoir, V., . . . Liò, P. (2024). DEFT: Efficient Fine-tuning of Diffusion Models by Learning the Generalised $\$h\$$ -transform. In Advances in Neural Information Processing Systems 37 (pp. 19636-19682). Curran Associates. doi:10.52202/079017-0620

440. Giusti, L., Reu, T., Ceccarelli, F., Bodnar, C., & Liò, P. (2024). Topological Message Passing for Higher - Order and Long - Range Interactions. In 2024 International Joint Conference on Neural Networks (IJCNN) Vol. 00 (pp. 1-8). Institute of Electrical and Electronics Engineers (IEEE). [doi:10.1109/ijcnn60899.2024.10650343](https://doi.org/10.1109/ijcnn60899.2024.10650343)
441. Hernandez Caralt, F., Gil, G. B., Duta, I., Liò, P., & Alarcon Cot, E. (2024). Joint Diffusion Processes as an Inductive Bias in Sheaf Neural Networks. GEOMETRY-GROUNDED REPRESENTATION LEARNING AND GENERATIVE MODELING WORKSHOP, GRAM AT ICML 2024, 251, 15 pages. Retrieved from https://www.webofscience.com/api/gateway?GWVersion=2&SrcApp=ucam_elements_live&SrcAuth=WosAPI&KeyUT=WOS:001479783300019&DestLinkType=FullRecord&DestApp=WOS_CPL
442. Huang, K., Wang, Y. G., Li, M., & Liò, P. (2024). How Universal Polynomial Bases Enhance Spectral Graph Neural Networks: Heterophily, Over-smoothing, and Over-squashing. Proceedings of Machine Learning Research, 235, 20310-20330.
443. Huang, K., Cao, W., Ta, H., Xiao, X., & Liò, P. (2024). Optimizing Polynomial Graph Filters: A Novel Adaptive Krylov Subspace Approach. In Proceedings of the ACM Web Conference 2024 (pp. 1057-1068). Association for Computing Machinery (ACM). [doi:10.1145/3589334.3645705](https://doi.org/10.1145/3589334.3645705)
444. Iuliano, A., Liò, P., Manfredi, G., & Romaniello, F. (2024). Denoising Probabilistic Diffusion Models for Synthetic Healthcare Image Generation. In 2024 IEEE International Workshop on Metrology for Living Environment (MetroLivEnv) Vol. 00 (pp. 415-420). Institute of Electrical and Electronics Engineers (IEEE). [doi:10.1109/metrolivenv60384.2024.10615511](https://doi.org/10.1109/metrolivenv60384.2024.10615511)
445. Komorowska, U. J., Mathis, S., Didi, K., Vargas, F., Liò, P., & Jamnik, M. (2024). Dynamics-Informed Protein Design with Structure Conditioning. In ICLR 2024. Vienna, Austria. Retrieved from <https://iclr.cc/virtual/2024/poster/18018>
446. Kovac, V., Bekkers, E. J., Liò, P., & Eijkelboom, F. (2024). E(n) Equivariant Message Passing Cellular Networks. In GEOMETRY-GROUNDED REPRESENTATION LEARNING AND GENERATIVE MODELING WORKSHOP, GRAM AT ICML 2024 Vol. 251 (pp. 14 pages). Retrieved from https://www.webofscience.com/api/gateway?GWVersion=2&SrcApp=ucam_elements_live&SrcAuth=WosAPI&KeyUT=WOS:001479783300013&DestLinkType=FullRecord&DestApp=WOS_CPL
447. Luca, V. M. D., Longa, A., Liò, P., & Passerini, A. (2024). xAI-Drop: Don't Use What You Cannot Explain.. In G. Wolf, & S. Krishnaswamy (Eds.), LoG Vol. 269 (pp. 16). PMLR. Retrieved from <https://proceedings.mlr.press/v269/>
448. Vali, M., Yang, J., Vali, S., Azevedo, T., Liò, P., & Thum, Y. (2024). End-to-end deep learning pipeline for prediction of IVF outcomes using ultrasound data. In BJOG-AN INTERNATIONAL JOURNAL OF OBSTETRICS AND GYNAECOLOGY Vol. 131 (pp. 187). Retrieved from https://www.webofscience.com/api/gateway?GWVersion=2&SrcApp=ucam_elements_live&SrcAuth=WosAPI&KeyUT=WOS:001365834300399&DestLinkType=FullRecord&DestApp=WOS_CPL
449. Vali, M., Yang, J., Vali, S., Azevedo, T., Liò, P., & Thum, Y. (2024). Prediction of pregnancy outcomes in IVF patients using multi-modal deep learning methods. In BJOG-AN INTERNATIONAL JOURNAL OF OBSTETRICS AND GYNAECOLOGY Vol. 131 (pp. 46-47). Retrieved from https://www.webofscience.com/api/gateway?GWVersion=2&SrcApp=ucam_elements_live&SrcAuth=WosAPI&KeyUT=WOS:001365834300092&DestLinkType=FullRecord&DestApp=WOS_CPL
450. Zaghen, O., Longa, A., Azzolin, S., Telyatnikov, L., Passerini, A., & Liò, P. (2024). Sheaf Diffusion Goes Nonlinear: Enhancing GNNs with Adaptive Sheaf Laplacians. In GEOMETRY-GROUNDED REPRESENTATION LEARNING AND GENERATIVE MODELING WORKSHOP, GRAM AT ICML 2024 Vol. 251 (pp. 13 pages). Retrieved from https://www.webofscience.com/api/gateway?GWVersion=2&SrcApp=ucam_elements_live&SrcAuth=WosAPI&KeyUT=WOS:001037960300218&DestLinkType=FullRecord&DestApp=WOS_CPL
451. Zhao, X., Li, Z., Shen, M., Stan, G. -B., Liò, P., & Zhao, Y. (2024). Enhancing Node Representations for Real-World Complex Networks with Topological Augmentation. In Frontiers in Artificial Intelligence and Applications. IOS Press. [doi:10.3233/faia240652](https://doi.org/10.3233/faia240652)
452. Azzolin, S., Longa, A., Barbiero, P., Liò, P., & Passerini, A. (2023). GLOBAL EXPLAINABILITY OF GNNS VIA LOGIC COMBINATION OF LEARNED CONCEPTS. 11th International Conference on Learning Representations ICLR 2023.
453. Bernárdez, G., Telyatnikov, L., Alarcón, E., Cabellos-Aparicio, A., Barlet-Ros, P., & Liò, P. (2023). Topological Network Traffic Compression. In Proceedings of the 2nd on Graph Neural Networking Workshop 2023 (pp. 7-12). Association for Computing Machinery (ACM). [doi:10.1145/3630049.3630172](https://doi.org/10.1145/3630049.3630172)
454. Bi, X., Tang, S., Yang, Z., Deng, X., Xiao, B., & Liò, P. (2023). MMCTNet: Multi-Modal Cony-Transformer Network for Predicting Good and Poor Outcomes in Cardiac Arrest Patients. In 2016 Computing in Cardiology Conference (CinC) Vol. 50 (pp. 1-4). Computing in Cardiology. [doi:10.22489/cinc.2023.099](https://doi.org/10.22489/cinc.2023.099)
455. Campbell, A., Zippo, A. G., Passamonti, L., Toschi, N., & Liò, P. (2023). DBGSL: Dynamic Brain Graph Structure Learning. Proceedings of Machine Learning Research, 227, 1318-1345.
456. Crisostomi, D., Cannistraci, I., Moschella, L., Barbiero, P., Ciccone, M., Liò, P., & Rodola, E. (2023). From Charts to Atlas: Merging Latent Spaces into One. NEURIPS WORKSHOP ON SYMMETRY AND GEOMETRY IN NEURAL REPRESENTATIONS, 228, 388-404. Retrieved from https://www.webofscience.com/api/gateway?GWVersion=2&SrcApp=ucam_elements_live&SrcAuth=WosAPI&KeyUT=WOS:001347126000020&DestLinkType=FullRecord&DestApp=WOS_CPL
457. de Ocariz Borde, H. S., Kazi, A., Barbero, F., & Liò, P. (2023). LATENT GRAPH INFERENCE USING PRODUCT MANIFOLDS. 11th International Conference on Learning Representations ICLR 2023.
458. Di Giovanni, F., Giusti, L., Barbero, F., Luise, G., Liò, P., & Bronstein, M. (2023). On Over-Squashing in Message Passing Neural Networks: The Impact of Width, Depth, and Topology. In INTERNATIONAL CONFERENCE ON MACHINE LEARNING, VOL 202 Vol. 202 (pp. 21 pages). Retrieved from https://www.webofscience.com/api/gateway?GWVersion=2&SrcApp=ucam_elements_live&SrcAuth=WosAPI&KeyUT=WOS:001206894308002&DestLinkType=FullRecord&DestApp=WOS_CPL
459. Duta, I., Cassarà, G., Silvestri, F., & Liò, P. (2023). Sheaf Hypergraph Networks.. In A. Oh, T. Naumann, A. Globerson, K. Saenko, M. Hardt, & S. Levine (Eds.), NeurIPS. Retrieved from https://papers.nips.cc/paper_files/paper/2023
460. Georgiev, D., Numeroso, D., Bacciu, D., & Liò, P. (2023). Neural Algorithmic Reasoning for Combinatorial Optimisation.. In S. Villar, & B. Chamberlain (Eds.), LoG Vol. 231 (pp. 28). PMLR. Retrieved from [http://proceedings.mlr.press/v231/](https://proceedings.mlr.press/v231/)
461. He, Y., Bodnar, C., & Liò, P. (2023). Sheaf-based Positional Encodings for Graph Neural Networks. In NEURIPS WORKSHOP ON SYMMETRY AND GEOMETRY IN NEURAL REPRESENTATIONS Vol. 228 (pp. 1-18). Retrieved from https://www.webofscience.com/api/gateway?GWVersion=2&SrcApp=ucam_elements_live&SrcAuth=WosAPI&KeyUT=WOS:001347126000001&DestLinkType=FullRecord&DestApp=WOS_CPL
462. Jang, A., Patel, S., Patel, S., Shah, S., & Liò, P. (2023). Predicting mortality in systemic sclerosis patients using machine learning approaches. In JOURNAL OF INVESTIGATIVE DERMATOLOGY Vol. 143 (pp. S37). Retrieved from https://www.webofscience.com/api/gateway?GWVersion=2&SrcApp=ucam_elements_live&SrcAuth=WosAPI&KeyUT=WOS:001037960300218&DestLinkType=FullRecord&DestApp=WOS_CPL

463. Joshi, C. K., Bodnar, C., Mathis, S. V., Cohen, T., & Liò, P. (2023). On the Expressive Power of Geometric Graph Neural Networks. In INTERNATIONAL CONFERENCE ON MACHINE LEARNING, VOL 202 Vol. 202 (pp. 26 pages). Retrieved from https://www.webofscience.com/api/gateway?GWVersion=2&SrcApp=ucam_elements_live&SrcAuth=WosAPI&KeyUT=WOS:001371932507021&DestLinkType=FullRecord&DestApp=WOS_CPL
464. Keskin, O., Lupidi, A., Giannini, F., Fioravanti, S., Magister, L. C., Barbiero, P., & Liò, P. (2023). Bridging Equational Properties and Patterns on Graphs: an AI-Based Approach. In TOPOLOGICAL, ALGEBRAIC AND GEOMETRIC LEARNING WORKSHOPS 2023, VOL 221 Vol. 221 (pp. 12 pages). Retrieved from https://www.webofscience.com/api/gateway?GWVersion=2&SrcApp=ucam_elements_live&SrcAuth=WosAPI&KeyUT=WOS:001220893300012&DestLinkType=FullRecord&DestApp=WOS_CPL
465. Liu, L., Prost, J., Zhu, L., Papadakis, N., Liò, P., Schönlieb, C. -B., & Aviles-Rivero, A. I. (2023). SCOTCH and SODA: A Transformer Video Shadow Detection Framework. In 2023 IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR) Vol. 00 (pp. 10449-10458). Institute of Electrical and Electronics Engineers (IEEE). doi:10.1109/cvpr52729.2023.01007
466. Lu, Y., Borde, H. S. D. O., & Liò, P. (2023). AMES: A differentiable embedding space selection framework for latent graph inference.. In S. Sanborn, C. Shewmake, S. Azeglio, & N. Miolane (Eds.), NeurReps Vol. 228 (pp. 19-34). PMLR. Retrieved from <https://proceedings.mlr.press/v228/>
467. Lu, X., Zhang, X., & Liò, P. (2023). GAT-DNS: DNS Multivariate Time Series Prediction Model Based on Graph Attention Network. In Companion Proceedings of the ACM Web Conference 2023 (pp. 127-131). Association for Computing Machinery (ACM). doi:10.1145/3543873.3587329
468. Margeloiu, A., Simidjievski, N., Liò, P., & Jamnik, M. (2023). Weight Predictor Network with Feature Selection for Small Sample Tabular Biomedical Data. In Proceedings of the AAAI Conference on Artificial Intelligence Vol. 37 (pp. 9081-9089). Association for the Advancement of Artificial Intelligence (AAAI). doi:10.1609/aaai.v37i8.26090
469. Mittone, G., Svoboda, F., Aldinucci, M., Lane, N., & Liò, P. (2023). A Federated Learning Benchmark for Drug-Target Interaction. In Companion Proceedings of the ACM Web Conference 2023 (pp. 1177-1181). Association for Computing Machinery (ACM). doi:10.1145/3543873.3587687
470. Norcliffe, A., Cebere, B., Imrie, F., Liò, P., & Schaar, M. V. D. (2023). SurvivalGAN: Generating Time-to-Event Data for Survival Analysis.. In AISTATS (pp. 10279-10304).
471. Opolka, F. L., Zhi, Y. -C., Liò, P., & Dong, X. (2023). Graph Classification Gaussian Processes via Spectral Features. In UNCERTAINTY IN ARTIFICIAL INTELLIGENCE Vol. 216 (pp. 1575-1585). Retrieved from https://www.webofscience.com/api/gateway?GWVersion=2&SrcApp=ucam_elements_live&SrcAuth=WosAPI&KeyUT=WOS:001222701100148&DestLinkType=FullRecord&DestApp=WOS_CPL
472. Sun, Z., Harit, A., Cristea, A. I., Wang, J., & Liò, P. (2023). A Rewiring Contrastive Patch PerformerMixer Framework for Graph Representation Learning. In 2023 IEEE International Conference on Big Data (BigData) Vol. 00 (pp. 5930-5939). Institute of Electrical and Electronics Engineers (IEEE). doi:10.1109/bigdata59044.2023.10386951
473. Sun, Z., Cristea, A. I., Liò, P., & Yu, J. (2023). ADAPTIVE DISTANCE MESSAGE PASSING FROM THE MULTI-RELATIONAL EDGE VIEW. In 1st Tiny Papers Track at Iclr 2023 Tiny Papers @ Iclr 2023.
474. Xuanyuan, H., Barbiero, P., Georgiev, D., Magister, L. C., & Liò, P. (2023). Global Concept-Based Interpretability for Graph Neural Networks via Neuron Analysis. Proceedings of the AAAI Conference on Artificial Intelligence, 37(9), 10675-10683. doi:10.1609/aaai.v37i9.26267
475. Yi, K., Zhou, B., Shen, Y., Liò, P., & Wang, Y. G. (2023). Graph Denoising Diffusion for Inverse Protein Folding. ADVANCES IN NEURAL INFORMATION PROCESSING SYSTEMS 36 (NEURIPS 2023), 20 pages. Retrieved from https://www.webofscience.com/api/gateway?GWVersion=2&SrcApp=ucam_elements_live&SrcAuth=WosAPI&KeyUT=WOS:001224281503015&DestLinkType=FullRecord&DestApp=WOS_CPL
476. Zou, X., Zhao, X., Liò, P., & Zhao, Y. (2023). Will More Expressive Graph Neural Networks Do Better on Generative Tasks?. In S. Villar, & B. Chamberlain (Eds.), LoG Vol. 231 (pp. 21). PMLR. Retrieved from <http://proceedings.mlr.press/v231/>
477. Barbero, F., Bodnar, C., Borde, H. S. D. O., Bronstein, M., Velickovic, P., & Liò, P. (2022). SHEAF NEURAL NETWORKS WITH CONNECTION LAPLACIANS. In TOPOLOGICAL, ALGEBRAIC AND GEOMETRIC LEARNING WORKSHOPS 2022, VOL 196 Vol. 196 (pp. 9 pages). Retrieved from https://www.webofscience.com/api/gateway?GWVersion=2&SrcApp=ucam_elements_live&SrcAuth=WosAPI&KeyUT=WOS:001228393100003&DestLinkType=FullRecord&DestApp=WOS_CPL
478. Barbiero, P., Ciravegna, G., Giannini, F., Liò, P., Gori, M., & Melacci, S. (2022). Entropy-Based Logic Explanations of Neural Networks. Proceedings of the AAAI Conference on Artificial Intelligence, 36(6), 6046-6054. doi:10.1609/aaai.v36i6.20551
479. Bodnar, C., Giovanni, F. D., Chamberlain, B., Liò, P., & Bronstein, M. (2022). Neural Sheaf Diffusion: A Topological Perspective on Heterophily and Oversmoothing in GNNs. In Advances in Neural Information Processing Systems 35 (pp. 18527-18541). Curran Associates. doi:10.52202/068431-1346
480. Buffelli, D., Liò, P., & Vandin, F. (2022). SizeShiftReg: A Regularization Method for Improving Size-Generalization in Graph Neural Networks. In Advances in Neural Information Processing Systems 35 (pp. 31871-31885). Curran Associates. doi:10.52202/068431-2310
481. Buterez, D., Janet, J. P., Kiddle, S. J., Oglic, D., & Liò, P. (2022). Graph Neural Networks with Adaptive Readouts. In Advances in Neural Information Processing Systems 35 (pp. 19746-19758). Curran Associates. doi:10.52202/068431-1435
482. Campbell, A., Qendro, L., Liò, P., & Mascolo, C. (2022). Robust and Efficient Uncertainty Aware Biosignal Classification via Early Exit Ensembles. In ICASSP 2022 - 2022 IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP) Vol. 00 (pp. 3998-4002). Institute of Electrical and Electronics Engineers (IEEE). doi:10.1109/icassp43922.2022.9746330
483. Cardozo, S., Montero, G. I., Kazhdan, D., Dimanov, B., Wijaya, M., Jamnik, M., & Liò, P. (2022). Explainer Divergence Scores (EDS): Some Post-Hoc Explanations May be Effective for Detecting Unknown Spurious Correlations. In Ceur Workshop Proceedings Vol. 3318.
484. Day, B., Vinas, R., Simidjievski, N., & Liò, P. (2022). Attentional Meta-learners for Few-shot Polythetic Classification. In INTERNATIONAL CONFERENCE ON MACHINE LEARNING, VOL 162 (pp. 23 pages). Retrieved from https://www.webofscience.com/api/gateway?GWVersion=2&SrcApp=ucam_elements_live&SrcAuth=WosAPI&KeyUT=WOS:000899944904040&DestLinkType=FullRecord&DestApp=WOS_CPL
485. Fan, J., Pei, J., Bi, X., Xiao, B., & Liò, P. (2022). Context Correlation Aware Network for Cardiac Segmentation. In 2022 IEEE International Conference on Multimedia and Expo (ICME) Vol. 00 (pp. 1-6). Institute of Electrical and Electronics Engineers (IEEE). doi:10.1109/icme52920.2022.9859985
486. Georgiev, D., Barbiero, P., Kazhdan, D., Veličković, P., & Liò, P. (2022). Algorithmic Concept-Based Explainable Reasoning. Proceedings of the AAAI Conference on Artificial Intelligence, 36(6), 6685-6693. doi:10.1609/aaai.v36i6.20623
487. He, Y., Velickovic, P., Liò, P., & Deac, A. (2022). Continuous Neural Algorithmic Planners. In LEARNING ON GRAPHS

- CONFERENCE, VOL 198 Vol. 198 (pp. 13 pages). Retrieved from https://www.webofscience.com/api/gateway?GWVersion=2&SrcApp=ucam_elements_live&SrcAuth=WosAPI&KeyUT=WOS:001227576100021&DestLinkType=FullRecord&DestApp=WOS_CPL
488. Imrie, F., Norcliffe, A., Liò, P., & Schaar, M. V. D. (2022). Composite Feature Selection Using Deep Ensembles. In *Advances in Neural Information Processing Systems* 35 (pp. 36142-36160). Curran Associates. doi:10.52202/068431-2619
 489. Jain, R., Ciravegna, G., Barbiero, P., Giannini, F., Buffelli, D., & Liò, P. (2022). Extending Logic Explained Networks to Text Classification. In *Proceedings of the 2022 Conference on Empirical Methods in Natural Language Processing* (pp. 8838-8857). Association for Computational Linguistics (ACL). doi:10.18653/v1/2022.emnlp-main.604
 490. Liu, L., Huang, Z., Liò, P., Schönlieb, C. -B., & Aviles-Rivero, A. I. (2022). You only Look at Patches: A Patch-wise Framework for 3D Unsupervised Medical Image Registration. In *Lecture Notes in Computer Science* Vol. 13386 (pp. 190-193). Springer Nature. doi:10.1007/978-3-031-11203-4_21
 491. Lu, X., Pang, R., & Liò, P. (2022). Poster. In *Proceedings of the 2022 ACM SIGSAC Conference on Computer and Communications Security* (pp. 3407-3409). Association for Computing Machinery (ACM). doi:10.1145/3548606.3563528
 492. Lu, X., Zhao, J., & Liò, P. (2022). Robust android malware detection based on subgraph network and denoising GCN network. In *Proceedings of the 20th Annual International Conference on Mobile Systems, Applications and Services* (pp. 549-550). Association for Computing Machinery (ACM). doi:10.1145/3498361.3538778
 493. Manouchehrinia, A., Ebrahimi, A., Wiil, U. K., Kiani, N. A., Liò, P., Olsson, T., & Kockum, I. (2022). A susceptibility network analysis of disease pathways leading to multiple sclerosis. In *MULTIPLE SCLEROSIS JOURNAL* Vol. 28 (pp. 172-173). Retrieved from https://www.webofscience.com/api/gateway?GWVersion=2&SrcApp=ucam_elements_live&SrcAuth=WosAPI&KeyUT=WOS:000866540801059&DestLinkType=FullRecord&DestApp=WOS_CPL
 494. Opolka, F. L., Zhi, Y. -C., Liò, P., & Dong, X. (2022). Adaptive Gaussian Processes on Graphs via Spectral Graph Wavelets.. In *G. Camps-Valls, F. J. R. Ruiz, & I. Valera (Eds.), AISTATS* Vol. 151 (pp. 4818-4834). PMLR. Retrieved from <http://proceedings.mlr.press/v151/>
 495. Opolka, F. L., & Liò, P. (2022). Bayesian Link Prediction with Deep Graph Convolutional Gaussian Processes. In *INTERNATIONAL CONFERENCE ON ARTIFICIAL INTELLIGENCE AND STATISTICS*, VOL 151 Vol. 151 (pp. 18 pages). Retrieved from https://www.webofscience.com/api/gateway?GWVersion=2&SrcApp=ucam_elements_live&SrcAuth=WosAPI&KeyUT=WOS:000828072704042&DestLinkType=FullRecord&DestApp=WOS_CPL
 496. Pandey, M., Qiu, W., Corso, G., Velickovic, P., Ying, R., Leskovec, J., & Liò, P. (2022). Learning Graph Search Heuristics. In *LEARNING ON GRAPHS CONFERENCE*, VOL 198 Vol. 198 (pp. 13 pages). Retrieved from https://www.webofscience.com/api/gateway?GWVersion=2&SrcApp=ucam_elements_live&SrcAuth=WosAPI&KeyUT=WOS:001227576100036&DestLinkType=FullRecord&DestApp=WOS_CPL
 497. Qian, P., Yang, J., Liò, P., Hu, P., & Qi, H. (2022). Joint Group-Wise Motion Estimation and Segmentation of Cardiac Cine MR Images Using Recurrent U-Net. In *Lecture Notes in Computer Science* Vol. 13413 (pp. 65-74). Springer Nature. doi:10.1007/978-3-031-12053-4_5
 498. Scherer, P., Liò, P., & Jamnik, M. (2022). Distributed representations of graphs for drug pair scoring. In *Proceedings of the First Learning on Graphs Conference (LoG 2022)* Vol. PMLR 198. Retrieved from <https://openreview.net/forum?id=IP-TISJqfq>
 499. Stark, H., Beaini, D., Corso, G., Tossou, P., Dallago, C., Guennemann, S., & Liò, P. (2022). 3D Infomax improves GNNs for Molecular Property Prediction. In *INTERNATIONAL CONFERENCE ON MACHINE LEARNING*, VOL 162 (pp. 24 pages). Retrieved from https://www.webofscience.com/api/gateway?GWVersion=2&SrcApp=ucam_elements_live&SrcAuth=WosAPI&KeyUT=WOS:00090130201030&DestLinkType=FullRecord&DestApp=WOS_CPL
 500. Tailor, S. A., Opolka, F. L., Liò, P., & Lane, N. D. (2022). DO WE NEED ANISOTROPIC GRAPH NEURAL NETWORKS?. In *Iclr 2022 10th International Conference on Learning Representations*.
 501. Yi, K., Chen, J., Wang, Y. G., Zhou, B., Liò, P., Fan, Y., & Hamann, J. (2022). APPROXIMATE EQUIVARIANCE SO(3) NEEDLET CONVOLUTION. In *TOPOLOGICAL, ALGEBRAIC AND GEOMETRIC LEARNING WORKSHOPS 2022*, VOL 196 Vol. 196 (pp. 10 pages). Retrieved from https://www.webofscience.com/api/gateway?GWVersion=2&SrcApp=ucam_elements_live&SrcAuth=WosAPI&KeyUT=WOS:001228393100020&DestLinkType=FullRecord&DestApp=WOS_CPL
 502. Zhou, B., Liu, X., Liu, Y., Huang, Y., Liò, P., & Wang, Y. G. (2022). Well-conditioned Spectral Transforms for Dynamic Graph Representation. In *LEARNING ON GRAPHS CONFERENCE*, VOL 198 Vol. 198 (pp. 19 pages). Retrieved from https://www.webofscience.com/api/gateway?GWVersion=2&SrcApp=ucam_elements_live&SrcAuth=WosAPI&KeyUT=WOS:001227576100054&DestLinkType=FullRecord&DestApp=WOS_CPL
 503. Beaini, D., Passaro, S., Létourneau, V., Hamilton, W. L., Corso, G., & Liò, P. (2021). Directional Graph Networks. In *Proceedings of Machine Learning Research* Vol. 139 (pp. 748-758).
 504. Bodnar, C., Frasca, F., Otter, N., Wang, Y. G., Liò, P., Montúfar, G., & Bronstein, M. (2021). Weisfeiler and Lehman Go Cellular: CW Networks. *Advances in Neural Information Processing Systems*, 4, 2625-2640.
 505. Bodnar, C., Frasca, F., Wang, Y. G., Otter, N., Montúfar, G., Liò, P., & Bronstein, M. M. (2021). Weisfeiler and Lehman Go Topological: Message Passing Simplicial Networks. In *Proceedings of Machine Learning Research* Vol. 139 (pp. 1026-1037).
 506. Corso, G., Ying, R., Pandey, M., Veličković, P., Leskovec, J., & Liò, P. (2021). Neural Distance Embeddings for Biological Sequences. In *Advances in Neural Information Processing Systems* Vol. 34 (pp. 18539-18551). Virtual: Curran Associates, Inc..
 507. Drotár, P., Jamsab, A. R., Day, B., Cangea, C., & Liò, P. (2021, December 13). Structure-aware generation of drug-like molecules. In *Machine Learning in Structural Biology Workshop at the 35th Conference on Neural Information Processing Systems*. Virtual.
 508. Kazhdan, D., Dimanov, B., Terre, H. A., Jamnik, M., Liò, P., & Weller, A. (2021). Is Disentanglement all you need? Comparing Concept-based & Disentanglement Approaches. In *Ninth International Conference on Learning Representations*. Virtual. Retrieved from <https://iclr.cc/virtual/2021/4079>
 509. Lu, X., & Liò, P. (2021). International Workshop On Application of Intelligent Technology in Security — AITS 2021. In *2015 IEEE International Conference on Dependable Systems and Networks Workshops* (pp. xiv-xv). Institute of Electrical and Electronics Engineers (IEEE). doi:10.1109/dsn-w52860.2021.00008
 510. Moss, J. D., Opolka, F. L., Dumitrescu, B., & Liò, P. (2021, November 4). Approximate Latent Force Model Inference. In *Science-Guided AI Symposium at AAAI 2021 (SGAI-AAAI-21)*.
 511. Norcliffe, A., Bodnar, C., Day, B., Moss, J., & Liò, P. (2021, May 3). Neural ODE Processes. In *The Ninth International Conference on Learning Representations*. Virtual. Retrieved from <https://openreview.net/group?id=ICLR.cc/2021/Conference#poster-presentations>
 512. Norcliffe, A., Bodnar, C., Day, B., Moss, J., & Liò, P. (2021). NEURAL ODE PROCESSES. In *Iclr 2021 9th International Conference on Learning Representations*.

513. Qendro, L., Campbell, A., Liò, P., & Mascolo, C. (2021). Early Exit Ensembles for Uncertainty Quantification. In MACHINE LEARNING FOR HEALTH, VOL 158 Vol. 158 (pp. 181-195). Retrieved from https://www.webofscience.com/api/gateway?GWVersion=2&SrcApp=ucam_elements_live&SrcAuth=WosAPI&KeyUT=WOS:00122769300013&DestLinkType=FullRecord&DestApp=WOS_CPL
514. Rocheteau, E., Liò, P., & Hyland, S. L. (2021). Temporal pointwise convolutional networks for length of stay prediction in the intensive care unit.. In M. Ghassemi, T. Naumann, & E. Pierson (Eds.), CHIL (pp. 58-68). ACM. Retrieved from <https://doi.org/10.1145/3450439>
515. Sebenius, I., Campbell, A., Morgan, S. E., Bullmore, E. T., & Liò, P. (2021). Multimodal Graph Coarsening for Interpretable, MRI-Based Brain Graph Neural Network. In 2021 IEEE 31st International Workshop on Machine Learning for Signal Processing (MLSP) Vol. 00 (pp. 1-6). Institute of Electrical and Electronics Engineers (IEEE). [doi:10.1109/mlsp52302.2021.9690626](https://doi.org/10.1109/mlsp52302.2021.9690626)
516. Weber, J. M., Lindenmeyer, C. P., Liò, P., & Lapkin, A. A. (2021). Teaching sustainability as complex systems approach: a sustainable development goals workshop. International Journal of Sustainability in Higher Education, 22(8), 25-41. [doi:10.1108/ijsh-06-2020-0209](https://doi.org/10.1108/ijsh-06-2020-0209)
517. Wei, X., Pu, C., He, Z., & Liò, P. (2021). Deep Reinforcement Learning-based Vaccine Distribution Strategies. In 2021 2nd International Conference on Electronics, Communications and Information Technology (CECIT) Vol. 00 (pp. 427-436). Institute of Electrical and Electronics Engineers (IEEE). [doi:10.1109/cecit53797.2021.00082](https://doi.org/10.1109/cecit53797.2021.00082)
518. Zheng, X., Zhou, B., Gao, J., Wang, Y. G., Liò, P., Li, M., & Montúfar, G. (2021). How Framelets Enhance Graph Neural Networks. In Proceedings of Machine Learning Research Vol. 139 (pp. 12761-12771).
519. Zhu, J., Tan, C., Yang, J., Yang, G., & Liò, P. (2021). Arbitrary Scale Super-Resolution for Medical Images. In INTERNATIONAL JOURNAL OF NEURAL SYSTEMS Vol. 31 (pp. 20 pages). [doi:10.1142/S0129065721500374](https://doi.org/10.1142/S0129065721500374)
520. Zubic, N., & Liò, P. (2021). An Effective Loss Function for Generating 3D Models from Single 2D Image Without Rendering.. In I. Maglogiannis, J. MacIntyre, & L. Iliadis (Eds.), AIAI Vol. 627 (pp. 309-322). Springer. Retrieved from <https://doi.org/10.1007/978-3-030-79150-6>
521. Azevedo, T., Passamonti, L., Liò, P., & Toschi, N. (2020). A deep spatiotemporal graph learning architecture for brain connectivity analysis.. In Annu Int Conf IEEE Eng Med Biol Soc Vol. 2020 (pp. 1120-1123). United States. [doi:10.1109/EMBC44109.2020.9175360](https://doi.org/10.1109/EMBC44109.2020.9175360)
522. Bodnar, C., Day, B., & Liò, P. (2020). Proximal Distilled Evolutionary Reinforcement Learning. Proceedings of the AAAI Conference on Artificial Intelligence, 34(04), 3283-3290. [doi:10.1609/aaai.v34i04.5728](https://doi.org/10.1609/aaai.v34i04.5728)
523. Corso, G., Cavalleri, L., Beaini, D., Liò, P., & Velickovic, P. (2020). Principal Neighbourhood Aggregation for Graph Nets. In ADVANCES IN NEURAL INFORMATION PROCESSING SYSTEMS 33, NEURIPS 2020 Vol. 33 (pp. 12 pages). Retrieved from https://www.webofscience.com/api/gateway?GWVersion=2&SrcApp=ucam_elements_live&SrcAuth=WosAPI&KeyUT=WOS:001207696404023&DestLinkType=FullRecord&DestApp=WOS_CPL
524. D'Agostino, D., Liò, P., Aldinucci, M., & Merelli, I. (2020). NeoHiC: A Web Application for the Analysis of Hi-C Data. In Lecture Notes in Computer Science Vol. 12313 (pp. 98-107). Springer Nature. [doi:10.1007/978-3-030-63061-4_10](https://doi.org/10.1007/978-3-030-63061-4_10)
525. Deasy, J., Ercole, A., & Liò, P. (2020, April 27). Adaptive Prediction Timing for Electronic Health Records. In International Conference on Learning Representations 2020. Addis Ababa, Ethiopia.
526. Deasy, J., Simidjievski, N., & Liò, P. (2020). Constraining Variational Inference with Geometric Jensen-Shannon Divergence.. In H. Larochelle, M. Ranzato, R. Hadsell, M. -F. Balcan, & H. -T. Lin (Eds.), NeurIPS. Retrieved from <https://proceedings.neurips.cc/paper/2020>
527. Di Stefano, A., Di Francesco Maesa, D., Das, S. K., & Liò, P. (2020). Resolution of Blockchain Conflicts through Heuristics-based Game Theory and Multilayer Network Modeling. In Proceedings of the 21st International Conference on Distributed Computing and Networking (pp. 1-10). Association for Computing Machinery (ACM). [doi:10.1145/3369740.3372914](https://doi.org/10.1145/3369740.3372914)
528. Dimitri, G. M., Beqiri, E., Placek, M. M., Czosnyka, M., Ercole, A., Smielewski, P., & Liò, P. (2020). Introducing brain-heart crosstalks information in clinical decision support systems for TBI patients, through ICM+**This study was supported by the European Union Seventh Framework Program (grant 602150) for collaborative European NeuroTrauma Effectiveness Research in Traumatic Brain Injury (Center-TBI).. In 2020 11th Conference of the European Study Group on Cardiovascular Oscillations (ESGCO) Vol. 00 (pp. 1-2). Institute of Electrical and Electronics Engineers (IEEE). [doi:10.1109/esgco49734.2020.9158050](https://doi.org/10.1109/esgco49734.2020.9158050)
529. Dimitri, G. M., Spasov, S., Duggento, A., Passamonti, L., Liò, P., & Toschi, N. (2020). Unsupervised stratification in neuroimaging through deep latent embeddings.. In Annu Int Conf IEEE Eng Med Biol Soc Vol. 2020 (pp. 1568-1571). United States. [doi:10.1109/EMBC44109.2020.9175810](https://doi.org/10.1109/EMBC44109.2020.9175810)
530. Filip, A. -C., Azevedo, T., Passamonti, L., Toschi, N., & Liò, P. (2020). A novel Graph Attention Network Architecture for modeling multimodal brain connectivity.. In Annu Int Conf IEEE Eng Med Biol Soc Vol. 2020 (pp. 1071-1074). United States. [doi:10.1109/EMBC44109.2020.9176613](https://doi.org/10.1109/EMBC44109.2020.9176613)
531. Kazhdan, D., Dimanov, B., Jamnik, M., Liò, P., & Weller, A. (2020, October 19). Now You See Me (CME): Concept-based Model Extraction. In CIKM '20: 29th ACM International Conference on Information and Knowledge Management, AIMLAI WS.
532. Kuszto, R., Dimitri, G. M., & Liò, P. (2020). Neural Models for Brain Networks Connectivity Analysis. In Lecture Notes in Computer Science Vol. 11925 (pp. 212-226). Springer Nature. [doi:10.1007/978-3-030-34585-3_19](https://doi.org/10.1007/978-3-030-34585-3_19)
533. Ma, Z., Xuan, J., Wang, Y. G., Li, M., & Liò, P. (2020). Path Integral Based Convolution and Pooling for Graph Neural Networks. In ADVANCES IN NEURAL INFORMATION PROCESSING SYSTEMS 33, NEURIPS 2020 Vol. 33 (pp. 13 pages). Retrieved from https://www.webofscience.com/api/gateway?GWVersion=2&SrcApp=ucam_elements_live&SrcAuth=WosAPI&KeyUT=WOS:001207696403081&DestLinkType=FullRecord&DestApp=WOS_CPL
534. Norcliffe, A., Bodnar, C., Day, B., Simidjievski, N., & Liò, P. (2020). On Second Order Behaviour in Augmented Neural ODEs. In ADVANCES IN NEURAL INFORMATION PROCESSING SYSTEMS 33, NEURIPS 2020 Vol. 33 (pp. 11 pages). Retrieved from https://www.webofscience.com/api/gateway?GWVersion=2&SrcApp=ucam_elements_live&SrcAuth=WosAPI&KeyUT=WOS:001207690603054&DestLinkType=FullRecord&DestApp=WOS_CPL
535. Spasov, S. E., & Liò, P. (2020). Dynamic neural network channel execution for efficient training. 30th British Machine Vision Conference 2019 Bmvc 2019.
536. Wang, D., Jamnik, M., & Liò, P. (2020). Abstract Diagrammatic Reasoning with Multiplex Graph Networks. In 8th International Conference on Learning Representations, ICLR 2020, Addis Ababa, Ethiopia, April 26-30, 2020 (pp. 1-20). Retrieved from <https://openreview.net/forum?id=ByxQB1BKwH>
537. Yeghikyan, G., Opolka, F. L., Nanni, M., Lepri, B., & Liò, P. (2020). Learning Mobility Flows from Urban Features with Spatial Interaction Models and Neural Networks**To appear in the Proceedings of 2020 IEEE International Conference on Smart Computing (SMARTCOMP 2020). In 2020 IEEE International

- Conference on Smart Computing (SMARTCOMP) Vol. 00 (pp. 57-64). Institute of Electrical and Electronics Engineers (IEEE). [doi:10.1109/smartcomp50058.2020.00028](https://doi.org/10.1109/smartcomp50058.2020.00028)
538. Aiello, L. M., Cherifi, C., Cherifi, H., Lambiotte, R., Liò, P., & Rocha, L. M. (2019). Preface (Vol. 812).
539. Azevedo, T., Passamonti, L., Liò, P., & Toschi, N. (2019). A Machine Learning Tool for Interpreting Differences in Cognition Using Brain Features. In IFIP Advances in Information and Communication Technology Vol. 559 (pp. 475-486). Springer Nature. [doi:10.1007/978-3-030-19823-7_40](https://doi.org/10.1007/978-3-030-19823-7_40)
540. Cangea, C., Belilovsky, E., Liò, P., & Courville, A. (2019, September 9). VideoNavQA: Bridging the Gap between Visual and Embodied Question Answering. In The British Machine Vision Conference (BMVC) 2019.
541. Cangea, C., Belilovsky, E., Liò, P., & Courville, A. C. (2019). VideoNavQA: Bridging the Gap between Visual and Embodied Question Answering.. In ViGIL@NeurIPS. Retrieved from <http://www.informatik.uni-trier.de/~ley/db/conf/nips/vigil2019.html>
542. Despeyroux, J., Felty, A., Liò, P., & Olarte, C. (2019). A Logical Framework for Modelling Breast Cancer Progression. In Lecture Notes in Computer Science Vol. 11415 (pp. 121-141). Springer Nature. [doi:10.1007/978-3-030-19432-1_8](https://doi.org/10.1007/978-3-030-19432-1_8)
543. Di Stefano, A., Scatà, M., La Corte, A., Das, S. K., & Liò, P. (2019). Improving QoE in multi-layer social sensing: A cognitive architecture and game theoretic model. In SocialSense'19 Proceedings of the Fourth International Workshop on Social Sensing (pp. 18-23). Montreal, Canada: Association for Computing Machinery. [doi:10.1145/3313294.3313384](https://doi.org/10.1145/3313294.3313384)
544. Opolka, F. L., Solomon, A., Cangea, C., Veličković, P., Liò, P., & Hjelm, R. D. (2019, May 6). Spatio-Temporal Deep Graph Infomax. In Seventh International Conference on Learning Representations (ICLR 2019).
545. Prokhorov, V., Pilehvar, M. T., Kartsaklis, D., Liò, P., & Collier, N. (2019). Unseen Word Representation by Aligning Heterogeneous Lexical Semantic Spaces. Proceedings of the AAAI Conference on Artificial Intelligence, 33(01), 6900-6907. [doi:10.1609/aaai.v33i01.33016900](https://doi.org/10.1609/aaai.v33i01.33016900)
546. Prokhorov, V., Pilehvar, M., Kartsaklis, D., Liò, P., & Collier, N. (2019, January 27). Unseen Word Representation by Aligning Heterogeneous Lexical Semantic Spaces. In AAAI-19: Thirty-Third AAAI Conference on Artificial Intelligence.
547. Rossi, E., Monti, F., Bronstein, M., & Liò, P. (2019, August 5). ncRNA Classification with Graph Convolutional Networks. In The First International Workshop on Deep Learning on Graphs: Methods and Applications (DLG'19). Anchorage, Alaska: Association for Computing Machinery.
548. Satu, S., Howlader, K. C., Akhund, T. M. N. U., Quinn, J. M. W., Liò, P., & Moni, M. A. (2019). Comorbidity Effects of Mitochondrial Dysfunction to the Progression of Neurological Disorders: Insights from a Systems Biomedicine Perspective. In 2019 22nd International Conference on Computer and Information Technology (ICCIT) Vol. 00 (pp. 1-7). Institute of Electrical and Electronics Engineers (IEEE). [doi:10.1109/iccit48885.2019.9038388](https://doi.org/10.1109/iccit48885.2019.9038388)
549. Serra, A., Guida, M. D., Liò, P., & Tagliaferri, R. (2019). Hierarchical Block Matrix Approach for Multi-view Clustering. In Lecture Notes in Computer Science Vol. 10834 (pp. 200-212). Springer Nature. [doi:10.1007/978-3-030-14160-8_19](https://doi.org/10.1007/978-3-030-14160-8_19)
550. Tangherloni, A., Rundo, L., Spolaor, S., Nobile, M. S., Merelli, I., Besozzi, D., . . . Liò, P. (2019). High Performance Computing for Haplotyping: Models and Platforms. In Lecture Notes in Computer Science Vol. 11339 (pp. 650-661). Springer Nature. [doi:10.1007/978-3-030-10549-5_51](https://doi.org/10.1007/978-3-030-10549-5_51)
551. Taylor, D., Spasov, S., & Liò, P. (2019, December 8). Co-Attentive Cross-Modal Deep Learning for Medical Evidence Synthesis and Decision Making. In Machine Learning for Health (ML4H) Workshop at NeurIPS 2019, Vancouver, Canada.. Vancouver, Canada.
552. Veličković, P., Fedus, W., Hamilton, W. L., Liò, P., Bengio, Y., & Hjelm, R. D. (2019, May 3). Deep Graph Infomax. In Seventh International Conference on Learning Representations (ICLR 2019).
553. Veličković, P., Fedus, W., Hamilton, W. L., Bengio, Y., Liò, P., & Devon Hjelm, R. (2019). Deep graph infomax. In 7th International Conference on Learning Representations ICLR 2019.
554. Webb, E., Day, B., Andres-Terre, H., & Liò, P. (2019, June 10). Factorised Neural Relational Inference for Multi-Interaction Systems. In Thirty-sixth International Conference on Machine Learning (ICML 2019). Long Beach, CA, USA.
555. Zhu, J., Yang, G., & Liò, P. (2019). How Can We Make Gan Perform Better in Single Medical Image Super-Resolution? A Lesion Focused Multi-Scale Approach. In 2019 IEEE 16th International Symposium on Biomedical Imaging (ISBI 2019) Vol. 00 (pp. 1669-1673). Institute of Electrical and Electronics Engineers (IEEE). [doi:10.1109/isbi.2019.8759517](https://doi.org/10.1109/isbi.2019.8759517)
556. Zhu, J., Yang, G., & Liò, P. (2019). Lesion focused super-resolution.. In E. D. Angelini, & B. A. Landman (Eds.), Image Processing Vol. 10949 (pp. 109491L). SPIE. Retrieved from <https://www.spiedigitallibrary.org/conference-proceedings-of-SPIE/10949.toc>
557. Bica, I., Veličković, P., Xiao, H., & Liò, P. (2018). Multi-omics data integration using cross-modal neural networks. In Esann 2018 Proceedings European Symposium on Artificial Neural Networks Computational Intelligence and Machine Learning (pp. 385-390).
558. Karazija, L., Veličković, P., & Liò, P. (2018). Automatic Inference of Cross-Modal Connection Topologies for X-CNNs. Lecture Notes in Computer Science, 10878, 54-63. [doi:10.1007/978-3-319-92537-0_7](https://doi.org/10.1007/978-3-319-92537-0_7)
559. Mathur, A., Zhang, T., Bhattacharya, S., Velickovic, P., Joffe, L., Lane, N. D., . . . Liò, P. (2018). Using deep data augmentation training to address software and hardware heterogeneities in wearable and smartphone sensing devices.. In L. Mottola, J. Gao, & P. Zhang (Eds.), IPSN '18 Proceedings of the 17th ACM/IEEE International Conference on Information Processing in Sensor Networks (pp. 200-211). Porto, Portugal: IEEE. [doi:10.1109/IPSIN.2018.00048](https://doi.org/10.1109/IPSIN.2018.00048)
560. Merelli, I., Liò, P., & Kotenko, I. V. (Eds.) (2018). 26th Euromicro International Conference on Parallel, Distributed and Network-based Processing, PDP 2018, Cambridge, United Kingdom, March 21-23, 2018. In PDP. IEEE Computer Society.
561. Spasov, S. E., Passamonti, L., Duggento, A., Liò, P., & Toschi, N. (2018). A Multi-modal Convolutional Neural Network Framework for the Prediction of Alzheimer's Disease.. In Annu Int Conf IEEE Eng Med Biol Soc Vol. 2018 (pp. 1271-1274). United States. [doi:10.1109/EMBC.2018.8512468](https://doi.org/10.1109/EMBC.2018.8512468)
562. Velickovic, P., Karazija, L., Lane, N. D., Bhattacharya, S., Liberis, E., Liò, P., . . . Vegreville, M. (2018). Cross-modal Recurrent Models for Weight Objective Prediction from Multimodal Time-series Data.. In N. Minsky, & V. Osmani (Eds.), PervasiveHealth (pp. 178-186). ACM. Retrieved from <https://doi.org/10.1145/3240925>
563. Veličković, P., Casanova, A., Liò, P., Cucurull, G., Romero, A., & Bengio, Y. (2018). Graph attention networks. 6th International Conference on Learning Representations, ICLR 2018 - Conference Track Proceedings.
564. Wang, D., Jamnik, M., & Liò, P. (2018). Investigating diagrammatic reasoning with deep neural networks. In Diagrams

- 2018 (pp. 390-398). Edinburgh: Springer International Publishing AG. [doi:10.1007/978-3-319-91376-6_36](https://doi.org/10.1007/978-3-319-91376-6_36)
565. Wang, D., Zhang, R., Zhu, J., Teng, Z., Huang, Y., Spiga, F., . . . Liò, P. (2018). Neural network fusion: a novel CT-MR Aortic Aneurysm image segmentation method.. In *Proc SPIE Int Soc Opt Eng Vol. 10574*. United States. [doi:10.1117/12.2293371](https://doi.org/10.1117/12.2293371)
 566. Brouwer, T., & Liò, P. (2017). Bayesian Hybrid Matrix Factorisation for Data Integration. In *Proceedings of Machine Learning Research Vol. 54* (pp. 557-566). Fort Lauderdale, FL, USA: Journal of Machine Learning Research. Retrieved from <http://www.jmlr.org/>
 567. Brouwer, T., Frellsen, J., & Liò, P. (2017). Comparative Study of Inference Methods for Bayesian Nonnegative Matrix Factorisation.. In M. Ceci, J. Hollmén, L. Todorovski, C. Vens, & S. Dzeroski (Eds.), *ECML/PKDD (1) Vol. 10534* (pp. 513-529). Skopje: Springer. [doi:10.1007/978-3-319-71249-9_31](https://doi.org/10.1007/978-3-319-71249-9_31)
 568. Felicetti, L., Femminella, M., Ivanov, T., Liò, P., & Reali, G. (2017). A big-data layered architecture for analyzing molecular communications systems in blood vessels. In *Proceedings of the 4th ACM International Conference on Nanoscale Computing and Communication* (pp. 1-2). Association for Computing Machinery (ACM). [doi:10.1145/3109453.3109468](https://doi.org/10.1145/3109453.3109468)
 569. Heffernan, K., Liò, P., & Teufel, S. (2017). Multilayer Data and Document Stratification for Comorbidity Analysis. In *Lecture Notes in Computer Science Vol. 10477* (pp. 209-219). Springer Nature. [doi:10.1007/978-3-319-67834-4_17](https://doi.org/10.1007/978-3-319-67834-4_17)
 570. Alarcon, E., Cid-Fuentes, R. G., Davy, A., Felicetti, L., Femminella, M., Liò, P., . . . Solé-Pareta, J. (2016). MolComML. In *Proceedings of the 3rd ACM International Conference on Nanoscale Computing and Communication* (pp. 1-6). Association for Computing Machinery (ACM). [doi:10.1145/2967446.2967460](https://doi.org/10.1145/2967446.2967460)
 571. Angione, C., Liò, P., Pucciarelli, S., Can, B., Conway, M., Lotti, M., . . . Telatin, A. (2016). Bioinformatics Challenges and Potentialities in Studying Extreme Environments. In *Lecture Notes in Computer Science Vol. 9874* (pp. 205-219). Springer Nature. [doi:10.1007/978-3-319-44332-4_16](https://doi.org/10.1007/978-3-319-44332-4_16)
 572. Bardozzo, F., Liò, P., & Tagliaferri, R. (2016, September 1). A machine learning approach to investigate regulatory control circuits in bacterial metabolic pathways. In *13th International Conference on Computational Intelligence methods for Bioinformatics and Biostatistics Vol. 2016* (pp. 13).
 573. Bartocci, E., Liò, P., & Paoletti, N. (Eds.) (2016). *Computational Methods in Systems Biology - 14th International Conference, CMSB 2016, Cambridge, UK, September 21-23, 2016, Proceedings*. In CMSB Vol. 9859. Springer.
 574. Bartocci, E., Liò, P., & Paoletti, N. (2016). Preface (Vol. 9859 LNCS).
 575. He, P., Mao, Y., Liu, Q., Liò, P., & Yang, K. (2016). Channel modelling of molecular communications across blood vessels and nerves. In *2016 IEEE International Conference on Communications, ICC 2016*. [doi:10.1109/ICC.2016.7510860](https://doi.org/10.1109/ICC.2016.7510860)
 576. Moni, M., & Liò, P. (2016). Infectome, diseaseome and comorbidities of Zika infection. In *International Journal of Infectious Diseases Vol. 53* (pp. 14). Elsevier. [doi:10.1016/j.ijid.2016.11.040](https://doi.org/10.1016/j.ijid.2016.11.040)
 577. Pratanwanich, N., Liò, P., & Stegle, O. (2016). Warped Matrix Factorisation for Multi-view Data Integration. In *Lecture Notes in Computer Science Vol. 9852* (pp. 789-804). Springer Nature. [doi:10.1007/978-3-319-46227-1_49](https://doi.org/10.1007/978-3-319-46227-1_49)
 578. Tordini, F., Merelli, I., Liò, P., Milanese, L., & Aldinucci, M. (2016). NuchaRt: Embedding High-Level Parallel Computing in R for Augmented Hi-C Data Analysis. In *Lecture Notes in Computer Science Vol. 9874* (pp. 259-272). Springer Nature. [doi:10.1007/978-3-319-44332-4_20](https://doi.org/10.1007/978-3-319-44332-4_20)
 579. Velickovic, P., Wang, D., Lane, N. D., & Liò, P. (2016). X-CNN: Cross-modal convolutional neural networks for sparse datasets.. In *SSCI* (pp. 1-8). IEEE. Retrieved from <https://ieeexplore.ieee.org/xpl/conhome/7840087/proceeding>
 580. Bardozzo, F., Liò, P., & Tagliaferri, R. (2015). Multi OMIC Oscillations in Bacterial Pathways. In *2015 International Joint Conference on Neural Networks (IJCNN)* (pp. 1-8). Institute of Electrical and Electronics Engineers (IEEE). [doi:10.1109/ijcnn.2015.7280853](https://doi.org/10.1109/ijcnn.2015.7280853)
 581. Boutorh, A., Pratanwanich, N., Guessoum, A., & Liò, P. (2015). Drug Repurposing by Optimizing Mining of Genes Target Association. In *Lecture Notes in Computer Science Vol. 8623* (pp. 209-218). Springer Nature. [doi:10.1007/978-3-319-24462-4_18](https://doi.org/10.1007/978-3-319-24462-4_18)
 582. Di Serio, C., Liò, P., Nonis, A., & Tagliaferri, R. (2015). Preface (Vol. 8623).
 583. Hamey, F. K., Shavit, Y., Maciulyte, V., Town, C., Liò, P., & Tosi, S. (2015). Automated Detection of Fluorescent Probes in Molecular Imaging. In *Lecture Notes in Computer Science Vol. 8623* (pp. 68-75). Springer Nature. [doi:10.1007/978-3-319-24462-4_6](https://doi.org/10.1007/978-3-319-24462-4_6)
 584. Iuliano, A., Occhipinti, A., Angelini, C., De Feis, I., & Liò, P. (2015). Applications of Network-based Survival Analysis Methods for Pathways Detection in Cancer. In *Lecture Notes in Computer Science Vol. 8623* (pp. 76-88). Springer Nature. [doi:10.1007/978-3-319-24462-4_7](https://doi.org/10.1007/978-3-319-24462-4_7)
 585. Korhonen, A., Guo, Y., Baker, S., Yetisgen-Yildiz, M., Stenius, U., Narita, M., & Liò, P. (2015). Improving Literature-Based Discovery with Advanced Text Mining. In *Lecture Notes in Computer Science Vol. 8623* (pp. 89-98). Springer Nature. [doi:10.1007/978-3-319-24462-4_8](https://doi.org/10.1007/978-3-319-24462-4_8)
 586. Lu, X., & Liò, P. (2015). Privacy Information Security Classification and Comparison Between the Westerner and Chinese. In *2015 International Conference on Identification, Information, and Knowledge in the Internet of Things (IIKI)* (pp. 13-18). Institute of Electrical and Electronics Engineers (IEEE). [doi:10.1109/iiki.2015.10](https://doi.org/10.1109/iiki.2015.10)
 587. Tordini, F., Drocco, M., Merelli, I., Milanese, L., Liò, P., & Aldinucci, M. (2015). NuChart-II: A Graph-Based Approach for Analysis and Interpretation of Hi-C Data. In *Lecture Notes in Computer Science Vol. 8623* (pp. 298-311). Springer Nature. [doi:10.1007/978-3-319-24462-4_25](https://doi.org/10.1007/978-3-319-24462-4_25)
 588. Tordini, F., Drocco, M., Misale, C., Milanese, L., Liò, P., Merelli, I., & Aldinucci, M. (2015). Parallel Exploration of the Nuclear Chromosome Conformation with NuChart-II. In *2015 23rd Euromicro International Conference on Parallel, Distributed, and Network-Based Processing* (pp. 725-732). Institute of Electrical and Electronics Engineers (IEEE). [doi:10.1109/pdp.2015.104](https://doi.org/10.1109/pdp.2015.104)
 589. Angione, C., Pratanwanich, N., & Liò, P. (2014, June 11). A hybrid of multi-omics FBA and Bayesian factor modeling to identify pathway crosstalks. In *Proceedings of the 6th International Workshop on Bio-Design Automation (IWBD A)*. Boston.
 590. Angione, C., Bartocci, E., Bortolussi, L., Liò, P., Occhipinti, A., & Sanguinetti, G. (2014, July 23). Bayesian Design for Whole Cell Synthetic Biology Models. In *Proceedings of the Third International Workshop on Hybrid Systems Biology (HSB 2014)*. Vienna.
 591. Bartoszek, K., & Liò, P. (2014). A novel algorithm to reconstruct phylogenies using gene sequences and expression data. In *2014 6th International Conference on Bioinformatics and Biomedical Technology (ICBBT 2014)*. Gdansk.
 592. Felicetti, L., Femminella, M., Reali, G., & Liò, P. (2014). Endovascular mobile sensor network for detecting circulating tumoral cells. In *Proceedings of the 9th International Conference on Body Area Networks* (pp. 111-117). European Alliance for Innovation n.o.. [doi:10.4108/icst.bodynets.2014.256917](https://doi.org/10.4108/icst.bodynets.2014.256917)

593. Fernandes, P., Liò, P., & Milanesi, L. (2014, July 17). Challenges in building an e-health infrastructure for P5 Medicine. In 6th International Conference on e-Health 2014. Lisbon.
594. Liò, P. (2014). Computing Longevity: Insights from Controls. In Unknown Conference (pp. 40-46). Springer International Publishing. [doi:10.1007/978-3-319-10398-3_4](https://doi.org/10.1007/978-3-319-10398-3_4)
595. Lu, X., Hui, P., Liò, P., & Qu, Z. (2014). Nodes Density Adaptive Opportunistic Forwarding Protocol for Intermittently Connected Networks. In 2014 International Conference on Identification, Information and Knowledge in the Internet of Things (pp. 297-300). Institute of Electrical and Electronics Engineers (IEEE). [doi:10.1109/iiki.2014.67](https://doi.org/10.1109/iiki.2014.67)
596. Pratanwanich, N., & Liò, P. (2014). Who Wrote This? Textual Modeling with Authorship Attribution in Big Data. In 2014 IEEE International Conference on Data Mining Workshop (pp. 645-652). Institute of Electrical and Electronics Engineers (IEEE). [doi:10.1109/icdmw.2014.140](https://doi.org/10.1109/icdmw.2014.140)
597. Scatà, M., Di Stefano, A., Giacchi, E., La Corte, A., & Liò, P. (2014). The Bio-Inspired and Social Evolution of Node and Data in a Multilayer Network. In Proceedings of the 5th International Conference on Data Communication Networking (pp. 41-46). INSTICC. [doi:10.5220/0005119600410046](https://doi.org/10.5220/0005119600410046)
598. Angione, C., Carapezza, G., Costanza, J., Liò, P., & Nicosia, G. (2013). Multi objective design for bacterial communication networks. 2013 IEEE International Conference on Communications Workshops Icc 2013, 813-817. [doi:10.1109/ICCW.2013.6649345](https://doi.org/10.1109/ICCW.2013.6649345)
599. Angione, C., Carapezza, G., Costanza, J., Liò, P., & Nicosia, G. (2013). The Role of the Genome in the Evolution of the Complexity of Metabolic Machines. In Springer Proceedings in Complexity (pp. 1063-1069). Springer Nature. [doi:10.1007/978-3-319-00395-5_127](https://doi.org/10.1007/978-3-319-00395-5_127)
600. Bansal, A., Azad, S., & Liò, P. (2013). Malaria Incidence Forecasting and Its Implication to Intervention. In T. Gilbert, M. Kirkilionis, & G. Nicoli (Eds.), Proceedings of the European Conference on Complex Systems 2012 (pp. 919-926). Bruxelles: Springer.
601. Bianchi, L., Fernandes, P., & Liò, P. (2013). Improving collective awareness and education about the privacy and ethical issues connected with the genome technologies. In The Future of Education, Conference Proceedings 2013. Florence: Libreria universitaria. Retrieved from <http://libreriauniversitaria.it/>
602. Jacovella, L., & Liò, P. (2013). Speeding up the transition to collective awareness. 2013 IEEE International Conference on Communications Workshops Icc 2013, 220-224. [doi:10.1109/ICCW.2013.6649232](https://doi.org/10.1109/ICCW.2013.6649232)
603. Liò, P., Jacovella, L., & Nguyen, V. (2013). Information Filtering and Learning: From Heuristics to Social Eudaimonia. In Springer Proceedings in Complexity (pp. 1051-1056). Springer Nature. [doi:10.1007/978-3-319-00395-5_125](https://doi.org/10.1007/978-3-319-00395-5_125)
604. Liò, P. (2013). Methodologies for Systems Medicine: Time to Join the Forces of Bioengineering and Bioinformatics.. In P. Fernandes, J. Solé-Casals, A. L. N. Fred, & H. Gamboa (Eds.), BIOINFORMATICS (pp. IS-27). SciTePress. Retrieved from <http://www.informatik.uni-trier.de/~ley/db/conf/biostec/bioinformatics2013.html>
605. Liò, P. (2013). Pathways to P4 medicine. Bioinformatics 2013 Proceedings of the International Conference on Bioinformatics Models Methods and Algorithms, IS15-IS20.
606. Liò, P., Miglino, O., Nicosia, G., Nolfi, S., & Pavone, M. (Eds.) (2013). Proceedings of the Twelfth European Conference on the Synthesis and Simulation of Living Systems: Advances in Artificial Life, ECAL 2013, Sicily, Italy, September 2-6, 2013. In ECAL. MIT Press.
607. Moni, M. A., Liò, P., & Milanesi, L. (2013). Comparing viral (HIV) and bacterial (staphylococcus aureus) infection of the bone tissue. Bioinformatics 2013 Proceedings of the International Conference on Bioinformatics Models Methods and Algorithms, 196-201.
608. Pratanwanich, N., & Liò, P. (2013). Bayesian Inference for Learning Between-Pathway Network: A New Tool for Studying Drug-Disease Interactions. In HUMAN HEREDITY Vol. 76 (pp. 99). Retrieved from https://www.webofscience.com/api/gateway?GWVersion=2&SrcApp=ucam_elements_live&SrcAuth=WosAPI&KeyUT=WOS:00033337100043&DestLinkType=FullRecord&DestApp=WOS_CPL
609. Taffi, M., Paoletti, N., Liò, P., Tesei, L., Merelli, E., & Marini, M. (2013). A systems biology and ecology framework for POPs bioaccumulation in marine ecosystems. Lecture Notes in Computer Science Including Subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics, 8130 LNBI, 238-239.
610. Angione, C., Carapezza, G., Costanza, J., Liò, P., & Nicosia, G. (2012). Computing with Metabolic Machines. In EpiC series in computing Vol. 10 (pp. 1-15). EasyChair. [doi:10.29007/t48n](https://doi.org/10.29007/t48n)
611. Coello, C. A. C., Greensmith, J., Krasnogor, N., Liò, P., Nicosia, G., & Pavone, M. (Eds.) (2012). Artificial Immune Systems - 11th International Conference, ICARIS 2012, Taormina, Italy, August 28-31, 2012. Proceedings. In ICARIS Vol. 7597. Springer.
612. Costanza, J., Carapezza, G., Angione, C., Liò, P., & Nicosia, G. (2012). Multi-objective optimisation, sensitivity and robustness analysis in FBA modelling. Lecture Notes in Computer Science Including Subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics, 7605 LNBI, 127-147. [doi:10.1007/978-3-642-33636-2_9](https://doi.org/10.1007/978-3-642-33636-2_9)
613. Kim, H., Khoo, W. M., & Liò, P. (2012). Polymorphic Attacks against Sequence-based Software Birthmarks. In SSP: The 2nd ACM SIGPLAN Workshop on Software Security and Protection. Beijing, China.
614. Liò, P., Merelli, E., & Paoletti, N. (2012). Disease processes as hybrid dynamical systems. EPTCS 92, 2012, pp. 152-166. Retrieved from <https://doi.org/10.4204/EPTCS.92.11>
615. Khoo, W. M., & Liò, P. (2011). Unity in diversity: Phylogenetic-inspired techniques for reverse engineering and detection of malware families. Proceedings 1st Syssec Workshop Syssec 2011, 3-10. [doi:10.1109/SysSec.2011.24](https://doi.org/10.1109/SysSec.2011.24)
616. Liò, P., Nicosia, G., & Stibor, T. (Eds.) (2011). Artificial Immune Systems - 10th International Conference, ICARIS 2011, Cambridge, UK, July 18-21, 2011. Proceedings. In ICARIS Vol. 6825. Springer.
617. Liò, P. (2011). Long Range Properties of DNA Sequences. In Bellacicco, Vulpiani, & Koch (Eds.), Collana Franco Angeli Editore. Roma.
618. Liò, P., Emanuela Merelli., & Nicola Paoletti, N. P. (2011). Multiple verification in computational modeling of bone pathologies. In EPTCS Vol. 67 (pp. 82-96). Aachen, Germany <http://combio.abo.fi/compmod11/>.
619. Lu, X., Xin, Y., & Liò, P. (2011). ADMAC: An adaptive directional MAC protocol for mobile ad hoc networks. Proceedings 2011 4th IEEE International Conference on Broadband Network and Multimedia Technology IC Bnmt 2011, 488-492. [doi:10.1109/ICBNMT.2011.6155982](https://doi.org/10.1109/ICBNMT.2011.6155982)
620. Lu, X., Hui, P., & Liò, P. (2011). Evolving model of opportunistic routing in delay tolerant networks. Proceedings 2011 7th International Conference on Mobile Ad Hoc and Sensor Networks Msn 2011, 276-281. [doi:10.1109/MSN.2011.35](https://doi.org/10.1109/MSN.2011.35)
621. Merelli, E., Paoletti, N., & Liò, P. (2011). Methodological Bridges for Multi-Level Systems. In E. Giacobino, & R. Pfeifer (Eds.),

622. Paoletti, N., Liò, P., Merelli, E., & Viceconti, M. (2011). Osteoporosis: A multiscale modeling viewpoint. *Proceedings of the 9th International Conference on Computational Methods in Systems Biology Cmsb* 11, 183-193. [doi:10.1145/2037509.2037536](https://doi.org/10.1145/2037509.2037536)
623. Song, Y., & Liò, P. (2011). Epileptic EEG detection via a novel pattern recognition framework. *5th International Conference on Bioinformatics and Biomedical Engineering Icbbe* 2011. [doi:10.1109/icbbee.2011.5780179](https://doi.org/10.1109/icbbee.2011.5780179)
624. Van Der Wath, R. C., Van Der Wath, E. C., & Liò, P. (2011). Parallel hematopoietic stem cell division rate estimation using an agent-based model on the grid. *Proceedings 19th International Euromicro Conference on Parallel Distributed and Network Based Processing Pdp* 2011, 311-317. [doi:10.1109/PDP.2011.65](https://doi.org/10.1109/PDP.2011.65)
625. Yoneki, E., Crowcroft, J., Liò, P., Walton, N., Vojnovic, M., & Whitaker, R. (2011). Message from the Workshop on the Future of Social Networking. *COMPUT COMMUN REV*, 41(3), 14-18. [doi:10.1145/2002250.2002254](https://doi.org/10.1145/2002250.2002254)
626. Aldinucci, M., Bracciali, A., Liò, P., Sorathiya, A., & Torquati, M. (2010). StochKit-FF: Efficient Systems Biology on Multicore Architectures.. In M. R. Guarracino, F. Vivien, J. L. Träff, M. Cannataro, M. Danelutto, A. Hast, . . . M. Alexander (Eds.), *Euro-Par Workshops Vol. 6586* (pp. 167-175). Springer. Retrieved from <https://doi.org/10.1007/978-3-642-21878-1>
627. Angelini, C., De Feis, I., Nguyen, V. A., Van Der Wath, R., & Liò, P. (2010). Combining replicates and nearby species data: A Bayesian approach. *Lecture Notes in Computer Science Including Subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics*, 6160 LNBI, 191-205. [doi:10.1007/978-3-642-14571-1_14](https://doi.org/10.1007/978-3-642-14571-1_14)
628. Bartoszek, K., Liò, P., & Sorathiya, A. (2010). INFLUENZA DIFFERENTIATION AND EVOLUTION. In A. T. Lawniczak, D. Makowiec, & B. N. Di Stefano (Eds.), *SUMMER SOLSTICE 2009 INTERNATIONAL CONFERENCE ON DISCRETE MODELS OF COMPLEX SYSTEMS Vol. 3* (pp. 417-452).
629. Chan, T. M., Leung, K. S., Lee, K. H., & Liò, P. (2010). Generic Spaced DNA Motif Discovery Using Genetic Algorithm. In *2010 IEEE CONGRESS ON EVOLUTIONARY COMPUTATION (CEC)* (pp.).
630. Nguyen, V. A., & Liò, P. (2010, October 15). Filling in the gaps of biological network. In S. Džeroski, S. Rogers, & G. Sanguinetti (Eds.), *Machine Learning in Systems Biology, Proceedings of the Fourth International Workshop Edinburgh, Scotland October 15-16, 2010* (pp. 147-149). Edinburgh.
631. Ostilli, M., Yoneki, E., Leung, I. X. Y., Mendes, J. F. F., Liò, P., & Crowcroft, J. (2010). Statistical mechanics of rumour spreading in network communities. In *ICCS 2010 - INTERNATIONAL CONFERENCE ON COMPUTATIONAL SCIENCE, PROCEEDINGS Vol. 1* (pp. 2325-2333). [doi:10.1016/j.procs.2010.04.262](https://doi.org/10.1016/j.procs.2010.04.262)
632. Papini, A., Mosti, S., Liò, P., & Haider, S. (2010). BIOLIP, a biotechnology-oriented database of oil content in plants, algae, fungi and cyanobacteria. In *JOURNAL OF BIOTECHNOLOGY Vol. 150* (pp. S204-S205). [doi:10.1016/j.jbiotec.2010.09.012](https://doi.org/10.1016/j.jbiotec.2010.09.012)
633. Papini, A., Nicosia, G., Stracquadanio, G., Liò, P., & Umeton, R. (2010). Key Enzymes for the Optimization of CO₂ Uptake and Nitrogen Consumption in the C-3 Photosynthetic Carbon Metabolism. In *JOURNAL OF BIOTECHNOLOGY Vol. 150* (pp. S525-S526). [doi:10.1016/j.jbiotec.2010.09.846](https://doi.org/10.1016/j.jbiotec.2010.09.846)
634. Pappas, V., Verma, D. C., & Liò, P. (2010). Morphogenesis in computer networks. *33rd IEEE Sarnoff Symposium 2010 Conference Proceedings*. [doi:10.1109/SARNOF.2010.5469776](https://doi.org/10.1109/SARNOF.2010.5469776)
635. Song, Y., Azad, S., & Liò, P. (2010). A new approach for epileptic seizure detection using extreme learning machine. *Biosignals* 2010 *Proceedings of the 3rd International Conference on Bio Inspired Systems and Signal Processing Proceedings*, 436-441.
636. Stracquadanio, G., Umeton, R., Papini, A., Liò, P., & Nicosia, G. (2010). Analysis and optimization of C3 photosynthetic carbon metabolism. *10th IEEE International Conference on Bioinformatics and Bioengineering 2010 Bibe* 2010, 44-51. [doi:10.1109/BIBE.2010.17](https://doi.org/10.1109/BIBE.2010.17)
637. Xie, S., Lawniczak, A. T., Song, Y., & Liò, P. (2010). Feature extraction via dynamic PCA for epilepsy diagnosis and epileptic seizure detection. *Proceedings of the 2010 IEEE International Workshop on Machine Learning for Signal Processing Mlsp* 2010, 337-342. [doi:10.1109/MLSP.2010.5588995](https://doi.org/10.1109/MLSP.2010.5588995)
638. Xie, S., Lawniczak, A. T., & Liò, P. (2010). Features extraction via wavelet kernel PCA for data classification. *Proceedings of the 2010 IEEE International Workshop on Machine Learning for Signal Processing Mlsp* 2010, 438-443. [doi:10.1109/MLSP.2010.5588766](https://doi.org/10.1109/MLSP.2010.5588766)
639. Bella, G., & Liò, P. (2009). Formal Analysis of the Genetic Toggle. In P. Degano, & R. Gorrieri (Eds.), *COMPUTATIONAL METHODS IN SYSTEMS BIOLOGY, PROCEEDINGS Vol. 5688* (pp. 96-110).
640. Chan, S. Y., Leung, I. X. Y., & Liò, P. (2009). Fast centrality approximation in modular networks. *International Conference on Information and Knowledge Management Proceedings*, 31-38. [doi:10.1145/1651274.1651282](https://doi.org/10.1145/1651274.1651282)
641. Cheng, T. M. K., Lu, Y. E., & Liò, P. (2009). Identification of structurally important amino acids in proteins by graph-theoretic measures. *Proceedings of the Kdd 09 Workshop on Statistical and Relational Learning in Bioinformatics Strebio* 09, 7-11. [doi:10.1145/1562090.1562092](https://doi.org/10.1145/1562090.1562092)
642. Giampaolo Bella, G. B., & Liò, P. (2009). Analysing the microRNA-17-92/Myc/E2F/RB Compound Toggle Switch by Theorem Proving. In *Proc. of the 9th Workshop on Network Tools and Applications in Biology (Nettab'09) Vol. Liberodiscrivere* (2009) (pp. 59-62). Catania: Liberodiscrivere (2009).
643. Guazzini, A., Liò, P., Passarella, A., & Conti, M. (2009). Information Processing and Timing Mechanisms in Vision. In C. Alippi, M. Polycarpou, C. Panayiotou, & G. Ellinas (Eds.), *ARTIFICIAL NEURAL NETWORKS - ICANN 2009, PT I Vol. 5768* (pp. 325-334).
644. Hui, P., Xu, K., Li, V. O. K., Crowcroft, J., Latora, V., & Liò, P. (2009). Selfishness, Altruism and Message Spreading in Mobile Social Networks. In *IEEE INFOCOM 2009 - IEEE CONFERENCE ON COMPUTER COMMUNICATIONS WORKSHOPS* (pp. 284-289).
645. Kitchovitch, S., Song, Y. D., van der Wath, R., & Liò, P. (2009). Substitution Matrices and Mutual Information Approaches to Modeling Evolution. In T. Stutzle (Ed.), *LEARNING AND INTELLIGENT OPTIMIZATION Vol. 5851* (pp. 259-272).
646. Kitchovitch, S., Leung, I., Song, Y. D., & Liò, P. (2009). Using Mutual Information and Models of Evolution for improved pattern detection. In J. Zhang, G. Z. Li, & J. Y. Yang (Eds.), *2009 INTERNATIONAL JOINT CONFERENCE ON BIOINFORMATICS, SYSTEMS BIOLOGY AND INTELLIGENT COMPUTING, PROCEEDINGS* (pp. 215-221). [doi:10.1109/IJCBS.2009.77](https://doi.org/10.1109/IJCBS.2009.77)
647. Lu, Y. -E., Roberts, S. G. B., Cheng, T. M. K., Dunbar, R., Liò, P., & Crowcroft, J. (2009). On optimising personal network size to manage information flow.. In J. Wang, S. Zhou, & D. Zhang (Eds.), *CIKM-CNIKM* (pp. 19-26). ACM. Retrieved from <http://www.informatik.uni-trier.de/~ley/db/conf/cikm/cnikm2009.html>
648. Lu, Y. -E., Roberts, S. G. B., Liò, P., Dunbar, R., & Crowcroft, J. (2009). Size Matters: Variation in Personal Network Size, Personality and Effect on Information Transmission.. In *CSE (4)* (pp. 188-193). IEEE Computer Society. [doi:10.1109/CSE.2009.179](https://doi.org/10.1109/CSE.2009.179)
649. Nguyen, V. A., & Liò, P. (2009). Measuring similarity between gene expression profiles: a Bayesian approach. In *BMC GENOMICS Vol. 10* (pp.). [doi:10.1186/1471-2164-10-S3-S14](https://doi.org/10.1186/1471-2164-10-S3-S14)

650. Sorathiya, A., Jucikas, T., Piecewicz, S., Sengupta, S., & Liò, P. (2009). Searching for Glycomics Role in Stem Cell Development. In F. Masulli, R. Tagliaferri, & G. M. Verkhivker (Eds.), *COMPUTATIONAL INTELLIGENCE METHODS FOR BIOINFORMATICS AND BIOSTATISTICS* Vol. 5488 (pp. 198-209).
651. Sorathiyar, A., Liò, P., & Sguanci, L. (2009). Mathematical Model of HIV Superinfection and Comparative Drug Therapy. In P. S. Andrews, J. Timmis, N. D. L. Owens, U. Aickelin, E. Hart, A. Hone, & A. M. Tyrrell (Eds.), *ARTIFICIAL IMMUNE SYSTEMS*, *PROCEEDINGS* Vol. 5666 (pp. 41-53).
652. Xie, S. K., Liò, P., & Lawniczak, A. T. (2009). A Case Study of ICA with Multi-scale PCA of Simulated Traffic Data. In C. Alippi, M. Polycarpou, C. Panayiotou, & G. Ellinas (Eds.), *ARTIFICIAL NEURAL NETWORKS - ICANN 2009*, PT II Vol. 5769 (pp. 358-367).
653. Xie, S. K., Liò, P., & Lawniczak, A. T. (2009). A Comparative Study of Noise Effect on Wavelet Based De-noising Methods. In *IEEE TIC-STH 09: 2009 IEEE TORONTO INTERNATIONAL CONFERENCE: SCIENCE AND TECHNOLOGY FOR HUMANITY* (pp. 919-926).
654. Xu, K., Hui, P., Li, V. O. K., Crowcroft, J., Latora, V., & Liò, P. (2009). Impact of Altruism on Opportunistic Communications. In *2009 FIRST INTERNATIONAL CONFERENCE ON UBIQUITOUS AND FUTURE NETWORKS* (pp. 153-158).
655. Allen, S. M., Conti, M., Crowcroft, J., Dunbar, R., Liò, P., Mendes, J. F., . . . Whitaker, R. M. (2008). Social Networking for Pervasive Adaptation. In G. D. Serugendo (Ed.), *SASOW 2008: SECOND IEEE INTERNATIONAL CONFERENCE ON SELF-ADAPTIVE AND SELF-ORGANIZING SYSTEMS WORKSHOPS*, *PROCEEDINGS* (pp. 49-54).
656. Angelini, C., Cuttillo, L., De Feis, I., Liò, P., & van der Wath, R. (2008). Combining experimental evidences from replicates and nearby species data for annotating novel genomes. In L. M. Ricciardi, A. Buonocore, & E. Pirozzi (Eds.), *COLLECTIVE DYNAMICS: TOPICS ON COMPETITION AND COOPERATION IN THE BIOSCIENCES* Vol. 1028 (pp. 277-291).
657. Bagnoli, F., Guazzini, A., & Liò, P. (2008). Human Heuristics for Autonomous Agents. In Liò, P., E. Yoneki, & D. C. Verma (Eds.), *BIO-INSPIRED COMPUTING AND COMMUNICATION* Vol. 5151 (pp. 340-351).
658. Kershenbaum, A., Pappas, V., Lee, K. W., Liò, P., Sadler, B., & Verma, D. (2008). A Biologically-Inspired MANET Architecture. In *Proceedings of SPIE, the International Society for Optical Engineering* (pp. 698106.1-698106.9).
659. Kershenbaum, A., Pappas, V., Lee, K. W., Liò, P., Sadler, B., & Verma, D. (2008). A biologically-inspired MANET architecture - art. no. 698106. In R. Suresh (Ed.), *DEFENSE TRANSFORMATION AND NET-CENTRIC SYSTEMS 2008* Vol. 6981 (pp. 98106).
660. Koukolikova-Nicola, Z., Liò, P., & Bagnoli, F. (2008). Inference on missing values in genetic networks using high-throughput data. In E. Marchiori, & J. H. Moore (Eds.), *EVOLUTIONARY COMPUTATION, MACHINE LEARNING AND DATA MINING IN BIOINFORMATICS*, *PROCEEDINGS* Vol. 4973 (pp. 106-116).
661. Lee, U., Magistretti, E., Gerla, M., Bellavista, P., Liò, P., & Lee, K. W. (2008). Bio-Inspired Multi-agent Collaboration for Urban Monitoring Applications. In Liò, P., E. Yoneki, & D. C. Verma (Eds.), *BIO-INSPIRED COMPUTING AND COMMUNICATION* Vol. 5151 (pp. 204-216).
662. Leung, I. X. Y., Gibbs, G., Bagnoli, F., Sorathiya, A., & Liò, P. (2008). Contact Network Modeling of Flu Epidemics. In H. Umeo, S. Morishita, K. Nishinari, T. Komatsuzaki, & S. Bandini (Eds.), *CELLULAR AUTOMATA*, *PROCEEDINGS* Vol. 5191 (pp. 354-361).
663. Liò, P., Yoneki, E., Crowcroft, J., & Verma, D. C. (Eds.) (2008). *Bio-Inspired Computing and Communication, First Workshop on Bio-Inspired Design of Networks*, *BIOWIRE 2007*, Cambridge, UK, April 2-5, 2007, Revised Selected Papers. In *BIOWIRE* Vol. 5151. Springer.
664. Liò, P., Angelini, C., DeFeis, I., Nguyen, V., Cuttillo, L., & van der Wath, R. (2008). Statistical issues for combining replicates and nearby species data and different omics. In *Proceedings The Art and Science of Statistical Bioinformatics The 27th Leeds Annual Statistical Research Workshop 15th - 17th July 2008* (pp. 50-54). Leeds: S. Barber, P.D. Baxter, A. Gusnanto & K.V. Mardia (eds) Leeds University Press.
665. Liò, P., Brilli, M., & Fani, R. (2008). Topological metrics in Blast data mining: Plasmid and nitrogen-fixing proteins case studies. In M. Elloumi, J. Kung, M. Linial, R. F. Murphy, K. Schneider, & C. Toma (Eds.), *BIOINFORMATICS RESEARCH AND DEVELOPMENT*, *PROCEEDINGS* Vol. 13 (pp. 207-220).
666. Liò, P., Lawniczak, A. T., Xie, S., & Xu, J. (2008). Wavelet-domain statistics of packet switching networks near traffic congestion. *Lecture Notes in Computer Science Including Subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics*, 5151 LNCS, 268-279. [doi:10.1007/978-3-540-92191-2_24](https://doi.org/10.1007/978-3-540-92191-2_24)
667. Lu, X. F., Chen, Y. C., Leung, I., Xiong, Z., & Liò, P. (2008). A novel mobility model from a heterogeneous military MANET trace. In D. Coudert, D. SimplotRyl, & I. Stojmenovic (Eds.), *AD-HOC, MOBILE AND WIRELESS NETWORKS*, *PROCEEDINGS* Vol. 5198 (pp. 463-474).
668. Lu, X. F., Hui, P., Liò, P., & Xiong, Z. (2008). Identity Privacy Protection by Delayed Transmission in Pocket Switched Networks. In M. Guo, Z. J. Wang, F. Tang, & C. Z. Xu (Eds.), *EUC 2008: PROCEEDINGS OF THE 5TH INTERNATIONAL CONFERENCE ON EMBEDDED AND UBIQUITOUS COMPUTING, VOL 2, WORKSHOPS* (pp. 272-277).
669. Lu, Y. E., Liò, P., & Hand, S. (2008). On low dimensional random projections and similarity search. *International Conference on Information and Knowledge Management Proceedings*, 749-758. [doi:10.1145/1458082.1458182](https://doi.org/10.1145/1458082.1458182)
670. Lu, X. F., Wicker, F., Liò, P., & Towsley, D. (2008). Security Estimation Model with Directional Antennas. In *2008 IEEE MILITARY COMMUNICATIONS CONFERENCE: MILCOM 2008*, VOLS 1-7 (pp. 3808-3813).
671. Nguyen, V. A., Koukolikova-Nicola, Z., Bagnoli, F., & Liò, P. (2008). Bayesian Inference on Hidden Knowledge in High-Throughput Molecular Biology Data. In T. B. Ho, & Z. H. Zhou (Eds.), *PRICAI 2008: TRENDS IN ARTIFICIAL INTELLIGENCE* Vol. 5351 (pp. 829-838).
672. Schwarz, E., Leweke, F. M., Bahn, S., & Liò, P. (2008). Combining molecular and physiological data of complex disorders. In M. Elloumi, J. Kung, M. Linial, R. F. Murphy, K. Schneider, & C. Toma (Eds.), *BIOINFORMATICS RESEARCH AND DEVELOPMENT*, *PROCEEDINGS* Vol. 13 (pp. 362-376).
673. Stajano, F., Bianchi, L., Liò, P., & Korff, D. (2008). Forensic genomics: Kin privacy, driftnets and other open questions. *Proceedings of the ACM Conference on Computer and Communications Security*, 15-22. [doi:10.1145/1456403.1456407](https://doi.org/10.1145/1456403.1456407)
674. van der Wath, R. C., & Liò, P. (2008). A Stochastic Multi-agent Model of Stem Cell Proliferation. In H. Umeo, S. Morishita, K. Nishinari, T. Komatsuzaki, & S. Bandini (Eds.), *CELLULAR AUTOMATA*, *PROCEEDINGS* Vol. 5191 (pp. 500-505).
675. van der Wath, R. C., & Liò, P. (2008). A Stochastic Single Cell Based Model of BrdU Measured Hematopoietic Stem Cell Kinetics. In M. Heiner, & A. M. Uhrmacher (Eds.), *COMPUTATIONAL METHODS IN SYSTEMS BIOLOGY*, *PROCEEDINGS* Vol. 5307 (pp. 387-401).
676. van der Wath, R. C., van der Wath, E., Carapelli, A., Nardi, F., Frati, F., Milanesi, L., & Liò, P. (2008). Bayesian phylogeny on grid. In M. Elloumi, J. Kung, M. Linial, R. F. Murphy, K. Schneider, & C.

- Toma (Eds.), BIOINFORMATICS RESEARCH AND DEVELOPMENT, PROCEEDINGS Vol. 13 (pp. 404-416).
677. Xie, S., Lawniczak, A. T., & Liò, P. (2008). Parametric & non-parametric analysis of mean treatment effects of number of packets in transit in data network model. Canadian Conference on Electrical and Computer Engineering, 2021-2026. [doi:10.1109/CCECE.2008.4564900](https://doi.org/10.1109/CCECE.2008.4564900)
 678. Angelini, C., Cutillo, L., De Feis, I., Van der Wath, R., & Liò, P. (2007). Identifying regulatory sites using neighborhood species. In E. Marchiori, J. H. Moore, & J. C. Rajapakse (Eds.), *Evolutionary Computation, Machine Learning and Data Mining in Bioinformatics*, Proceedings Vol. 4447 (pp. 1-10).
 679. Carapelli, A., Liò, P., Nardi, F., van der Wath, E., & Frati, F. (2007). Phylogenetic analysis of mitochondrial protein coding genes confirms the reciprocal paraphyly of Hexapoda and Crustacea. In *BMC EVOLUTIONARY BIOLOGY* Vol. 7 (pp.). [doi:10.1186/1471-2148-7-S2-S8](https://doi.org/10.1186/1471-2148-7-S2-S8)
 680. Fani, R., Brilli, M., Fondi, M., & Liò, P. (2007). The role of gene fusions in the evolution of metabolic pathways: the histidine biosynthesis case. In *BMC EVOLUTIONARY BIOLOGY* Vol. 7 (pp.). [doi:10.1186/1471-2148-7-S2-S4](https://doi.org/10.1186/1471-2148-7-S2-S4)
 681. Lawniczak, A. T., Xie, S., Liò, P., & Xu, J. (2007). Study of packet traffic fluctuations near phase transition point from free flow to congestion in data network model. Canadian Conference on Electrical and Computer Engineering, 360-363. [doi:10.1109/CCECE.2007.93](https://doi.org/10.1109/CCECE.2007.93)
 682. Lawniczak, A. T., Liò, P., Xie, S., & Xu, J. Y. (2007). Wavelet spectral analysis of packet traffic near phase transition point from free flow to congestion in data network model. In 2007 CANADIAN CONFERENCE ON ELECTRICAL AND COMPUTER ENGINEERING, VOLS 1-3 (pp. 364-367).
 683. Lu, Y. E., Liò, P., & Hand, S. (2007). Beta random projection. In *ISM WORKSHOPS 2007: NINTH IEEE INTERNATIONAL SYMPOSIUM ON MULTIMEDIA - WORKSHOPS, PROCEEDINGS* (pp. 323-328). [doi:10.1109/ISM.Workshops.2007.61](https://doi.org/10.1109/ISM.Workshops.2007.61)
 684. Lu, Y. E., Hand, S., & Liò, P. (2007). Keyword searching in structured overlays via content distance addressing. In G. Moro, S. Bergamaschi, S. Joseph, J. H. Morin, & A. M. Oukel (Eds.), *Databases, Information Systems, and Peer-to-Peer Computing* Vol. 4125 (pp. 259-272).
 685. Milanese, L., Liò, P., & Breton, V. (2007). Bioinformatics Challenges in Life Science. In *IST-Africa 2007 Conference Proceedings*, Paul Cunningham and Miriam Cunningham (Eds.), IIMC International Information Management Corporation, 2007, ISBN: 1-905824-04-1. Maputo, Mozambique.
 686. Sguanci, L., Bagnoli, F., & Liò, P. (2007). Modeling HIV quasispecies evolutionary dynamics. In *BMC EVOLUTIONARY BIOLOGY* Vol. 7 (pp.). [doi:10.1186/1471-2148-7-S2-S5](https://doi.org/10.1186/1471-2148-7-S2-S5)
 687. Fani, R., Caramelli, D., & Liò, P. (2006). From prebiotic chemistry to the evolution of man: The First Conference of the S.I.B.E. (Italian Society of Evolutionary Biology) in Florence. *Rivista di Biologia - Biology Forum*, 99(3), 357-360.
 688. Fani, R., Caramelli, D., & Liò, P. (2006). [It happened... From prebiotic chemistry to human evolution. In Florence, the First Congress of S.I.B.E. September, 4-6, 2006]. *Riv Biol*, 99(3), 357-360. Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/17342847>
 689. Sguanci, L., Liò, P., & Bagnoli, F. (2006). Modeling evolutionary dynamics of HIV infection. In C. Priami (Ed.), *COMPUTATIONAL METHODS IN SYSTEMS BIOLOGY, PROCEEDINGS* Vol. 4210 (pp. 196-211).
 690. Sguanci, L., Liò, P., & Bagnoli, F. (2006). The influence of risk perception in epidemics: A cellular agent model. In S. E. Yacoubi, B. Chopard, & S. Bandini (Eds.), *CELLULAR AUTOMATA, PROCEEDINGS* Vol. 4173 (pp. 321-329).
 691. Liò, P. (2005). Phylogenetic and structural analysis of mitochondrial complex I proteins. In *GENE* Vol. 345 (pp. 55-64). [doi:10.1016/j.gene.2004.11.033](https://doi.org/10.1016/j.gene.2004.11.033)
 692. Lu, Y. E., Hand, S., & Liò, P. (2005). Keyword searching in hypercubic manifolds. In G. Caronni, N. Weiler, M. Waldvogel, & N. Shahmehri (Eds.), *Fifth IEEE International Conference on Peer-to-Peer Computing, Proceedings* (pp. 150-151).
 693. Liò, P., & Vannucci, M. (2003). Investigating the evolution and structure of chemokine receptors. In *GENE* Vol. 317 (pp. 29-37). [doi:10.1016/S0378-1119\(03\)00666-8](https://doi.org/10.1016/S0378-1119(03)00666-8)
 694. Brilli, M., Liò, P., Lazcano, A., & Fani, R. (2002). Evolution of TIM barrel: Multiple gene elongation events in HisA.. In *Origins of Life and Evolution of the Biosphere* Vol. 22 (pp. 487). Oaxaca, Mexico: Springer.
 695. Liò, P. (2002). Structure and evolution of the histidine biosynthetic pathway. In M. Brilli, Liò, P., A. Lazcano, & R. Fani (Eds.), *Origins of Life and Evolution of the Biosphere* Vol. 22 (pp. 488). Oaxaca, Mexico: Springer.
 696. Dewar, J., Wheatley, A., Wilkinson, J., Holgate, S. T., Thomas, N. S., Liò, P., . . . Hall, I. P. (1997). Association of the Gln 27 beta(2)-adrenoceptor polymorphism and IgE variability in asthmatic families. In *CHEST* Vol. 111 (pp. S78-S79).
 697. Morton, N. E., & Liò, P. (1997). Oligogenic linkage and map integration. In I. H. Pawlowitzki, J. H. Edwards, & E. A. Thompson (Eds.), *GENETIC MAPPING OF DISEASE GENES* (pp. 17-21).
 698. Thomas, N. S., Wilkinson, J., Liò, P., Doull, I., Morton, N. E., & Holgate, S. T. (1997). Investigation of the genetic factors underlying asthma and atopy in outbred UK populations. In C. S. Hong, J. T. Choung, J. H. Chung, J. Jang, T. Y. Jang, K. S. Jung, . . . C. S. Park (Eds.), *5TH WEST-PACIFIC ALLERGY SYMPOSIUM / 7TH KOREA-JAPAN JOINT ALLERGY SYMPOSIUM* (pp. 81-86).
 699. Bagnoli, F., Guasti, G., & Liò, P. (1995). Translation optimization in bacteria: Statistical models. In M. Peyrard (Ed.), *NONLINEAR EXCITATIONS IN BIOMOLECULES* (pp. 405-411).
 700. Fani, R., Grifoni, A., Damiani, G., Liò, P., & Mori, E. (1994). Nucleotide Sequence of Azospirillum RAPD markers. In *Azospirillum VI and Related Microorganisms:: Genetics - Physiology - Ecology (NATO ASI Series / Ecological Sciences)*. Springer Verlag.

701. Ali, R., Borgi, A., Irwin, C., Severino, M., & Liò, P. (2026). Remember to Forget: Gated Adaptive Positional Encoding. [doi:10.48550/arxiv.2605.10414](https://arxiv.org/abs/2605.10414)
702. Bagnoli, F., Cvetkovic, T. J., Guazzini, A., Liò, P., & Romei, R. (2026). Modeling the Spreading of Fake News Through the Interactions Between Human Heuristics and Recommender Systems. [doi:10.20944/preprints202602.1064.v1](https://arxiv.org/abs/2602.1064v1)
703. Braithwaite, L., Borgi, A., Onorato, G., Tarantelli, K., Restuccia, F., Silvestri, F., & Liò, P. (2026). Heterogeneous Sheaf Neural Networks. [doi:10.48550/arxiv.2409.08036](https://arxiv.org/abs/2409.08036)
704. Buscemi, A., Proverbio, D., Di Stefano, A., Han, T. -A., Castignani, G., & Liò, P. (2026). FAIRGAME: a Framework for AI Agents Bias Recognition using Game Theory. [doi:10.48550/arxiv.2504.14325](https://arxiv.org/abs/2504.14325)
705. Buscemi, A., Proverbio, D., Di Stefano, A., Han, T. -A., Castignani, G., & Liò, P. (2026). When Numbers Start Talking: Implicit Numerical Coordination Among LLM-Based Agents. [doi:10.48550/arxiv.2601.03846](https://arxiv.org/abs/2601.03846)
706. Caralt, F. H., Català, M. G. I., Bazaga, A., & Liò, P. (2026). On the Necessity of Learnable Sheaf Laplacians. [doi:10.48550/arxiv.2603.05395](https://arxiv.org/abs/2603.05395)
707. Caranzano, I., Sanavia, T., Liò, P., Baldi, P., & Fariselli, P. (2026). The illusion of interpretability in biologically informed neural networks. [doi:10.64898/2026.05.07.723544](https://arxiv.org/abs/2605.07723544)
708. Català, M. G. I., Borde, H. S. D. O., Montañez, G. D., & Liò, P. (2026). The Stepwise Informativeness Assumption: Why are Entropy Dynamics and Reasoning Correlated in LLMs?. [doi:10.48550/arxiv.2604.06192](https://arxiv.org/abs/2604.06192)
709. Chen, X., Zhang, R., Gao, B., He, X., Liu, X., Liò, P., . . . Yiu, S. -M. (2026). MODE: Efficient Time Series Prediction with Mamba Enhanced by Low-Rank Neural ODEs. [doi:10.48550/arxiv.2601.00920](https://arxiv.org/abs/2601.00920)
710. Dong, T., He, H., Liò, P., & Jamnik, M. (2026). An AI Monkey Gets Grapes for Sure -- Sphere Neural Networks for Reliable Decision-Making. [doi:10.48550/arxiv.2601.00142](https://arxiv.org/abs/2601.00142)
711. Ebrahimi, A., Wiil, U. K., Olsson, T., Liò, P., Kockum, I., Manouchehrinia, A., & Kiani, N. A. (2026). A susceptibility network analysis of disease trajectories leading to multiple sclerosis: a nationwide cohort study. [doi:10.64898/2026.01.19.26344395](https://arxiv.org/abs/2601.19.26344395)
712. Dong, T., Jamnik, M., & Liò, P. (2026). Data-driven Machine Learning Cannot Reach Symbolic-level Logical Reasoning -- The Limit of the Scaling Law. [doi:10.48550/arxiv.2606.26454](https://arxiv.org/abs/2606.26454)
713. Grillo, N., Rowbottom, J., Liò, P., Schönlieb, C. B., & Fresca, S. (2026). HyperR Adaptivity: Joint $\mathbb{H}^s$ -Adaptive Meshing via Hypergraph Multi-Agent Deep Reinforcement Learning. [doi:10.48550/arxiv.2512.10439](https://arxiv.org/abs/2512.10439)
714. Gupta, C., Haider, S., & Liò, P. (2026). Trajectory Inference of Human Aging from Cross-Sectional DNA Methylation Data. [doi:10.48550/arxiv.2607.06583](https://arxiv.org/abs/2607.06583)
715. Ioannou, P., Liò, P., & Cicuta, P. (2026). An Empirical Investigation of Neural ODEs and Symbolic Regression for Dynamical Systems.. CoRR, abs/2601.20637.
716. Jain, R., Okumura, K., Amir, M., Liò, P., & Prorok, A. (2026). Pairwise is Not Enough: Hypergraph Neural Networks for Multi-Agent Pathfinding.. CoRR, abs/2602.06733.
717. Lam, K. -Y., ZHANG, R. Q., Wen, H., Li, M., Zhang, X., Yang, Q., . . . Liò, P. (2026). From Physics Constraints to Adaptive Discovery: OG-QIMP Enables Quantum-Informed Molecular Property Prediction. [doi:10.21203/rs.3.rs-8355954/v1](https://arxiv.org/abs/2102.03383)
718. Logothetis, S. B., Wood, A., & Liò, P. (2026). KAPLAN: Kolmogorov-Arnold Prognostic Learnable Activation Networks for Survival Analysis. Retrieved from <https://arxiv.org/abs/2605.23082v2>
719. Magister, L. C., & Liò, P. (2026). Concept Graph Convolutions: Message Passing in the Concept Space. [doi:10.48550/arxiv.2604.20082](https://arxiv.org/abs/2604.20082)
720. Magister, L. C., Norcliffe, A., Duta, I., & Liò, P. (2026). Subgraph Concept Networks: Concept Levels in Graph Classification. [doi:10.48550/arxiv.2604.18868](https://arxiv.org/abs/2604.18868)
721. Marozzo, F., & Liò, P. (2026). LLM-as-an-Investigator: Evidence-First Reasoning for Robust Interactive Problem Diagnosis. [doi:10.48550/arxiv.2606.13220](https://arxiv.org/abs/2606.13220)
722. Naddeo, D., Abate, C., Liò, P., Toschi, N., & Bianchi, F. M. (2026). Hierarchical Pooling for Sheaf Neural Networks. [doi:10.48550/arxiv.2606.20932](https://arxiv.org/abs/2606.20932)
723. Pan, G., Wang, S., Lin, Y., Zhou, T., Liò, P., Zhao, Z., & Wang, Y. (2026). VLM-CAD: VLM-Optimized Collaborative Agent Design Workflow for Analog Circuit Sizing. [doi:10.48550/arxiv.2601.07315](https://arxiv.org/abs/2601.07315)
724. Pertl, L., Xuanyuan, H., & Liò, P. (2026). Superposition in Graph Neural Networks. [doi:10.48550/arxiv.2509.00928](https://arxiv.org/abs/2509.00928)
725. Rathod, S. S., Ceccarelli, F., Holden, S. B., Liò, P., Zhang, X., & Tanevski, J. (2026). ContextFlow: Context-Aware Flow Matching For Trajectory Inference From Spatial Omics Data. [doi:10.48550/arxiv.2510.02952](https://arxiv.org/abs/2510.02952)
726. Rathod, S. S., Liò, P., & Zhang, X. (2026). SplineFlow: Flow Matching for Dynamical Systems with B-Spline Interpolants. [doi:10.48550/arxiv.2601.23072](https://arxiv.org/abs/2601.23072)
727. Rekesh, A., Cretu, M., Shevchuk, D., Somnath, V. R., Liò, P., Batey, R. A., . . . Liu, C. -H. (2026). SynCoGen: Synthesizable 3D Molecule Generation via Joint Reaction and Coordinate Modeling. [doi:10.48550/arxiv.2507.11818](https://arxiv.org/abs/2507.11818)
728. Rowbottom, J., Fresca, S., Liò, P., Schönlieb, C. -B., & Boullé, N. (2026). Multi-Level Monte Carlo Training of Neural Operators. [doi:10.48550/arxiv.2505.12940](https://arxiv.org/abs/2505.12940)
729. Sun, B., Zhu, M., Caso, F., Gu, J., Yu, J., Torr, P., Liò, P., & Yu, J. (2026). The Path Matters: Learning a Token-Commitment Policy for Diffusion Language Models. [doi:10.48550/arxiv.2605.24697](https://arxiv.org/abs/2605.24697)
730. Sun, L., Huang, Z., Wang, Y., Chen, Q., Liò, P., & Yu, P. S. (2026). Are Common Substructures Transferable? Riemannian Graph Foundation Model with Neural Vector Bundles. [doi:10.48550/arxiv.2606.03270](https://arxiv.org/abs/2606.03270)
731. Zaz, B., Català, M. G. I., Caralt, F. H., Eliasof, M., & Liò, P. (2026). Graph Transductive Sharpening: Leveraging Unlabeled Predictions in Node Classification. [doi:10.48550/arxiv.2605.20248](https://arxiv.org/abs/2605.20248)
732. Zhang, Y., Sun, Z., Liò, P., & Xia, K. (2026). Communicability-Inspired Positional Encoding (CIPE). [doi:10.48550/arxiv.2606.25293](https://arxiv.org/abs/2606.25293)
733. Zhao, K., Wang, Z., Ma, T., Wu, F., Tang, X., Liò, P., Wang, S., & Ye, Y. (2026). Hypergraph Pattern Machine: Compositional Tokenization for Higher-Order Interactions. [doi:10.48550/arxiv.2605.16527](https://arxiv.org/abs/2605.16527)
734. Ali, R., Liò, P., & Vicary, J. (2025). Algebraic Priors for Approximately Equivariant Networks. Retrieved from <https://arxiv.org/abs/2506.08244v2>
735. Ali, R., Caso, F., Irwin, C., & Liò, P. (2025). Entropy-Lens: The Information Signature of Transformer Computations.. CoRR, abs/2502.16570.
736. Ali, R., Caso, F., Irwin, C., & Liò, P. (2025). Entropy-Lens: Uncovering Decision Strategies in LLMs. Retrieved from <https://arxiv.org/abs/2502.16570v3>

737. Ali, R., Liò, P., & Vicary, J. (2025). Parameter-free approximate equivariance for tasks with finite group symmetry.. CoRR, abs/2506.08244.
738. Belkadi, S., Hong, S., Chen, M., Cretu, M., Harris, C., & Liò, P. (2025). Diffusion-Free Graph Generation with Next-Scale Prediction. Retrieved from <https://arxiv.org/abs/2503.23612v2>
739. Bergna, R., Calvo-Ordoñez, S., Opolka, F. L., Liò, P., & Hernandez-Lobato, J. M. (2025). Uncertainty Modeling in Graph Neural Networks via Stochastic Differential Equations. [doi:10.48550/arxiv.2408.16115](https://arxiv.org/abs/2408.16115)
740. Borgi, A., Silvestri, F., & Liò, P. (2025). Polynomial Neural Sheaf Diffusion: A Spectral Filtering Approach on Cellular Sheaves.. CoRR, abs/2512.00242.
741. Buscemi, A., Proverbio, D., Di Stefano, A., Han, T. A., Castignani, G., & Liò, P. (2025). Strategic Communication and Language Bias in Multi-Agent LLM Coordination. [doi:10.48550/arxiv.2508.00032](https://arxiv.org/abs/2508.00032)
742. Buterez, D., Janet, J. P., Oglic, D., & Liò, P. (2025). An end-to-end attention-based approach for learning on graphs. [doi:10.48550/arxiv.2402.10793](https://arxiv.org/abs/2402.10793)
743. Caranzano, I., Pancotti, C., Rollo, C., Sartori, F., Liò, P., Fariselli, P., & Sanavia, T. (2025). Sparsity is All You Need: Rethinking Biological Pathway-Informed Approaches in Deep Learning. [doi:10.48550/arxiv.2505.04300](https://arxiv.org/abs/2505.04300)
744. Caso, F., Trappolini, G., Bacciu, A., Liò, P., & Silvestri, F. (2025). Renormalized Graph Representations for Node Classification. [doi:10.48550/arxiv.2306.00707](https://arxiv.org/abs/2306.00707)
745. Ceccarelli, F., Liò, P., Saez-Rodriguez, J., Holden, S. B., & Tanevski, J. (2025). Topography Aware Optimal Transport for Alignment of Spatial Omics Data. [doi:10.1101/2025.04.15.648894](https://arxiv.org/abs/2504.15648)
746. Chen, J., Mathis, S., Harris, C., Didi, K., & Liò, P. (2025). Flows, straight but not so fast: Exploring the design space of Rectified Flows in Protein Design. [doi:10.48550/arxiv.2510.24732](https://arxiv.org/abs/2510.24732)
747. Cheng, Y., Zhao, X., Zeng, T., Liò, P., Schönlieb, C. -B., & Aviles-Rivero, A. I. (2025). Deep Spectral Prior. [doi:10.48550/arxiv.2505.19873](https://arxiv.org/abs/2505.19873)
748. Cornelio, C., Petruzzellis, F., & Liò, P. (2025). Hierarchical Planning for Complex Tasks with Knowledge Graph-RAG and Symbolic Verification. Retrieved from <https://arxiv.org/abs/2504.04578v1>
749. Cosentino, C., Defilippo, A., Dossena, M., Irwin, C., Joubbi, S., & Liò, P. (2025). HealthBranches: Synthesizing Clinically-Grounded Question Answering Datasets via Decision Pathways. [doi:10.48550/arxiv.2508.07308](https://arxiv.org/abs/2508.07308)
750. Cretu, M., Harris, C., Igashov, I., Schneuing, A., Segler, M., Correia, B., . . . Liò, P. (2025). SynFlowNet: Design of Diverse and Novel Molecules with Synthesis Constraints. [doi:10.48550/arxiv.2405.01155](https://arxiv.org/abs/2405.01155)
751. Deangeli, G., Spillantini, M. G., & Liò, P. (2025). GhostBuster: A Deep-Learning-based, Literature-Unbiased Gene Prioritization Tool for Gene Annotation Prediction.. [doi:10.1101/2025.06.22.660948](https://arxiv.org/abs/2506.22660)
752. Deangeli, G., Spillantini, M. G., & Liò, P. (2025). Proteomizer: Leveraging the Transcriptome-Proteome Mismatch to Infer Novel Gene Regulatory Relations.. [doi:10.1101/2025.06.22.660948](https://arxiv.org/abs/2506.22660)
753. Denker, A., Vargas, F., Padhy, S., Didi, K., Mathis, S., Dutordoir, V., . . . Liò, P. (2025). DEFT: Efficient Fine-Tuning of Diffusion Models by Learning the Generalised $\$h\$$ -transform. [doi:10.48550/arxiv.2406.01781](https://arxiv.org/abs/2406.01781)
754. Dong, T., Jamnik, M., & Liò, P. (2025). Sphere Neural-Networks for Rational Reasoning. [doi:10.48550/arxiv.2403.15297](https://arxiv.org/abs/2403.15297)
755. Dussolle, A., & Liò, P. (2025). How Smoothing is N-simplicial Attention?. CoRR, abs/2512.15600.
756. Duta, I., Cassarà, G., Silvestri, F., & Liò, P. (2025). Sheaf Hypergraph Networks. [doi:10.48550/arxiv.2309.17116](https://arxiv.org/abs/2309.17116)
757. Duta, I., & Liò, P. (2025). SPHINX: Structural Prediction using Hypergraph Inference Network. [doi:10.48550/arxiv.2410.03208](https://arxiv.org/abs/2410.03208)
758. Duta, I., & Liò, P. (2025). Wasserstein Hypergraph Neural Network. [doi:10.48550/arxiv.2506.09682](https://arxiv.org/abs/2506.09682)
759. El, B., Choudhury, D., Liò, P., & Joshi, C. K. (2025). Towards Mechanistic Interpretability of Graph Transformers via Attention Graphs.. CoRR, abs/2502.12352.
760. Fiorini, S., Aktas, H., Duta, I., Coniglio, S., Morerio, P., Del Bue, A., & Liò, P. (2025). Sheaves Reloaded: A Directional Awakening. [doi:10.48550/arxiv.2506.02842](https://arxiv.org/abs/2506.02842)
761. Georgenthum, H., Cosentino, C., Marozzo, F., & Liò, P. (2025). Enhancing Surgical Documentation through Multimodal Visual-Temporal Transformers and Generative AI. [doi:10.48550/arxiv.2504.19918](https://arxiv.org/abs/2504.19918)
762. Hume, J., & Liò, P. (2025). On the Sheafification of Higher-Order Message Passing.. CoRR, abs/2509.23020.
763. Jimenez-Mesa, C., Wan, Y., Sansone, G., Martinez-Murcia, F. J., Ramirez, J., Liò, P., . . . Mamalakis, M. (2025). Uncovering Neuroimaging Biomarkers of Brain Tumor Surgery with AI-Driven Methods. [doi:10.48550/arxiv.2507.04881](https://arxiv.org/abs/2507.04881)
764. Joshi, C. K., Gianni, E., Kwok, S. L. Y., Mathis, S. V., Liò, P., & Holliger, P. (2025). Generative inverse design of RNA structure and function with gRNAde. [doi:10.1101/2025.11.29.691298](https://arxiv.org/abs/2511.29691)
765. Joshi, C. K., Jamasb, A. R., Viñas, R., Harris, C., Mathis, S. V., Morehead, A., . . . Liò, P. (2025). gRNAde: Geometric Deep Learning for 3D RNA inverse design.. [doi:10.1101/2024.03.31.587283](https://arxiv.org/abs/2024.03.31.587283)
766. Koszut, S., Nallaperuma-Herzberg, S., & Liò, P. (2025). Decoding the Stressed Brain with Geometric Machine Learning. [doi:10.48550/arxiv.2506.00587](https://arxiv.org/abs/2506.00587)
767. Kujawa, Z., Poole, J., Georgiev, D., Numeroso, D., Fleischmann, H., & Liò, P. (2025). Neural Algorithmic Reasoning with Multiple Correct Solutions. [doi:10.48550/arxiv.2409.06953](https://arxiv.org/abs/2409.06953)
768. Lee, C. K., Jeha, P., Frellsen, J., Liò, P., Albergo, M. S., & Vargas, F. (2025). Debiasing Guidance for Discrete Diffusion with Sequential Monte Carlo.. CoRR, abs/2502.06079.
769. Liao, J., Liò, P., Kamps, M. D., & Sarikaya, D. (2025). DisentangleFormer: Spatial-Channel Decoupling for Multi-Channel Vision.. CoRR, abs/2512.04314.
770. Lishkova, Y., Scherer, P., Ridderbusch, S., Jamnik, M., Liò, P., Ober-Blöbaum, S., & Offen, C. (2025). Discrete Lagrangian Neural Networks with Automatic Symmetry Discovery. [doi:10.48550/arxiv.2211.10830](https://arxiv.org/abs/2211.10830)
771. Liu, C., Li, V., Leong, L., Radenkovic, V., Liò, P., & Joshi, C. K. (2025). Multi-Scale Protein Structure Modelling with Geometric Graph U-Nets.. CoRR, abs/2512.06752.
772. Ma, Y., Yi, K., Liò, P., Jin, S., & Wang, Y. G. (2025). How Particle System Theory Enhances Hypergraph Message Passing.. CoRR, abs/2505.18505.
773. Mamalakis, M., Mamalakis, A., Agartz, I., Mørch-Johnsen, L. E., Murray, G., Suckling, J., & Liò, P. (2025). Solving the enigma: Enhancing faithfulness and comprehensibility in explanations of deep networks. [doi:10.48550/arxiv.2405.10008](https://arxiv.org/abs/2405.10008)
774. Mamalakis, M., de Vareilles, H., Murray, G., Liò, P., & Suckling, J. (2025). The Explanation Necessity for Healthcare AI. [doi:10.48550/arxiv.2406.00216](https://arxiv.org/abs/2406.00216)
775. Norcliffe, A., Lee, C., Imrie, F., van der Schaar, M., & Liò, P. (2025). Stochastic Encodings for Active Feature Acquisition. [doi:10.48550/arxiv.2508.01957](https://arxiv.org/abs/2508.01957)
776. Onari, M. A., Magister, L. C., Wu, Y., Lupi, A., Creazzo, D., Tordin, M., . . . Liò, P. (2025). Multimodal Attention-Aware Fusion for Diagnosing Distal Myopathy: Evaluating Model Interpretability and Clinician Trust. [doi:10.48550/arxiv.2508.01316](https://arxiv.org/abs/2508.01316)

777. Parmar, J., Liò, P., & Banerjee, S. (2025). A Framework for Generating Counterfactual Explanations to Explain Black-Box Models. [doi:10.20944/preprints202501.1083.v1](https://doi.org/10.20944/preprints202501.1083.v1)
778. Proverbio, D., Buscemi, A., Di Stefano, A., Han, T. A., Castignani, G., & Liò, P. (2025). Can LLMs effectively provide game-theoretic-based scenarios for cybersecurity?. [doi:10.48550/arxiv.2508.05670](https://doi.org/10.48550/arxiv.2508.05670)
779. Saccardi, C., Pierzyna, M., Borde, H. S. D. O., Monaco, S., Meo, C., Liò, P., . . . Dauwels, J. (2025). Assessing the Geographic Generalization and Physical Consistency of Generative Models for Climate Downscaling. [doi:10.48550/arxiv.2510.13722](https://doi.org/10.48550/arxiv.2510.13722)
780. Shi, T., & Liò, P. (2025). UESA-Net: U-Shaped Embedded Multidirectional Shrinkage Attention Network for Ultrasound Nodule Segmentation.. CoRR, abs/2509.22763.
781. Sun, Z., Harit, A., & Liò, P. (2025). Actionable Interpretability via Causal Hypergraphs: Unravelling Batch Size Effects in Deep Learning. [doi:10.48550/arxiv.2506.17826](https://doi.org/10.48550/arxiv.2506.17826)
782. Sun, B., & Liò, P. (2025). EU-Nets: Enhanced, Explainable and Parsimonious U-Nets.. CoRR, abs/2502.18122.
783. Sun, Z., Harit, A., Cristea, A., Donnelly, C. A., & Liò, P. (2025). GLANCE: Graph Logic Attention Network with Cluster Enhancement for Heterophilous Graph Representation Learning. [doi:10.48550/arxiv.2507.18521](https://doi.org/10.48550/arxiv.2507.18521)
784. Sun, B., & Liò, P. (2025). Multi-Head Explainer: A General Framework to Improve Explainability in CNNs and Transformers.. CoRR, abs/2501.01311.
785. Telyatnikov, L., Bucarelli, M. S., Bernardez, G., Zaghen, O., Scardapane, S., & Liò, P. (2025). Hypergraph Neural Networks through the Lens of Message Passing: A Common Perspective to Homophily and Architecture Design. [doi:10.48550/arxiv.2310.07684](https://doi.org/10.48550/arxiv.2310.07684)
786. Tian, Z., & Liò, P. (2025). Integration of Bioinformatics and Machine Learning to characterize *Fusobacterium nucleatum*'s pathogenicity. [doi:10.1101/2025.08.21.671586](https://doi.org/10.1101/2025.08.21.671586)
787. Vali, M., Wyatt, E., Abbott, K., Croft, C., Liò, P., Krauss, T. F., . . . Fusco, D. (2025). Nanoplasmonic SERS-enabled structural identification of an uncharacterised indole metabolite directly in *E. coli* cultures. [doi:10.1101/2025.11.10.687708](https://doi.org/10.1101/2025.11.10.687708)
788. Vonessen, C., Harris, C., Cretu, M., & Liò, P. (2025). TABASCO: A Fast, Simplified Model for Molecular Generation with Improved Physical Quality. [doi:10.48550/arxiv.2507.00899](https://doi.org/10.48550/arxiv.2507.00899)
789. Wang, Z., Koszut, S., Liò, P., & Ceccarelli, F. (2025). MoRE-GNN: Multi-omics Data Integration with a Heterogeneous Graph Autoencoder. [doi:10.48550/arxiv.2510.06880](https://doi.org/10.48550/arxiv.2510.06880)
790. Wang, Z., Jamasb, A., Hajji, M., Morehead, A., Braithwaite, L., & Liò, P. (2025). Topotein: Topological Deep Learning for Protein Representation Learning. [doi:10.48550/arxiv.2509.03885](https://doi.org/10.48550/arxiv.2509.03885)
791. Zahoor, S., Liò, P., Dias, G., & Hasanuzzaman, M. (2025). Integrating Probabilistic Trees and Causal Networks for Clinical and Epidemiological Data. [doi:10.48550/arxiv.2501.15973](https://doi.org/10.48550/arxiv.2501.15973)
792. Zhang, Q., Wen, H., Li, M., Huang, D., Yiu, S. -M., Jensen, C. S., & Liò, P. (2025). AutoHFormer: Efficient Hierarchical Autoregressive Transformer for Time Series Prediction. [doi:10.48550/arxiv.2506.16001](https://doi.org/10.48550/arxiv.2506.16001)
793. Zhang, H., Horne, R. I., Brotzakis, Z. F., Harris, C., Liò, P., & Vendruscolo, M. (2025). Structure-based Generation of a Secondary Nucleation Inhibitor in α -Synuclein Aggregation Using a Conditional Diffusion Model. [doi:10.1101/2025.08.16.670694](https://doi.org/10.1101/2025.08.16.670694)
794. Zheng, T., Rondina, A., Micklem, G., & Liò, P. (2025). Challenges and Guidelines in Deep Generative Protein Design: Four Case Studies. [doi:10.48550/arxiv.2411.18568](https://doi.org/10.48550/arxiv.2411.18568)
795. Zhou, G., Azevedo, T., Quaegebeur, A., Pansuwan, T., Rittman, T., & Liò, P. (2025). Uncertainty-Aware Tau Detection in Progressive Supranuclear Palsy Using Object Detection Models. [doi:10.1101/2025.10.09.681479](https://doi.org/10.1101/2025.10.09.681479)
796. Zi, S., Borde, H. S. D. O., Rocheteau, E., & Liò, P. (2025). Bridging Graph and State-Space Modeling for Intensive Care Unit Length of Stay Prediction. [doi:10.48550/arxiv.2508.17554](https://doi.org/10.48550/arxiv.2508.17554)
797. Ali, R., Kulytė, P., Borde, H. S. D. O., & Liò, P. (2024). Metric Learning for Clifford Group Equivariant Neural Networks. [doi:10.48550/arxiv.2407.09926](https://doi.org/10.48550/arxiv.2407.09926)
798. Barucci, A., Ciacci, G., Liò, P., Azevedo, T., Di Cencio, A., Merella, M., . . . Collareta, A. (2024). Artificial Intelligence-powered fossil shark tooth identification: Unleashing the potential of Convolutional Neural Networks. [doi:10.48550/arxiv.2405.04189](https://doi.org/10.48550/arxiv.2405.04189)
799. Bazaga, A., Liò, P., & Micklem, G. (2024). HyperBERT: Mixing Hypergraph-Aware Layers with Language Models for Node Classification on Text-Attributed Hypergraphs. [doi:10.48550/arxiv.2402.07309](https://doi.org/10.48550/arxiv.2402.07309)
800. Bazaga, A., Liò, P., & Micklem, G. (2024). Language Model Knowledge Distillation for Efficient Question Answering in Spanish. [doi:10.48550/arxiv.2312.04193](https://doi.org/10.48550/arxiv.2312.04193)
801. Bazaga, A., Liò, P., & Micklem, G. (2024). SQLformer: Deep Auto-Regressive Query Graph Generation for Text-to-SQL Translation. [doi:10.48550/arxiv.2310.18376](https://doi.org/10.48550/arxiv.2310.18376)
802. Bazaga, A., Liò, P., & Micklem, G. (2024). Unsupervised Pretraining for Fact Verification by Language Model Distillation. [doi:10.48550/arxiv.2309.16540](https://doi.org/10.48550/arxiv.2309.16540)
803. Bi, X., Yang, Z., Liu, B., Cun, X., Pun, C. -M., Liò, P., & Xiao, B. (2024). ZeroPur: Succinct Training-Free Adversarial Purification.. CoRR, abs/2406.03143.
804. Boom, J. D., Greenig, M., Sormanni, P., & Liò, P. (2024). Score-Based Generative Models for Designing Binding Peptide Backbones. [doi:10.48550/arxiv.2310.07051](https://doi.org/10.48550/arxiv.2310.07051)
805. Buterez, D., Janet, J. P., Oglic, D., & Liò, P. (2024). Masked Attention is All You Need for Graphs.. CoRR, abs/2402.10793.
806. Cao, P., & Liò, P. (2024). GenRec: Generative Personalized Sequential Recommendation.. CoRR, abs/2407.21191.
807. Cao, P., & Liò, P. (2024). GenRec: Generative Sequential Recommendation with Large Language Models. Retrieved from <https://arxiv.org/abs/2407.21191v2>
808. Caralt, F. H., Gil, G. B., Duta, I., Liò, P., & Cot, E. A. (2024). Joint Diffusion Processes as an Inductive Bias in Sheaf Neural Networks. [doi:10.48550/arxiv.2407.20597](https://doi.org/10.48550/arxiv.2407.20597)
809. de Lope, E. G., Deshpande, S., Torné, R. V., Liò, P., Glaab, E., & Bordas, S. P. A. (2024). Graph Representation Learning Strategies for Omics Data: A Case Study on Parkinson's Disease. [doi:10.48550/arxiv.2406.14442](https://doi.org/10.48550/arxiv.2406.14442)
810. De Luca, V. M., Longa, A., Liò, P., & Passerini, A. (2024). xAI-Drop: Don't Use What You Cannot Explain. [doi:10.48550/arxiv.2407.20067](https://doi.org/10.48550/arxiv.2407.20067)
811. Defilippo, A., Veltri, P., Liò, P., & Guzzi, P. H. (2024). Leveraging graph neural networks for supporting Automatic Triage of Patients. [doi:10.48550/arxiv.2403.07038](https://doi.org/10.48550/arxiv.2403.07038)
812. Didi, K., Vargas, F., Mathis, S. V., Dutordoir, V., Mathieu, E., Komorowska, U. J., & Liò, P. (2024). A framework for conditional diffusion modelling with applications in motif scaffolding for protein design. [doi:10.48550/arxiv.2312.09236](https://doi.org/10.48550/arxiv.2312.09236)
813. Georgiev, D., Wilson, J., Buffelli, D., & Liò, P. (2024). Deep Equilibrium Algorithmic Reasoning. [doi:10.48550/arxiv.2410.15059](https://doi.org/10.48550/arxiv.2410.15059)
814. Georgiev, D., Numeroso, D., Bacciu, D., & Liò, P. (2024). Neural Algorithmic Reasoning for Combinatorial Optimisation. [doi:10.48550/arxiv.2306.06064](https://doi.org/10.48550/arxiv.2306.06064)
815. Georgiev, D., & Liò, P. (2024). Neural Bipartite Matching. [doi:10.48550/arxiv.2005.11304](https://doi.org/10.48550/arxiv.2005.11304)

816. Georgiev, D., Liò, P., & Buffelli, D. (2024). The Deep Equilibrium Algorithmic Reasoner. [doi:10.48550/arxiv.2402.06445](https://doi.org/10.48550/arxiv.2402.06445)
817. Huang, K., Cao, W., Ta, H., Xiao, X., & Liò, P. (2024). Optimizing Polynomial Graph Filters: A Novel Adaptive Krylov Subspace Approach. Retrieved from <https://arxiv.org/abs/2403.07954v2>
818. Joshi, C. K., Bodnar, C., Mathis, S. V., Cohen, T., & Liò, P. (2024). On the Expressive Power of Geometric Graph Neural Networks. [doi:10.48550/arxiv.2301.09308](https://doi.org/10.48550/arxiv.2301.09308)
819. Kovač, V., Bekkers, E. J., Liò, P., & Eijkelboom, F. (2024). E(n) Equivariant Message Passing Cellular Networks. Retrieved from <https://arxiv.org/abs/2406.03145v3>
820. Kulytè, P., Vargas, F., Mathis, S. V., Wang, Y. G., Hernández-Lobato, J. M., & Liò, P. (2024). Improving Antibody Design with Force-Guided Sampling in Diffusion Models. [doi:10.48550/arxiv.2406.05832](https://doi.org/10.48550/arxiv.2406.05832)
821. Lawrence, E., El-Shazly, A., Seal, S., Joshi, C. K., Liò, P., Singh, S., . . . Greenig, M. (2024). Understanding Biology in the Age of Artificial Intelligence. [doi:10.48550/arxiv.2403.04106](https://doi.org/10.48550/arxiv.2403.04106)
822. Lomoio, U., Veltri, P., Guzzi, P. H., & Liò, P. (2024). DCAE-SR: Design of a Denoising Convolutional Autoencoder for reconstructing Electrocardiograms signals at Super Resolution. [doi:10.1101/2024.04.08.24305091](https://doi.org/10.1101/2024.04.08.24305091)
823. Longa, A., Azzolin, S., Santin, G., Cencetti, G., Liò, P., Lepri, B., & Passerini, A. (2024). Explaining the Explainers in Graph Neural Networks: a Comparative Study. [doi:10.48550/arxiv.2210.15304](https://doi.org/10.48550/arxiv.2210.15304)
824. Mamalakis, M., Mamalakis, A., Agartz, I., Mørch-Johnsen, L. E., Murray, G. K., Suckling, J., & Liò, P. (2024). Solving the enigma: Deriving optimal explanations of deep networks.. CoRR, abs/2405.10008.
825. Margeloiu, A., Simidjievski, N., Liò, P., & Jamnik, M. (2024). GCondNet: A Novel Method for Improving Neural Networks on Small High-Dimensional Tabular Data. [doi:10.48550/arxiv.2211.06302](https://doi.org/10.48550/arxiv.2211.06302)
826. Margeloiu, A., Bazaga, A., Simidjievski, N., Liò, P., & Jamnik, M. (2024). TabMDA: Tabular Manifold Data Augmentation for Any Classifier using Transformers with In-context Subsetting. [doi:10.48550/arxiv.2406.01805](https://doi.org/10.48550/arxiv.2406.01805)
827. Nguyen, B., Sani, L., Qiu, X., Liò, P., & Lane, N. D. (2024). Sheaf HyperNetworks for Personalized Federated Learning. Retrieved from <https://arxiv.org/abs/2405.20882v1>
828. Purificato, A., Cassarà, G., Siciliano, F., Liò, P., & Silvestri, F. (2024). Sheaf4Rec: Sheaf Neural Networks for Graph-based Recommender Systems. [doi:10.48550/arxiv.2304.09097](https://doi.org/10.48550/arxiv.2304.09097)
829. Rathod, S., Liò, P., & Zhang, X. (2024). Predicting time-varying flux and balance in metabolic systems using structured neural-ODE processes.. CoRR, abs/2410.14426.
830. Rowbottom, J., Maierhofer, G., Deveney, T., Schratz, K., Liò, P., Schönlieb, C. -B., & Budd, C. J. (2024). G-Adaptive mesh refinement - leveraging graph neural networks and differentiable finite element solvers.. CoRR, abs/2407.04516.
831. Singh, V., Khanzadeh, M., Davis, V., Rush, H., Rossi, E., Shrader, J., & Liò, P. (2024). Bayesian Binary Search. [doi:10.48550/arxiv.2410.01771](https://doi.org/10.48550/arxiv.2410.01771)
832. Somathilaka, S., Ratwatte, A., Balasubramaniam, S., Vuran, M. C., Srisa-an, W., & Liò, P. (2024). Wet TinyML: Chemical Neural Network Using Gene Regulation and Cell Plasticity.. CoRR, abs/2403.08549.
833. Su, S., Duta, I., Magister, L. C., & Liò, P. (2024). Explaining Hypergraph Neural Networks: From Local Explanations to Global Concepts. [doi:10.48550/arxiv.2410.07764](https://doi.org/10.48550/arxiv.2410.07764)
834. Yi, K., Fan, Y., Hamann, J., Liò, P., & Wang, Y. (2024). AB\$mathbb{C}\$MB: Deep Delensing Assisted Likelihood-Free Inference from CMB Polarization Maps. Retrieved from <https://arxiv.org/abs/2407.10013v1>
835. Zaki, J. K., Tomasik, J., McCune, J. A., Bahn, S., Liò, P., & Scherman, O. A. (2024). Explainable Deep Learning Framework for SERS Bio-quantification. [doi:10.48550/arxiv.2411.08082](https://doi.org/10.48550/arxiv.2411.08082)
836. Zhao, X., Li, Z., Shen, M., Stan, G. -B., Liò, P., & Zhao, Y. (2024). Enhancing Node Representations for Real-World Complex Networks with Topological Augmentation. Retrieved from <https://arxiv.org/abs/2402.13033v2>
837. Zhao, X., Li, Z., Shen, M., Stan, G. -B., Liò, P., & Zhao, Y. (2024). Enhancing Real-World Complex Network Representations with Hyperedge Augmentation.. CoRR, abs/2402.13033.
838. Zhu, M., Bazaga, A., & Liò, P. (2024). FLUID-LLM: Learning Computational Fluid Dynamics with Spatiotemporal-aware Large Language Models. [doi:10.48550/arxiv.2406.04501](https://doi.org/10.48550/arxiv.2406.04501)
839. Zuo, K., Jiang, Y., Mo, F., & Liò, P. (2024). KG4Diagnosis: A Hierarchical Multi-Agent LLM Framework with Knowledge Graph Enhancement for Medical Diagnosis. Retrieved from <https://arxiv.org/abs/2412.16833v4>
840. Ambags, E. L., Capitoli, G., Imperio, V. L., Provenzano, M., Nobile, M. S., & Liò, P. (2023). Assisting clinical practice with fuzzy probabilistic decision trees. [doi:10.48550/arxiv.2304.07788](https://doi.org/10.48550/arxiv.2304.07788)
841. Azzolin, S., Longa, A., Barbiero, P., Liò, P., & Passerini, A. (2023). Global Explainability of GNNs via Logic Combination of Learned Concepts. [doi:10.48550/arxiv.2210.07147](https://doi.org/10.48550/arxiv.2210.07147)
842. Barbiero, P., Fioravanti, S., Giannini, F., Tonda, A., Liò, P., & Lavore, E. D. (2023). Categorical Foundations of Explainable AI: A Unifying Formalism of Structures and Semantics.. CoRR, abs/2304.14094.
843. Barbiero, P., Fioravanti, S., Giannini, F., Tonda, A., Liò, P., & Di Lavore, E. (2023). Categorical Foundations of Explainable AI: A Unifying Theory. [doi:10.48550/arxiv.2304.14094](https://doi.org/10.48550/arxiv.2304.14094)
844. Bardozzo, F., Terlizzi, A., Liò, P., & Tagliaferri, R. (2023). ElegansAI: how a biological neural network would compare with artificial networks?. [doi:10.21203/rs.3.rs-3005708/v2](https://doi.org/10.21203/rs.3.rs-3005708/v2)
845. Bardozzo, F., Terlizzi, A., Liò, P., & Tagliaferri, R. (2023). ElegansNet: a brief scientific report and initial experiments. [doi:10.1101/2023.04.23.537987](https://doi.org/10.1101/2023.04.23.537987)
846. Bergna, R., Opolka, F., Liò, P., & Hernandez-Lobato, J. M. (2023). Graph Neural Stochastic Differential Equations. [doi:10.48550/arxiv.2308.12316](https://doi.org/10.48550/arxiv.2308.12316)
847. Bernárdez, G., Telyatnikov, L., Alarcón, E., Cabellos-Aparicio, A., Barlet-Ros, P., & Liò, P. (2023). Topological Graph Signal Compression. [doi:10.48550/arxiv.2308.11068](https://doi.org/10.48550/arxiv.2308.11068)
848. Biseric, A., Nikolic, M., Schaar, M. V. D., Delibasic, B., Liò, P., & Petrovic, A. (2023). Interpretable Medical Diagnostics with Structured Data Extraction by Large Language Models.. CoRR, abs/2306.05052.
849. Bodnar, C., Di Giovanni, F., Chamberlain, B. P., Liò, P., & Bronstein, M. M. (2023). Neural Sheaf Diffusion: A Topological Perspective on Heterophily and Oversmoothing in GNNs. [doi:10.48550/arxiv.2202.04579](https://doi.org/10.48550/arxiv.2202.04579)
850. Borde, H. S. D. O., Kazi, A., Barbero, F., & Liò, P. (2023). Latent Graph Inference using Product Manifolds. [doi:10.48550/arxiv.2211.16199](https://doi.org/10.48550/arxiv.2211.16199)
851. Brant, I., Norcliffe, A., & Liò, P. (2023). Fourier Neural Differential Equations for learning Quantum Field Theories. [doi:10.48550/arxiv.2311.17250](https://doi.org/10.48550/arxiv.2311.17250)
852. Bujel, K., Gideoni, Y., Joshi, C. K., & Liò, P. (2023). Group Invariant Global Pooling.. CoRR, abs/2305.19207.
853. Buterez, D., Janet, J. P., Kiddle, S. J., Oglic, D., & Liò, P. (2023). Modelling local and general quantum mechanical properties with attention-based pooling. [doi:10.26434/chemrxiv-2023-301gi](https://doi.org/10.26434/chemrxiv-2023-301gi)
854. Campbell, A., Spasov, S., Toschi, N., & Liò, P. (2023). DBGDM: Dynamic Brain Graph Deep Generative Model. [doi:10.48550/arxiv.2301.11408](https://doi.org/10.48550/arxiv.2301.11408)

855. Campbell, A., Zippo, A. G., Passamonti, L., Toschi, N., & Liò, P. (2023). DynDepNet: Learning Time-Varying Dependency Structures from fMRI Data via Dynamic Graph Structure Learning. [doi:10.48550/arxiv.2209.13513](https://doi.org/10.48550/arxiv.2209.13513)
856. Caso, F., Trappolini, G., Bacciu, A., Liò, P., & Silvestri, F. (2023). Renormalized Graph Neural Networks.. CoRR, abs/2306.00707.
857. Ceccarelli, F., Giusti, L., Holden, S. B., & Liò, P. (2023). Neural Embeddings for Protein Graphs.. CoRR, abs/2306.04667.
858. Chen, J., Wang, Y., Bodnar, C., Ying, R., Liò, P., & Wang, Y. (2023). Dirichlet Energy Enhancement of Graph Neural Networks by Framelet Augmentation.. CoRR, abs/2311.05767.
859. Crisostomi, D., Cannistraci, I., Moschella, L., Barbiero, P., Ciccone, M., Liò, P., & Rodolà, E. (2023). From Charts to Atlas: Merging Latent Spaces into One. Retrieved from <https://arxiv.org/abs/2311.06547v1>
860. di Villaforesta, A. F., Magister, L. C., Barbiero, P., & Liò, P. (2023). Digital Histopathology with Graph Neural Networks: Concepts and Explanations for Clinicians. [doi:10.48550/arxiv.2312.02225](https://doi.org/10.48550/arxiv.2312.02225)
861. Dimitri, G. M., Spasov, S. E., Duggento, A., Passamonti, L., Liò, P., & Toschi, N. (2023). Multimodal and multicontrast image fusion via deep generative models.. CoRR, abs/2303.15963.
862. Dominici, G., Barbiero, P., Magister, L. C., Liò, P., & Simidjievski, N. (2023). SHARCS: Shared Concept Space for Explainable Multimodal Learning. [doi:10.48550/arxiv.2307.00316](https://doi.org/10.48550/arxiv.2307.00316)
863. Giannini, F., Fioravanti, S., Keskin, O., Lupidi, A. M., Magister, L. C., Liò, P., & Barbiero, P. (2023). Interpretable Graph Networks Formulate Universal Algebra Conjectures. [doi:10.48550/arxiv.2307.11688](https://doi.org/10.48550/arxiv.2307.11688)
864. Giovanni, F. D., Giusti, L., Barbero, F., Luise, G., Liò, P., & Bronstein, M. (2023). On Over-Squashing in Message Passing Neural Networks: The Impact of Width, Depth, and Topology. Retrieved from <https://arxiv.org/abs/2302.02941v3>
865. Giusti, L., Reu, T., Ceccarelli, F., Bodnar, C., & Liò, P. (2023). CIN++: Enhancing Topological Message Passing. [doi:10.48550/arxiv.2306.03561](https://doi.org/10.48550/arxiv.2306.03561)
866. Harris, C., Didi, K., Jamasb, A. R., Joshi, C. K., Mathis, S. V., Liò, P., & Blundell, T. (2023). Benchmarking Generated Poses: How Rational is Structure-based Drug Design with Generative Models?. [doi:10.48550/arxiv.2308.07413](https://doi.org/10.48550/arxiv.2308.07413)
867. Hasan, M., Abdar, M., Khosravi, A., Aickelin, U., Liò, P., Hossain, I., . . . Nahavandi, S. (2023). Survey on Leveraging Uncertainty Estimation Towards Trustworthy Deep Neural Networks: The Case of Reject Option and Post-training Processing. [doi:10.48550/arxiv.2304.04906](https://doi.org/10.48550/arxiv.2304.04906)
868. Huang, K., & Liò, P. (2023). An Effective Universal Polynomial Basis for Spectral Graph Neural Networks.. CoRR, abs/2311.18177.
869. Imrie, F., Norcliffe, A., Liò, P., & van der Schaar, M. (2023). Composite Feature Selection using Deep Ensembles. [doi:10.48550/arxiv.2211.00631](https://doi.org/10.48550/arxiv.2211.00631)
870. Islam, M. S., Hasan, K. F., Sultana, S., Uddin, S., Liò, P., Quinn, J. M. W., & Moni, M. A. (2023). HARDC : A novel ECG-based heartbeat classification method to detect arrhythmia using hierarchical attention based dual structured RNN with dilated CNN. [doi:10.48550/arxiv.2303.06020](https://doi.org/10.48550/arxiv.2303.06020)
871. Jain, R., Ciravegna, G., Barbiero, P., Giannini, F., Buffelli, D., & Liò, P. (2023). Extending Logic Explained Networks to Text Classification. [doi:10.48550/arxiv.2211.09732](https://doi.org/10.48550/arxiv.2211.09732)
872. Jain, R., Velickovic, P., & Liò, P. (2023). Neural Priority Queues for Graph Neural Networks.. CoRR, abs/2307.09660.
873. Joshi, C. K., Jamasb, A. R., Viñas, R., Harris, C., Mathis, S. V., & Liò, P. (2023). Multi-State RNA Design with Geometric Multi-Graph Neural Networks.. CoRR, abs/2305.14749.
874. Jürß, J., Magister, L. C., Barbiero, P., Liò, P., & Simidjievski, N. (2023). Everybody Needs a Little HELP: Explaining Graphs via Hierarchical Concepts. [doi:10.48550/arxiv.2311.15112](https://doi.org/10.48550/arxiv.2311.15112)
875. Kazhdan, D., Dimanov, B., Magister, L. C., Barbiero, P., Jamnik, M., & Liò, P. (2023). GCI: A (G)raph (C)oncept (I)nterpretation Framework. [doi:10.48550/arxiv.2302.04899](https://doi.org/10.48550/arxiv.2302.04899)
876. Lachi, V., Dimitri, G. M., Di Stefano, A., Liò, P., Bianchini, M., & Mocenni, C. (2023). Impact of the Covid 19 outbreaks on the italian twitter vaccination debat: a network based analysis. [doi:10.48550/arxiv.2306.02838](https://doi.org/10.48550/arxiv.2306.02838)
877. Li, Z., Zhao, X., Shen, M., Stan, G. -B., Liò, P., & Zhao, Y. (2023). Hybrid Graph: A Unified Graph Representation with Datasets and Benchmarks for Complex Graphs.. CoRR, abs/2306.05108.
878. Liu, L., Prost, J., Zhu, L., Papadakis, N., Liò, P., Schönlieb, C. -B., & Aviles-Rivero, A. I. (2023). SCOTCH and SODA: A Transformer Video Shadow Detection Framework. [doi:10.48550/arxiv.2211.06885](https://doi.org/10.48550/arxiv.2211.06885)
879. Liu, L., Cheng, Y., Chen, D., He, J., Liò, P., Schönlieb, C. -B., & Aviles-Rivero, A. I. (2023). Traffic Video Object Detection using Motion Prior. [doi:10.48550/arxiv.2311.10092](https://doi.org/10.48550/arxiv.2311.10092)
880. Longa, A., Lachi, V., Santin, G., Bianchini, M., Lepri, B., Liò, P., . . . Passerini, A. (2023). Graph Neural Networks for temporal graphs: State of the art, open challenges, and opportunities. [doi:10.48550/arxiv.2302.01018](https://doi.org/10.48550/arxiv.2302.01018)
881. Lu, Y., Borde, H. S. D. O., & Liò, P. (2023). AMES: A Differentiable Embedding Space Selection Framework for Latent Graph Inference. [doi:10.48550/arxiv.2311.11891](https://doi.org/10.48550/arxiv.2311.11891)
882. Marinoni, A., Liò, P., Barp, A., Jutten, C., & Girolami, M. (2023). Improving embedding of graphs with missing data by soft manifolds. [doi:10.48550/arxiv.2311.17598](https://doi.org/10.48550/arxiv.2311.17598)
883. Mei, X., Yang, Y., Li, M., Huang, C., Zhang, K., & Liò, P. (2023). A Feature Reuse Framework with Texture-adaptive Aggregation for Reference-based Super-Resolution.. CoRR, abs/2306.01500.
884. Mittone, G., Svoboda, F., Aldinucci, M., Lane, N. D., & Liò, P. (2023). A Federated Learning Benchmark for Drug-Target Interaction. [doi:10.48550/arxiv.2302.07684](https://doi.org/10.48550/arxiv.2302.07684)
885. Norcliffe, A., Ceberé, B., Imrie, F., Liò, P., & van der Schaar, M. (2023). SurvivalGAN: Generating Time-to-Event Data for Survival Analysis. [doi:10.48550/arxiv.2302.12749](https://doi.org/10.48550/arxiv.2302.12749)
886. Opolka, F. L., Zhi, Y. -C., Liò, P., & Dong, X. (2023). Graph Classification Gaussian Processes via Spectral Features. [doi:10.48550/arxiv.2306.03770](https://doi.org/10.48550/arxiv.2306.03770)
887. Pándy, M., Qiu, W., Corso, G., Veličković, P., Ying, R., Leskovec, J., & Liò, P. (2023). Learning Graph Search Heuristics. [doi:10.48550/arxiv.2212.03978](https://doi.org/10.48550/arxiv.2212.03978)
888. Purificato, A., Cassarà, G., Liò, P., & Silvestri, F. (2023). Sheaf Neural Networks for Graph-based Recommender Systems.. CoRR, abs/2304.09097.
889. Shen, Z., Cheng, Y., Chan, R. H., Liò, P., Schönlieb, C. -B., & Aviles-Rivero, A. I. (2023). TRIDENT: The Nonlinear Trilogy for Implicit Neural Representations. [doi:10.48550/arxiv.2311.13610](https://doi.org/10.48550/arxiv.2311.13610)
890. Torge, J., Harris, C., Mathis, S. V., & Liò, P. (2023). DiffHopp: A Graph Diffusion Model for Novel Drug Design via Scaffold Hopping. Retrieved from <https://arxiv.org/abs/2308.07416v1>
891. Viñas, R., Scherer, P., Simidjievski, N., Jamnik, M., & Liò, P. (2023). Spatio-relational inductive biases in spatial cell-type deconvolution. [doi:10.1101/2023.05.19.541474](https://doi.org/10.1101/2023.05.19.541474)
892. Wölflein, G., Magister, L. C., Liò, P., Harrison, D. J., & Arandjelović, O. (2023). Deep Multiple Instance Learning with Distance-Aware Self-Attention. [doi:10.48550/arxiv.2305.10552](https://doi.org/10.48550/arxiv.2305.10552)
893. Xuanyuan, H., Barbiero, P., Georgiev, D., Magister, L. C., & Liò, P. (2023). Global Concept-Based Interpretability for Graph Neural Networks via Neuron Analysis. [doi:10.48550/arxiv.2208.10609](https://doi.org/10.48550/arxiv.2208.10609)

894. Yang, J., & Liò, P. (2023). Dual-Domain Multi-Contrast MRI Reconstruction with Synthesis-based Fusion Network.. CoRR, abs/2312.00661.
895. Yang, Z., Zhang, G., Wu, J., Yang, J., Sheng, Q. Z., Xue, S., . . . Liò, P. (2023). State of the Art and Potentialities of Graph-level Learning. Retrieved from <https://arxiv.org/abs/2301.05860v3>
896. Yang, J., & Liò, P. (2023). Unsupervised Adaptive Implicit Neural Representation Learning for Scan-Specific MRI Reconstruction.. CoRR, abs/2312.00677.
897. Yeh, K. F., Flood, P. D. L., Redman, W., & Liò, P. (2023). Learning Linear Embeddings for Non-Linear Network Dynamics with Koopman Message Passing.. CoRR, abs/2305.09060.
898. Yi, K., Zhou, B., Shen, Y., Liò, P., & Wang, Y. G. (2023). Graph Denoising Diffusion for Inverse Protein Folding. Retrieved from <https://arxiv.org/abs/2306.16819v2>
899. Zhao, X., Stärk, H., Beaini, D., Liò, P., & Zhao, Y. (2023). Task-Agnostic Graph Neural Network Evaluation via Adversarial Collaboration.. CoRR, abs/2301.11517.
900. Zhu, J., Yang, G., & Liò, P. (2023). A residual dense vision transformer for medical image super-resolution with segmentation-based perceptual loss fine-tuning.. CoRR, abs/2302.11184.
901. Zhu, M., Stanivuk, S., Petrovic, A., Nikolic, M., & Liò, P. (2023). Incorporating LLM Priors into Tabular Learners.. CoRR, abs/2311.11628.
902. Zhu, M., Kobalczyk, K., Petrovic, A., Nikolic, M., Schaar, M. V. D., Delibasic, B., & Liò, P. (2023). Tabular Few-Shot Generalization Across Heterogeneous Feature Spaces.. CoRR, abs/2311.10051.
903. Zou, X., Zhao, X., Liò, P., & Zhao, Y. (2023). Will More Expressive Graph Neural Networks do Better on Generative Tasks?. Retrieved from <https://arxiv.org/abs/2308.11978v4>
904. Azevedo, T., Bethlehem, R. A. I., Whiteside, D. J., Swaddiwudhipong, N., Rowe, J. B., Liò, P., & Rittman, T. (2022). Identifying healthy individuals with Alzheimer neuroimaging phenotypes in the UK Biobank. [doi:10.1101/2022.01.05.22268795](https://doi.org/10.1101/2022.01.05.22268795)
905. Barbero, F., Bodnar, C., Borde, H. S. D. O., Bronstein, M., Veličković, P., & Liò, P. (2022). Sheaf Neural Networks with Connection Laplacians. [doi:10.48550/arxiv.2206.08702](https://doi.org/10.48550/arxiv.2206.08702)
906. Barbiero, P., Ciravegna, G., Giannini, F., Liò, P., Gori, M., & Melacci, S. (2022). Entropy-based Logic Explanations of Neural Networks. [doi:10.48550/arxiv.2106.06804](https://doi.org/10.48550/arxiv.2106.06804)
907. Bodnar, C., Frasca, F., Otter, N., Wang, Y. G., Liò, P., Montúfar, G., & Bronstein, M. (2022). Weisfeiler and Lehman Go Cellular: CW Networks. [doi:10.48550/arxiv.2106.12575](https://doi.org/10.48550/arxiv.2106.12575)
908. Bongini, P., Scarselli, F., Bianchini, M., Dimitri, G. M., Pancino, N., & Liò, P. (2022). Modular multi-source prediction of drug side-effects with DruGNN. [doi:10.48550/arxiv.2202.08147](https://doi.org/10.48550/arxiv.2202.08147)
909. Buffelli, D., Liò, P., & Vandin, F. (2022). SizeShiftReg: a Regularization Method for Improving Size-Generalization in Graph Neural Networks. [doi:10.48550/arxiv.2207.07888](https://doi.org/10.48550/arxiv.2207.07888)
910. Buterez, D., Janet, J. P., Kiddle, S. J., Oglic, D., & Liò, P. (2022). Graph Neural Networks with Adaptive Readouts. [doi:10.48550/arxiv.2211.04952](https://doi.org/10.48550/arxiv.2211.04952)
911. Buterez, D., Janet, J. P., Kiddle, S. J., & Liò, P. (2022). MF-PCBA: Multi-fidelity high-throughput screening benchmarks for drug discovery and machine learning. [doi:10.26434/chemrxiv-2022-cb3tz](https://doi.org/10.26434/chemrxiv-2022-cb3tz)
912. Buterez, D., Janet, J. P., Kiddle, S., & Liò, P. (2022). Multi-fidelity machine learning models for improved high-throughput screening predictions. [doi:10.26434/chemrxiv-2022-dsbn5-v2](https://doi.org/10.26434/chemrxiv-2022-dsbn5-v2)
913. Buterez, D., Janet, J. P., Kiddle, S., Oglic, D., & Liò, P. (2022). Transfer learning with graph neural networks for improved molecular property prediction in the multi-fidelity setting. [doi:10.26434/chemrxiv-2022-dsbn5-v3](https://doi.org/10.26434/chemrxiv-2022-dsbn5-v3)
914. Cardozo, S., Montero, G. I., Kazhdan, D., Dimanov, B., Wijaya, M., Jamnik, M., & Liò, P. (2022). Explainer Divergence Scores (EDS): Some Post-Hoc Explanations May be Effective for Detecting Unknown Spurious Correlations. [doi:10.48550/arxiv.2211.07650](https://doi.org/10.48550/arxiv.2211.07650)
915. Christensen, C. N., Lu, M., Ward, E. N., Liò, P., & Kaminski, C. F. (2022). Spatio-temporal Vision Transformer for Super-resolution Microscopy. [doi:10.48550/arxiv.2203.00030](https://doi.org/10.48550/arxiv.2203.00030)
916. Day, B., Viñas, R., Simidjievski, N., & Liò, P. (2022). Attentional Meta-learners for Few-shot Polythetic Classification. [doi:10.48550/arxiv.2106.05317](https://doi.org/10.48550/arxiv.2106.05317)
917. Deasy, J., Simidjievski, N., & Liò, P. (2022). Heavy-tailed denoising score matching. [doi:10.48550/arxiv.2112.09788](https://doi.org/10.48550/arxiv.2112.09788)
918. Goh, C. W. J., Bodnar, C., & Liò, P. (2022). Simplicial Attention Networks. [doi:10.48550/arxiv.2204.09455](https://doi.org/10.48550/arxiv.2204.09455)
919. He, Y., Veličković, P., Liò, P., & Deac, A. (2022). Continuous Neural Algorithmic Planners. [doi:10.48550/arxiv.2211.15839](https://doi.org/10.48550/arxiv.2211.15839)
920. Igashov, I., Jamasb, A. R., Sadek, A., Sverrisson, F., Schneuing, A., Liò, P., . . . Correia, B. (2022). Decoding Surface Fingerprints for Protein-Ligand Interactions. Cold Spring Harbor Laboratory. [doi:10.1101/2022.04.26.489341](https://doi.org/10.1101/2022.04.26.489341)
921. Jain, A., Mishra, C., & Liò, P. (2022). A physics-informed search for metric solutions to Ricci flow, their embeddings, and visualisation.. CoRR, abs/2212.05892.
922. Liu, L., Huang, Z., Liò, P., Schönlieb, C. -B., & Aviles-Rivero, A. I. (2022). PC-SwinMorph: Patch Representation for Unsupervised Medical Image Registration and Segmentation. [doi:10.48550/arxiv.2203.05684](https://doi.org/10.48550/arxiv.2203.05684)
923. Magister, L. C., Barbiero, P., Kazhdan, D., Siciliano, F., Ciravegna, G., Silvestri, F., . . . Liò, P. (2022). Encoding Concepts in Graph Neural Networks. [doi:10.48550/arxiv.2207.13586](https://doi.org/10.48550/arxiv.2207.13586)
924. Margeloiu, A., Simidjievski, N., Liò, P., & Jamnik, M. (2022). Graph-Conditioned MLP for High-Dimensional Tabular Biomedical Data.. CoRR, abs/2211.06302.
925. Margeloiu, A., Simidjievski, N., Liò, P., & Jamnik, M. (2022). Weight Predictor Network with Feature Selection for Small Sample Tabular Biomedical Data. [doi:10.48550/arxiv.2211.15616](https://doi.org/10.48550/arxiv.2211.15616)
926. Mitchell, H., Norcliffe, A., & Liò, P. (2022). Learning Feynman Diagrams using Graph Neural Networks. [doi:10.48550/arxiv.2211.15348](https://doi.org/10.48550/arxiv.2211.15348)
927. Moss, J. D., Opolka, F. L., Dumitrascu, B., & Liò, P. (2022). Approximate Latent Force Model Inference. [doi:10.48550/arxiv.2109.11851](https://doi.org/10.48550/arxiv.2109.11851)
928. Opolka, F. L., Zhi, Y. -C., Liò, P., & Dong, X. (2022). Adaptive Gaussian Processes on Graphs via Spectral Graph Wavelets. [doi:10.48550/arxiv.2110.12752](https://doi.org/10.48550/arxiv.2110.12752)
929. Purves, C., Liò, P., & Cangea, C. (2022). Goal-Conditioned Reinforcement Learning in the Presence of an Adversary.. CoRR, abs/2211.06929.
930. Scherer, P., Liò, P., & Jamnik, M. (2022). Distributed representations of graphs for drug pair scoring. [doi:10.48550/arxiv.2209.09383](https://doi.org/10.48550/arxiv.2209.09383)
931. Stärk, H., Beaini, D., Corso, G., Tossou, P., Dallago, C., Günnemann, S., & Liò, P. (2022). 3D Infomax improves GNNs for Molecular Property Prediction. [doi:10.48550/arxiv.2110.04126](https://doi.org/10.48550/arxiv.2110.04126)
932. Tailor, S. A., Opolka, F. L., Liò, P., & Lane, N. D. (2022). Do We Need Anisotropic Graph Neural Networks?. [doi:10.48550/arxiv.2104.01481](https://doi.org/10.48550/arxiv.2104.01481)
933. Viñas, R., Joshi, C. K., Georgiev, D., Dumitrascu, B., Gamazon, E. R., & Liò, P. (2022). Hypergraph factorisation for multi-tissue gene expression imputation. [doi:10.1101/2022.07.31.502211](https://doi.org/10.1101/2022.07.31.502211)
934. Yi, K., Chen, J., Wang, Y. G., Zhou, B., Liò, P., Fan, Y., & Hamann, J. (2022). Approximate Equivariance SO(3) Needle Convolution. [doi:10.48550/arxiv.2206.10385](https://doi.org/10.48550/arxiv.2206.10385)

935. Zhi, Y. -C., Opolka, F. L., Ng, Y. C., Liò, P., & Dong, X. (2022). Transductive Kernels for Gaussian Processes on Graphs. [doi:10.48550/arxiv.2211.15322](https://doi.org/10.48550/arxiv.2211.15322)
936. Amor, A., Liò, P., Singh, V., Torné, R. V., & Terre, H. A. (2021). Graph Representation Learning on Tissue-Specific Multi-Omics. [doi:10.48550/arxiv.2107.11856](https://doi.org/10.48550/arxiv.2107.11856)
937. Banerjee, S., Liò, P., Jones, P. B., & Cardinal, R. N. (2021). A human-interpretable machine learning approach to predict mortality in severe mental illness. [doi:10.1101/2021.04.05.21254684](https://doi.org/10.1101/2021.04.05.21254684)
938. Beaini, D., Passaro, S., Létourneau, V., Hamilton, W. L., Corso, G., & Liò, P. (2021). Directional Graph Networks. [doi:10.48550/arxiv.2010.02863](https://doi.org/10.48550/arxiv.2010.02863)
939. Bodnar, C., Frasca, F., Wang, Y. G., Otter, N., Montúfar, G., Liò, P., & Bronstein, M. (2021). Weisfeiler and Lehman Go Topological: Message Passing Simplicial Networks. [doi:10.48550/arxiv.2103.03212](https://doi.org/10.48550/arxiv.2103.03212)
940. Chen, Y., Schönlieb, C. -B., Liò, P., Leiner, T., Dragotti, P. L., Wang, G., . . . Yang, G. (2021). AI-based Reconstruction for Fast MRI -- A Systematic Review and Meta-analysis. [doi:10.48550/arxiv.2112.12744](https://doi.org/10.48550/arxiv.2112.12744)
941. Ciravegna, G., Barbiero, P., Giannini, F., Gori, M., Liò, P., Maggini, M., & Melacci, S. (2021). Logic Explained Networks. [doi:10.48550/arxiv.2108.05149](https://doi.org/10.48550/arxiv.2108.05149)
942. Corso, G., Ying, R., Pándy, M., Veličković, P., Leskovec, J., & Liò, P. (2021). Neural Distance Embeddings for Biological Sequences. [doi:10.48550/arxiv.2109.09740](https://doi.org/10.48550/arxiv.2109.09740)
943. Day, B., Norcliffe, A., Moss, J., & Liò, P. (2021). Meta-learning using privileged information for dynamics. [doi:10.48550/arxiv.2104.14290](https://doi.org/10.48550/arxiv.2104.14290)
944. Deasy, J., Simidjievski, N., & Liò, P. (2021). Constraining Variational Inference with Geometric Jensen-Shannon Divergence. [doi:10.48550/arxiv.2006.10599](https://doi.org/10.48550/arxiv.2006.10599)
945. Del Vecchio, A., Deac, A., Liò, P., & Veličković, P. (2021). Neural message passing for joint paratope-epitope prediction. [doi:10.48550/arxiv.2106.00757](https://doi.org/10.48550/arxiv.2106.00757)
946. Dimitri, G. M., Spasov, S., Duggento, A., Passamonti, L., Liò, P., & Toschi, N. (2021). Multimodal image fusion via deep generative models. [doi:10.1101/2021.03.08.434427](https://doi.org/10.1101/2021.03.08.434427)
947. Drotár, P., Jamasb, A. R., Day, B., Cangea, C., & Liò, P. (2021). Structure-aware generation of drug-like molecules. [doi:10.48550/arxiv.2111.04107](https://doi.org/10.48550/arxiv.2111.04107)
948. Fanfani, V., Torne, R. V., Liò, P., & Stracquadanio, G. (2021). Discovering cancer driver genes and pathways using stochastic block model graph neural networks. *Unknown Journal*, 2021.06.29.450342. [doi:10.1101/2021.06.29.450342](https://doi.org/10.1101/2021.06.29.450342)
949. Flood, P. D. L., Viñas, R., & Liò, P. (2021). Investigating Estimated Kolmogorov Complexity as a Means of Regularization for Link Prediction. [doi:10.48550/arxiv.2006.04258](https://doi.org/10.48550/arxiv.2006.04258)
950. Georgiev, D., Barbiero, P., Kazhdan, D., Veličković, P., & Liò, P. (2021). Algorithmic Concept-based Explainable Reasoning. [doi:10.48550/arxiv.2107.07493](https://doi.org/10.48550/arxiv.2107.07493)
951. Kazhdan, D., Dimanov, B., Terre, H. A., Jamnik, M., Liò, P., & Weller, A. (2021). Is Disentanglement all you need? Comparing Concept-based & Disentanglement Approaches. [doi:10.48550/arxiv.2104.06917](https://doi.org/10.48550/arxiv.2104.06917)
952. King, J., Torné, R. V., Campbell, A., & Liò, P. (2021). An investigation of pre-upsampling generative modelling and Generative Adversarial Networks in audio super resolution. [doi:10.48550/arxiv.2109.14994](https://doi.org/10.48550/arxiv.2109.14994)
953. Magister, L. C., Kazhdan, D., Singh, V., & Liò, P. (2021). GCExplainer: Human-in-the-Loop Concept-based Explanations for Graph Neural Networks. [doi:10.48550/arxiv.2107.11889](https://doi.org/10.48550/arxiv.2107.11889)
954. Norcliffe, A., Bodnar, C., Day, B., Moss, J., & Liò, P. (2021). Neural ODE Processes. [doi:10.48550/arxiv.2103.12413](https://doi.org/10.48550/arxiv.2103.12413)
955. Qendro, L., Campbell, A., Liò, P., & Mascolo, C. (2021). High Frequency EEG Artifact Detection with Uncertainty via Early Exit Paradigm. [doi:10.48550/arxiv.2107.10746](https://doi.org/10.48550/arxiv.2107.10746)
956. Rocheteau, E., Tong, C., Veličković, P., Lane, N., & Liò, P. (2021). Predicting Patient Outcomes with Graph Representation Learning. [doi:10.48550/arxiv.2101.03940](https://doi.org/10.48550/arxiv.2101.03940)
957. Rocheteau, E., Liò, P., & Hyland, S. (2021). Temporal Pointwise Convolutional Networks for Length of Stay Prediction in the Intensive Care Unit. [doi:10.48550/arxiv.2007.09483](https://doi.org/10.48550/arxiv.2007.09483)
958. Shams, Z., Dimanov, B., Kola, S., Simidjievski, N., Terre, H. A., Scherer, P., . . . Liò, P. (2021). REM: An Integrative Rule Extraction Methodology for Explainable Data Analysis in Healthcare. [doi:10.1101/2021.01.25.21250459](https://doi.org/10.1101/2021.01.25.21250459)
959. Spasov, S., Di Stefano, A., Liò, P., & Tang, J. (2021). GRADE: Graph Dynamic Embedding. [doi:10.48550/arxiv.2007.08060](https://doi.org/10.48550/arxiv.2007.08060)
960. Tailor, S. A., Opolka, F. L., Liò, P., & Lane, N. D. (2021). Adaptive Filters and Aggregator Fusion for Efficient Graph Convolutions. *arxiv*.
961. Yang, J., Li, X. -X., Liu, F., Nie, D., Liò, P., Qi, H., & Shen, D. (2021). Fast T2w/FLAIR MRI Acquisition by Optimal Sampling of Information Complementary to Pre-acquired T1w MRI. [doi:10.48550/arxiv.2111.06400](https://doi.org/10.48550/arxiv.2111.06400)
962. Zheng, X., Zhou, B., Gao, J., Wang, Y. G., Liò, P., Li, M., & Montufar, G. (2021). How Framelets Enhance Graph Neural Networks. [doi:10.48550/arxiv.2102.06986](https://doi.org/10.48550/arxiv.2102.06986)
963. Zhou, B., Liu, X., Liu, Y., Huang, Y., Liò, P., & Wang, Y. (2021). Spectral Transform Forms Scalable Transformer. [doi:10.48550/arxiv.2111.07602](https://doi.org/10.48550/arxiv.2111.07602)
964. Zhu, J., Tan, C., Yang, J., Yang, G., & Liò, P. (2021). MIASSR: An Approach for Medical Image Arbitrary Scale Super-Resolution. [doi:10.48550/arxiv.2105.10738](https://doi.org/10.48550/arxiv.2105.10738)
965. Zhu, M., Liò, P., & Moss, J. (2021). Modular Neural Ordinary Differential Equations. [doi:10.48550/arxiv.2109.07359](https://doi.org/10.48550/arxiv.2109.07359)
966. Zubić, N., & Liò, P. (2021). An Effective Loss Function for Generating 3D Models from Single 2D Image without Rendering. [doi:10.48550/arxiv.2103.03390](https://doi.org/10.48550/arxiv.2103.03390)
967. Azevedo, T., Campbell, A., Romero-Garcia, R., Passamonti, L., Bethlehem, R. A. I., Liò, P., & Toschi, N. (2020). A Deep Graph Neural Network Architecture for Modelling Spatio-temporal Dynamics in resting-state functional MRI Data. *Unknown Journal*, 2020.11.08.370288. [doi:10.1101/2020.11.08.370288](https://doi.org/10.1101/2020.11.08.370288)
968. Azevedo, T., Dimitri, G. M., Liò, P., & Gamazon, E. R. (2020). Multilayer modelling and analysis of the human transcriptome. *Unknown Journal*, 2020.05.21.109082. [doi:10.1101/2020.05.21.109082](https://doi.org/10.1101/2020.05.21.109082)
969. Azevedo, T., Passamonti, L., Liò, P., & Toschi, N. (2020). Towards a predictive spatio-temporal representation of brain data. [doi:10.48550/arxiv.2003.03290](https://doi.org/10.48550/arxiv.2003.03290)
970. Barbiero, P., Torné, R. V., & Liò, P. (2020). Graph representation forecasting of patient's medical conditions: towards a digital twin. *Unknown Journal*, 2020.09.19.20197764. [doi:10.1101/2020.09.19.20197764](https://doi.org/10.1101/2020.09.19.20197764)
971. Barbiero, P., & Liò, P. (2020). The computational Patient has diabetes and a COVID. *Unknown Journal*, 2020.06.10.20127183. [doi:10.1101/2020.06.10.20127183](https://doi.org/10.1101/2020.06.10.20127183)
972. Bardozzo, F., Liò, P., & Tagliaferri, R. (2020). A machine learning approach to investigate regulatory control circuits in bacterial metabolic pathways. [doi:10.48550/arxiv.2001.04794](https://doi.org/10.48550/arxiv.2001.04794)
973. Bardozzo, F., Liò, P., & Tagliaferri, R. (2020). Signal metrics analysis of oscillatory patterns in bacterial multi-omic networks. [doi:10.48550/arxiv.2008.00263](https://doi.org/10.48550/arxiv.2008.00263)

974. Bodnar, C., Cangea, C., & Liò, P. (2020). Deep Graph Mapper: Seeing Graphs through the Neural Lens. [doi:10.48550/arxiv.2002.03864](https://doi.org/10.48550/arxiv.2002.03864)
975. Bodnar, C., Day, B., & Liò, P. (2020). Proximal Distilled Evolutionary Reinforcement Learning. [doi:10.48550/arxiv.1906.09807](https://doi.org/10.48550/arxiv.1906.09807)
976. Buterez, D., Bica, I., Tariq, I., Andrés-Terré, H., & Liò, P. (2020). CellVGAE: An unsupervised scRNA-seq analysis workflow with graph attention networks. [doi:10.1101/2020.12.20.423645](https://doi.org/10.1101/2020.12.20.423645)
977. Campbell, A., & Liò, P. (2020). tvGP-VAE: Tensor-variate Gaussian Process Prior Variational Autoencoder. [doi:10.48550/arxiv.2006.04788](https://doi.org/10.48550/arxiv.2006.04788)
978. Castiglione, F., Deb, D., Srivastava, A. P., Liò, P., & Liso, A. (2020). From infection to immunity: understanding the response to SARS-CoV2 through in-silico modeling. [doi:10.1101/2020.12.20.423670](https://doi.org/10.1101/2020.12.20.423670)
979. Christensen, C. N., Ward, E. N., Liò, P., & Kaminski, C. F. (2020). ML-SIM: A deep neural network for reconstruction of structured illumination microscopy images. [doi:10.48550/arxiv.2003.11064](https://doi.org/10.48550/arxiv.2003.11064)
980. Corso, G., Cavalleri, L., Beaini, D., Liò, P., & Veličković, P. (2020). Principal Neighbourhood Aggregation for Graph Nets. [doi:10.48550/arxiv.2004.05718](https://doi.org/10.48550/arxiv.2004.05718)
981. Day, B., Cangea, C., Jamasb, A. R., & Liò, P. (2020). Message Passing Neural Processes. [doi:10.48550/arxiv.2009.13895](https://doi.org/10.48550/arxiv.2009.13895)
982. de Maria, E., Despeyroux, J., Felty, A., Liò, P., Olarte, C., & Bahrami, A. (2020). Computational Logic for Biomedicine and Neurosciences. [doi:10.48550/arxiv.2007.07571](https://doi.org/10.48550/arxiv.2007.07571)
983. Deasy, J., Ercole, A., & Liò, P. (2020). Adaptive Prediction Timing for Electronic Health Records. [doi:10.48550/arxiv.2003.02554](https://doi.org/10.48550/arxiv.2003.02554)
984. Deasy, J., Rocheteau, E., Kohler, K., Stubbs, D. J., Barbiero, P., Liò, P., & Ercole, A. (2020). Forecasting Ultra-early Intensive Care Strain from COVID-19 in England, v1.1.4. [doi:10.1101/2020.03.19.20039057](https://doi.org/10.1101/2020.03.19.20039057)
985. Di Stefano, A., Scatà, M., Attanasio, B., La Corte, A., Liò, P., & Das, S. K. (2020). A Novel Methodology for designing Policies in Mobile Crowdsensing Systems. [doi:10.48550/arxiv.2001.06437](https://doi.org/10.48550/arxiv.2001.06437)
986. Glass, S., Spasov, S., & Liò, P. (2020). RicciNets: Curvature-guided Pruning of High-performance Neural Networks Using Ricci Flow. [doi:10.48550/arxiv.2007.04216](https://doi.org/10.48550/arxiv.2007.04216)
987. Karavias, V., Day, B., & Liò, P. (2020). Uncertainty in Neural Relational Inference Trajectory Reconstruction. [doi:10.48550/arxiv.2006.13666](https://doi.org/10.48550/arxiv.2006.13666)
988. Kazhdan, D., Shams, Z., & Liò, P. (2020). MARLeME: A Multi-Agent Reinforcement Learning Model Extraction Library. [doi:10.48550/arxiv.2004.07928](https://doi.org/10.48550/arxiv.2004.07928)
989. Kazhdan, D., Dimanov, B., Jamnik, M., & Liò, P. (2020). MEME: Generating RNN Model Explanations via Model Extraction. [doi:10.48550/arxiv.2012.06954](https://doi.org/10.48550/arxiv.2012.06954)
990. Kazhdan, D., Dimanov, B., Jamnik, M., Liò, P., & Weller, A. (2020). Now You See Me (CME): Concept-based Model Extraction. [doi:10.48550/arxiv.2010.13233](https://doi.org/10.48550/arxiv.2010.13233)
991. Lipov, A., & Liò, P. (2020). A Multiscale Graph Convolutional Network Using Hierarchical Clustering. [doi:10.48550/arxiv.2006.12542](https://doi.org/10.48550/arxiv.2006.12542)
992. Ma, Z., Xuan, J., Wang, Y. G., Li, M., & Liò, P. (2020). Path Integral Based Convolution and Pooling for Graph Neural Networks. [doi:10.48550/arxiv.2006.16811](https://doi.org/10.48550/arxiv.2006.16811)
993. Moss, J., & Liò, P. (2020). Gene Regulatory Network Inference with Latent Force Models. [doi:10.48550/arxiv.2010.02555](https://doi.org/10.48550/arxiv.2010.02555)
994. Norcliffe, A., Bodnar, C., Day, B., Simidjievski, N., & Liò, P. (2020). On Second Order Behaviour in Augmented Neural ODEs. [doi:10.48550/arxiv.2006.07220](https://doi.org/10.48550/arxiv.2006.07220)
995. Opolka, F. L., & Liò, P. (2020). Graph Convolutional Gaussian Processes For Link Prediction. [doi:10.48550/arxiv.2002.04337](https://doi.org/10.48550/arxiv.2002.04337)
996. Rocheteau, E., Liò, P., & Hyland, S. (2020). Predicting Length of Stay in the Intensive Care Unit with Temporal Pointwise Convolutional Networks. [doi:10.48550/arxiv.2006.16109](https://doi.org/10.48550/arxiv.2006.16109)
997. Scherer, P., Trębacz, M., Simidjievski, N., Shams, Z., Terre, H. A., Liò, P., & Jamnik, M. (2020). Incorporating network based protein complex discovery into automated model construction. [doi:10.48550/arxiv.2010.00387](https://doi.org/10.48550/arxiv.2010.00387)
998. Scherer, P., & Liò, P. (2020). Learning distributed representations of graphs with Geo2DR. [doi:10.48550/arxiv.2003.05926](https://doi.org/10.48550/arxiv.2003.05926)
999. Spivakovsky, P., Liò, P., & Clark, M. S. (2020). PhylSim: A New Phylogenetic Tool for Modeling Trait Evolution and Speciation. [doi:10.1101/2020.05.13.094706](https://doi.org/10.1101/2020.05.13.094706)
1000. Stankevičiūtė, K., Azevedo, T., Campbell, A., Bethlehem, R., & Liò, P. (2020). Population Graph GNNs for Brain Age Prediction. Unknown Journal, 2020.06.26.172171. [doi:10.1101/2020.06.26.172171](https://doi.org/10.1101/2020.06.26.172171)
1001. Tan, C., Zhu, J., & Liò, P. (2020). Arbitrary Scale Super-Resolution for Brain MRI Images. [doi:10.48550/arxiv.2004.02086](https://doi.org/10.48550/arxiv.2004.02086)
1002. Trębacz, M., Shams, Z., Jamnik, M., Scherer, P., Simidjievski, N., Terre, H. A., & Liò, P. (2020). Using ontology embeddings for structural inductive bias in gene expression data analysis. [doi:10.48550/arxiv.2011.10998](https://doi.org/10.48550/arxiv.2011.10998)
1003. Viñas, R., Azevedo, T., Gamazon, E. R., & Liò, P. (2020). Gene Expression Imputation with Generative Adversarial Imputation Nets. Unknown Journal, 2020.06.09.141689. [doi:10.1101/2020.06.09.141689](https://doi.org/10.1101/2020.06.09.141689)
1004. Wang, D., Jamnik, M., & Liò, P. (2020). Abstract Diagrammatic Reasoning with Multiplex Graph Networks. [doi:10.48550/arxiv.2006.11197](https://doi.org/10.48550/arxiv.2006.11197)
1005. Wang, D., Jamnik, M., & Liò, P. (2020). Extrapolatable Relational Reasoning With Comparators in Low-Dimensional Manifolds. [doi:10.48550/arxiv.2006.08698](https://doi.org/10.48550/arxiv.2006.08698)
1006. Wichitwechkarn, V., Day, B., Bodnar, C., Wales, M., & Liò, P. (2020). The Role of Isomorphism Classes in Multi-Relational Datasets. [doi:10.48550/arxiv.2009.14593](https://doi.org/10.48550/arxiv.2009.14593)
1007. Yeghikyan, G., Opolka, F. L., Nanni, M., Lepri, B., & Liò, P. (2020). Learning Mobility Flows from Urban Features with Spatial Interaction Models and Neural Networks. [doi:10.48550/arxiv.2004.11924](https://doi.org/10.48550/arxiv.2004.11924)
1008. Zhao, Y., Wang, D., Bates, D., Mullins, R., Jamnik, M., & Liò, P. (2020). Learned Low Precision Graph Neural Networks. [doi:10.48550/arxiv.2009.09232](https://doi.org/10.48550/arxiv.2009.09232)
1009. Zhao, Y., Wang, D., Gao, X., Mullins, R., Liò, P., & Jamnik, M. (2020). Probabilistic Dual Network Architecture Search on Graphs. [doi:10.48550/arxiv.2003.09676](https://doi.org/10.48550/arxiv.2003.09676)
1010. Andrés-Terré, H., & Liò, P. (2019). Perturbation theory approach to study the latent space degeneracy of Variational Autoencoders. [doi:10.48550/arxiv.1907.05267](https://doi.org/10.48550/arxiv.1907.05267)
1011. Azevedo, T., Passamonti, L., Liò, P., & Toschi, N. (2019). A machine learning tool for interpreting differences in cognition using brain features. Unknown Journal, 558403. [doi:10.1101/558403](https://doi.org/10.1101/558403)
1012. Bica, I., Andrés-Terré, H., Cvejic, A., & Liò, P. (2019). Unsupervised generative and graph representation learning for modelling cell differentiation. Cold Spring Harbor Laboratory. [doi:10.1101/801605](https://doi.org/10.1101/801605)
1013. Cangea, C., Belilovsky, E., Liò, P., & Courville, A. (2019). VideoNavQA: Bridging the Gap between Visual and Embodied Question Answering. [doi:10.48550/arxiv.1908.04950](https://doi.org/10.48550/arxiv.1908.04950)
1014. Cangea, C., Veličković, P., & Liò, P. (2019). XFlow: Cross-modal Deep Neural Networks for Audiovisual Classification. [doi:10.48550/arxiv.1709.00572](https://doi.org/10.48550/arxiv.1709.00572)

- 1015.** Deac, A., Huang, Y. -H., Veličković, P., Liò, P., & Tang, J. (2019). Drug-Drug Adverse Effect Prediction with Graph Co-Attention. [doi:10.48550/arxiv.1905.00534](https://doi.org/10.48550/arxiv.1905.00534)
- 1016.** Deasy, J., Liò, P., & Ercole, A. (2019). Dynamic survival prediction in intensive care units from heterogeneous time series without the need for variable selection or pre-processing. [doi:10.48550/arxiv.1909.07214](https://doi.org/10.48550/arxiv.1909.07214)
- 1017.** Deasy, J., Ercole, A., & Liò, P. (2019). Impact of novel aggregation methods for flexible, time-sensitive EHR prediction without variable selection or cleaning. [doi:10.48550/arxiv.1909.08981](https://doi.org/10.48550/arxiv.1909.08981)
- 1018.** George, T. M., & Liò, P. (2019). Unsupervised Machine Learning for Data Encoding applied to Ovarian Cancer Transcriptomes. [doi:10.1101/855593](https://doi.org/10.1101/855593)
- 1019.** Luzhnica, E., Day, B., & Liò, P. (2019). Clique pooling for graph classification. [doi:10.48550/arxiv.1904.00374](https://doi.org/10.48550/arxiv.1904.00374)
- 1020.** Luzhnica, E., Day, B., & Liò, P. (2019). On Graph Classification Networks, Datasets and Baselines. [doi:10.48550/arxiv.1905.04682](https://doi.org/10.48550/arxiv.1905.04682)
- 1021.** Müller, T., & Liò, P. (2019). PECLIDES Neuro A Personalisable Clinical Decision Support System for Neurological Diseases. [doi:10.1101/708818](https://doi.org/10.1101/708818)
- 1022.** Opolka, F. L., Solomon, A., Cangea, C., Veličković, P., Liò, P., & Hjelm, R. D. (2019). Spatio-Temporal Deep Graph Infomax. [doi:10.48550/arxiv.1904.06316](https://doi.org/10.48550/arxiv.1904.06316)
- 1023.** Rakowski, A. G., Veličković, P., Dall'Ara, E., & Liò, P. (2019). ChronoMID - Cross-Modal Neural Networks for 3-D Temporal Medical Imaging Data. [doi:10.48550/arxiv.1901.03906](https://doi.org/10.48550/arxiv.1901.03906)
- 1024.** Rossi, E., Monti, F., Bronstein, M., & Liò, P. (2019). ncRNA Classification with Graph Convolutional Networks. [doi:10.48550/arxiv.1905.06515](https://doi.org/10.48550/arxiv.1905.06515)
- 1025.** Scherer, P., Andres-Terre, H., Liò, P., & Jamnik, M. (2019). Decoupling feature propagation from the design of graph auto-encoders. [doi:10.48550/arxiv.1910.08589](https://doi.org/10.48550/arxiv.1910.08589)
- 1026.** Simidjievski, N., Bodnar, C., Tariq, I., Scherer, P., Andres-Terre, H., Shams, Z., . . . Liò, P. (2019). Variational autoencoders for cancer data integration: design principles and computational practice. *Unknown Journal*, 719542. [doi:10.1101/719542](https://doi.org/10.1101/719542)
- 1027.** Singh, V., & Liò, P. (2019). Towards Probabilistic Generative Models Harnessing Graph Neural Networks for Disease-Gene Prediction. [doi:10.48550/arxiv.1907.05628](https://doi.org/10.48550/arxiv.1907.05628)
- 1028.** Spasov, S. E., & Liò, P. (2019). Dynamic Neural Network Channel Execution for Efficient Training. [doi:10.48550/arxiv.1905.06435](https://doi.org/10.48550/arxiv.1905.06435)
- 1029.** Tangherloni, A., Ricciuti, F., Besozzi, D., Liò, P., & Cvejic, A. (2019). Analysis of single-cell RNA sequencing data based on autoencoders. [doi:10.1101/727867](https://doi.org/10.1101/727867)
- 1030.** Taylor, D., Spasov, S., & Liò, P. (2019). Co-Attentive Cross-Modal Deep Learning for Medical Evidence Synthesis and Decision Making. [doi:10.48550/arxiv.1909.06442](https://doi.org/10.48550/arxiv.1909.06442)
- 1031.** Viñas, R., Andrés-Terré, H., Liò, P., & Bryson, K. (2019). Adversarial generation of gene expression data. Cold Spring Harbor Laboratory. [doi:10.1101/836254](https://doi.org/10.1101/836254)
- 1032.** Wang, D., Jamnik, M., & Liò, P. (2019). Unsupervised and interpretable scene discovery with Discrete-Attend-Infer-Repeat. [doi:10.48550/arxiv.1903.06581](https://doi.org/10.48550/arxiv.1903.06581)
- 1033.** Webb, E., Day, B., Andres-Terre, H., & Liò, P. (2019). Factorised Neural Relational Inference for Multi-Interaction Systems. [doi:10.48550/arxiv.1905.08721](https://doi.org/10.48550/arxiv.1905.08721)
- 1034.** Weber, J., Liò, P., & Lapkin, A. (2019). Identification of Strategic Molecules for Future Circular Supply Chains Using Large Reaction Networks. [doi:10.26434/chemrxiv.8488934.v1](https://doi.org/10.26434/chemrxiv.8488934.v1)
- 1035.** Yang, J., Wang, D., Rollins, C., Leming, M., Liò, P., Suckling, J., . . . Cachia, A. (2019). Volumetric Segmentation and Characterisation of the Paracingulate Sulcus on MRI Scans. *Unknown Journal*, 859496. [doi:10.1101/859496](https://doi.org/10.1101/859496)
- 1036.** Zhu, J., Yang, G., & Liò, P. (2019). How Can We Make GAN Perform Better in Single Medical Image Super-Resolution? A Lesion Focused Multi-Scale Approach. [doi:10.48550/arxiv.1901.03419](https://doi.org/10.48550/arxiv.1901.03419)
- 1037.** Barsacchi, M., Terre, H. A., & Liò, P. (2018). GESE: Metabolically driven latent space learning for gene expression data. *Unknown Journal*, 365643. [doi:10.1101/365643](https://doi.org/10.1101/365643)
- 1038.** Bartoszek, K., & Liò, P. (2018). Modelling trait dependent speciation with Approximate Bayesian Computation. [doi:10.48550/arxiv.1812.03715](https://doi.org/10.48550/arxiv.1812.03715)
- 1039.** Cangea, C., Grauslys, A., Liò, P., & Falciani, F. (2018). Structure-Based Networks for Drug Validation. [doi:10.48550/arxiv.1811.09714](https://doi.org/10.48550/arxiv.1811.09714)
- 1040.** Cangea, C., Veličković, P., Jovanović, N., Kipf, T., & Liò, P. (2018). Towards Sparse Hierarchical Graph Classifiers. [doi:10.48550/arxiv.1811.01287](https://doi.org/10.48550/arxiv.1811.01287)
- 1041.** Del Prete, E., Facchiano, A., & Liò, P. (2018). Reusing microarray clinical data from a complex disease with bioinformatics tool. [doi:10.7287/peerj.preprints.27398v1](https://doi.org/10.7287/peerj.preprints.27398v1)
- 1042.** Felicetti, L., Femminella, M., Reali, G., & Liò, P. (2018). Applications of molecular communications to medicine: a survey. [doi:10.48550/arxiv.1808.04242](https://doi.org/10.48550/arxiv.1808.04242)
- 1043.** Karazija, L., Veličković, P., & Liò, P. (2018). Automatic Inference of Cross-modal Connection Topologies for X-CNNs. [doi:10.48550/arxiv.1805.00987](https://doi.org/10.48550/arxiv.1805.00987)
- 1044.** Moni, M. A., Rana, H. K., Islam, M. B., Ahmed, B., Liò, P., Huq, F., & Quinn, J. M. W. (2018). Early Detection of Neurological Dysfunction Using Blood Cell Transcript Profiles. [doi:10.1101/483016](https://doi.org/10.1101/483016)
- 1045.** Parmar, V., & Liò, P. (2018). Multi-omic Network Regression: Methodology, Tool and Case Study. [doi:10.48550/arxiv.1810.05441](https://doi.org/10.48550/arxiv.1810.05441)
- 1046.** Prokhorov, V., Pilehvar, M. T., Kartsaklis, D., Liò, P., & Collier, N. (2018). Unseen Word Representation by Aligning Heterogeneous Lexical Semantic Spaces. [doi:10.48550/arxiv.1811.04983](https://doi.org/10.48550/arxiv.1811.04983)
- 1047.** Rahman, M. H., Peng, S., Chen, C., Liò, P., & Moni, M. A. (2018). Genetic effect of Type 2 diabetes to the progression of neurological diseases. [doi:10.7287/peerj.preprints.27323](https://doi.org/10.7287/peerj.preprints.27323)
- 1048.** Rana, H. K., Akhtar, R., Islam, M. B., Ahmed, M. B., Liò, P., Quinn, J. M. W., . . . Moni, M. A. (2018). Genetic Effects of Welding Fumes on the Development of Respiratory System Diseases. [doi:10.1101/480855](https://doi.org/10.1101/480855)
- 1049.** Rana, H. K., Akhtar, M. R., Ahmed, B., Liò, P., Quinn, J., Huq, F., & Moni, M. A. (2018). Genetic Effects of Welding Fumes on the progression of Neurodegenerative Diseases. [doi:10.1101/480806](https://doi.org/10.1101/480806)
- 1050.** Sheehan, C., Day, B., & Liò, P. (2018). Introducing Curvature to the Label Space. [doi:10.48550/arxiv.1810.09549](https://doi.org/10.48550/arxiv.1810.09549)
- 1051.** Spasov, S., Passamonti, L., Duggento, A., Liò, P., & Toschi, N. (2018). A parameter-efficient deep learning approach to predict conversion from mild cognitive impairment to Alzheimer's disease. [doi:10.1101/383687](https://doi.org/10.1101/383687)
- 1052.** Veličković, P., Fedus, W., Hamilton, W. L., Liò, P., Bengio, Y., & Hjelm, R. D. (2018). Deep Graph Infomax. [doi:10.48550/arxiv.1809.10341](https://doi.org/10.48550/arxiv.1809.10341)
- 1053.** Veličković, P., Cucurull, G., Casanova, A., Romero, A., Liò, P., & Bengio, Y. (2018). Graph Attention Networks. [doi:10.48550/arxiv.1710.10903](https://doi.org/10.48550/arxiv.1710.10903)
- 1054.** Vijayakumar, S., Conway, M., Liò, P., & Angione, C. (2018). Seeing the wood for the trees: a forest of methods for optimisation and omic-network integration in metabolic modelling. [doi:10.48550/arxiv.1809.09475](https://doi.org/10.48550/arxiv.1809.09475)

1055. Zhu, J., Yang, G., & Liò, P. (2018). Lesion Focused Super-Resolution. [doi:10.48550/arxiv.1810.06693](https://doi.org/10.48550/arxiv.1810.06693)
1056. Ascolani, G., & Liò, P. (2017). Modelling the order of driver mutations and metabolic mutations as structures in cancer dynamics. [doi:10.48550/arxiv.1705.10862](https://doi.org/10.48550/arxiv.1705.10862)
1057. Athanasiadis, E. I., Botthof, J. G., Andres, H., Ferreira, L., Liò, P., & Cvejic, A. (2017). Single-cell RNA-Sequencing uncovers transcriptional states and fate decisions in haematopoiesis. [doi:10.1101/117960](https://doi.org/10.1101/117960)
1058. Brouwer, T., & Liò, P. (2017). Bayesian Hybrid Matrix Factorisation for Data Integration. [doi:10.48550/arxiv.1704.04962](https://doi.org/10.48550/arxiv.1704.04962)
1059. Brouwer, T., Frellsen, J., & Liò, P. (2017). Comparative Study of Inference Methods for Bayesian Nonnegative Matrix Factorisation. [doi:10.48550/arxiv.1707.05147](https://doi.org/10.48550/arxiv.1707.05147)
1060. Brouwer, T., & Liò, P. (2017). Prior and Likelihood Choices for Bayesian Matrix Factorisation on Small Datasets. [doi:10.48550/arxiv.1712.00288](https://doi.org/10.48550/arxiv.1712.00288)
1061. Del Prete, E., Facchiano, A., & Liò, P. (2017). A Gene Set Enrichment Analysis of multiomic celiac disease data. [doi:10.7287/peerj.preprints.3315v1](https://doi.org/10.7287/peerj.preprints.3315v1)
1062. Liberis, E., Veličković, P., Sormanni, P., Vendruscolo, M., & Liò, P. (2017). Paratope Prediction using Convolutional and Recurrent Neural Networks. *Unknown Journal*, 185488. [doi:10.1101/185488](https://doi.org/10.1101/185488)
1063. Peychev, M., Veličković, P., & Liò, P. (2017). Quantifying the Effects of Enforcing Disentanglement on Variational Autoencoders. [doi:10.48550/arxiv.1711.09159](https://doi.org/10.48550/arxiv.1711.09159)
1064. Prokhorov, V., Pilehvar, M. T., Kartsaklis, D., Liò, P., & Collier, N. (2017). Learning Rare Word Representations using Semantic Bridging. [doi:10.48550/arxiv.1707.07554](https://doi.org/10.48550/arxiv.1707.07554)
1065. Tangherloni, A., Spolaor, S., Rundo, L., Nobile, M. S., Merelli, I., Cazzaniga, P., . . . Liò, P. (2017). GenHap: A novel computational method based on genetic algorithms for haplotype assembly. [doi:10.7287/peerj.preprints.3246](https://doi.org/10.7287/peerj.preprints.3246)
1066. Veličković, P., Karazija, L., Lane, N. D., Bhattacharya, S., Liberis, E., Liò, P., . . . Vegreville, M. (2017). Cross-modal Recurrent Models for Weight Objective Prediction from Multimodal Time-series Data. [doi:10.48550/arxiv.1709.08073](https://doi.org/10.48550/arxiv.1709.08073)
1067. Brouwer, T., Frellsen, J., & Liò, P. (2016). Fast Bayesian Non-Negative Matrix Factorisation and Tri-Factorisation. [doi:10.48550/arxiv.1610.08127](https://doi.org/10.48550/arxiv.1610.08127)
1068. Veličković, P., Wang, D., Lane, N. D., & Liò, P. (2016). X-CNN: Cross-modal Convolutional Neural Networks for Sparse Datasets. [doi:10.48550/arxiv.1610.00163](https://doi.org/10.48550/arxiv.1610.00163)
1069. Angione, C., Carapezza, G., Costanza, J., Liò, P., & Nicosia, G. (2015). Design and strain selection criteria for bacterial communication networks. [doi:10.1101/013383](https://doi.org/10.1101/013383)
1070. Fondi, M., & Liò, P. (2015). Multi-omics and metabolic modelling pipelines: challenges and tools for systems microbiology. [doi:10.1101/013532](https://doi.org/10.1101/013532)
1071. Taffi, M., Paoletti, N., Liò, P., Tesei, L., Pucciarelli, S., & Marini, M. (2014). Estimation and Modelling of PCBs Bioaccumulation in the Adriatic Sea Ecosystem. [doi:10.48550/arxiv.1405.6384](https://doi.org/10.48550/arxiv.1405.6384)
1072. Liò, P., Merelli, E., & Paoletti, N. (2012). Disease processes as hybrid dynamical systems. [doi:10.48550/arxiv.1208.3858](https://doi.org/10.48550/arxiv.1208.3858)
1073. Giampieri, E., Remondini, D., de Oliveira, L., Castellani, G., & Liò, P. (2011). Stochastic analysis of a miRNA-protein toggle switch. [doi:10.48550/arxiv.1106.4442](https://doi.org/10.48550/arxiv.1106.4442)
1074. Leung, I. X. Y., Chan, S. -Y., Hui, P., & Liò, P. (2011). Intra-City Urban Network and Traffic Flow Analysis from GPS Mobility Trace. [doi:10.48550/arxiv.1105.5839](https://doi.org/10.48550/arxiv.1105.5839)
1075. Liò, P., Merelli, E., & Paoletti, N. (2011). Multiple verification in computational modeling of bone pathologies. [doi:10.48550/arxiv.1109.1368](https://doi.org/10.48550/arxiv.1109.1368)
1076. Massaro, E., Guazzini, A., Bagnoli, F., & Liò, P. (2011). Information dynamics algorithm for detecting communities in networks. [doi:10.48550/arxiv.1112.1224](https://doi.org/10.48550/arxiv.1112.1224)
1077. Aldinucci, M., Bracciali, A., Liò, P., Sorathiya, A., & Torquati, M. (2010). StochKit-FF: Efficient Systems Biology on Multicore Architectures. [doi:10.48550/arxiv.1007.1768](https://doi.org/10.48550/arxiv.1007.1768)
1078. Nguyen, V. -A., Koukolikova-Nicola, Z., Bagnoli, F., & Liò, P. (2010). Noise and nonlinearities in high-throughput data. [doi:10.48550/arxiv.1001.0685](https://doi.org/10.48550/arxiv.1001.0685)
1079. Leung, I. X. Y., Hui, P., Liò, P., & Crowcroft, J. (2009). Towards real-time community detection in large networks. [doi:10.48550/arxiv.0808.2633](https://doi.org/10.48550/arxiv.0808.2633)
1080. Bagnoli, F., Guazzini, A., & Liò, P. (2008). Human Heuristics for Autonomous Agents. [doi:10.48550/arxiv.0801.3048](https://doi.org/10.48550/arxiv.0801.3048)
1081. Bagnoli, F., Liò, P., & Sguanci, L. (2007). Risk perception in epidemic modeling. [doi:10.48550/arxiv.0705.1974](https://doi.org/10.48550/arxiv.0705.1974)
1082. Sguanci, L., Bagnoli, F., & Liò, P. (2006). Mathematical Model of HIV superinfection dynamics and R5 to X4 switch. [doi:10.48550/arxiv.q-bio/0603003](https://doi.org/10.48550/arxiv.q-bio/0603003)
1083. Sguanci, L., Liò, P., & Bagnoli, F. (2006). The influence of risk perception in epidemics: a cellular agent model. [doi:10.48550/arxiv.q-bio/0607010](https://doi.org/10.48550/arxiv.q-bio/0607010)
1084. Bagnoli, F., Liò, P., & Sguanci, L. (2005). Modeling viral coevolution: HIV multi-clonal persistence and competition dynamics. [doi:10.48550/arxiv.q-bio/0509006](https://doi.org/10.48550/arxiv.q-bio/0509006)
1085. Piazza, F., & Liò, P. (2005). Statistical analysis of simple repeats in the human genome. [doi:10.48550/arxiv.q-bio/0502009](https://doi.org/10.48550/arxiv.q-bio/0502009)
1086. Bagnoli, F., & Liò, P. (1998). Selection, Mutations and Codon Usage in Bacterial Model. [doi:10.48550/arxiv.cond-mat/9808317](https://doi.org/10.48550/arxiv.cond-mat/9808317)
1087. Liò, P., & Goldman, N. (1998). Review: Models of molecular evolution and phylogeny. *Genome Research*, 8(12), 1233-1244. [doi:10.1101/gr.8.12.1233](https://doi.org/10.1101/gr.8.12.1233)