

Profile

Tai-Ping Liu has been a faculty member of University of Maryland, New York University, Stanford University, and Academia Sinica, Taiwan. He is currently distinguished visiting chair at Academia Sinica and Emeritus Professor of Mathematics at Stanford University.

His research activity centers on nonlinear partial differential equations in fluid dynamics and the kinetic theory of gases. For system of hyperbolic conservation laws, he has made contributions on fundamental issues such as the general admissibility condition for shock waves, the functional approach for the well-posedness theory, and formulation of relaxation and nonlinear resonance phenomena. For viscous conservation laws, he established the theory for nonlinear stability of elementary waves. In the study of the Boltzmann equation in the kinetic theory, he introduced the Green's function approach and resolved some of the key issues on the relation of the Boltzmann equation and the fluid dynamics.