Preface

The special issue is dedicated to Professor Gui-Qiang G. Chen in honor of his 60th birthday

Gui-Qiang G. Chen is internationally recognized as a leader in the analysis of partial differential equations (PDEs) and related disciplines in mathematics and science. He has made significant and original contributions to diverse research areas, including mathematical analysis, partial differential equations, mathematical physics, and nonlinear science. In particular, much of his work has been focused on nonlinear hyperbolic systems of conservation laws, mathematical theory of shock waves, free boundary problems in the theory of supersonic and transonic flow, nonlinear degenerate and mixed-type PDEs and their applications, entropy analysis, weak convergence methods, singular limit problems for nonlinear PDEs, measure-theoretical analysis for discontinuous and singular entropy solutions, stability/instability analysis of characteristic discontinuities for nonlinear hyperbolic conservation laws, and convergence/stability analysis of shock-capturing methods and related numerical methods, among others. Professor Gui-Qiang G. Chen has published over 200 research papers in peer-reviewed premier SCI journals and more than 10 research books/volumes by leading international publishers. Please see paper "*Some contributions of Gui-Qiang G. Chen to nonlinear conservation laws and partial differential equations*" published in Communications in Mathematical Analysis and Applications, Vol. 3(2), 2024, for more details.

Gui-Qiang G. Chen's distinguished scientific achievements, mentoring, humanity, and contributions to promoting mathematics across the sciences have profoundly influenced and inspired many of us. The papers contributed by his former students, postdoctoral fellows, collaborators, and friends serve as a testimony to their high appreciation for his scientific eminence and lasting friendship. On this special occasion of his 60th birthday, we wish Professor Gui-Qiang G. Chen continued success and fulfillment in all his endeavors for many decades to come.

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