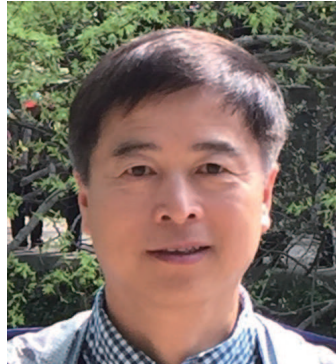


## Preface

### Special Issue In Honor of Professor Jie Shen



We are delighted to present this special issue in honor of Professor Jie Shen on the occasion of his sixtieth birthday in *Journal of Mathematical Study* (JMS) of which he serves currently as the editor-in-chief. This issue collects original papers from his students, post-docs and collaborators, who have tremendously benefited from him. The topics of the papers span broad research areas in computational and applied mathematics, including scientific computing, theoretical applied/numerical analysis and neural network, which perfectly reflect Jie Shen's significant and broad scientific impacts. In detail, he has made outstanding contributions in algorithms and analysis of spectral methods, projection type methods for incompressible flows, algorithms and simulations for phase-field models, and most recently structure preserving schemes for complex nonlinear dissipative/conservative systems.

Professor Jie Shen received his B.S. degree from Peking University, China (1982) and his Ph.D. degree from Université de Paris-Sud, France (1987). He started his academic career as a Postdoc/Visiting Assistant Professor in the Department of Mathematics, Indiana University (1987-1991), followed by ten years in the Department of Mathematics at Penn State University (1991-2001), rising through the ranks of Assistant Professor, Associate Professor and Full Professor. After one year in the Department of Mathematics at University of Central Florida (2001-2002), he joined Purdue University in 2002 and currently serves as the Director of Center for Computational and Applied Mathematics at Purdue University. Professor Jie Shen's impactful contributions to numerical analysis and scientific computing have been acknowledged internationally. He received a Fulbright Research Chair Award in 2008, and was elected Fellow of the American Mathematical Society in 2017 and Fellow of Society for Industrial and Applied Mathematics (SIAM) in 2020.

Professor Jie Shen has been a great teacher, a brilliant mentor, a perfect collaborator, and a very dear friend to many of us. His dedication, passion and intuition in research have had tremendous influences on his students, postdocs, visiting scholars, and many other junior researchers. We therefore dedicate this special issue to him.

We would like to thank all the authors and referees for their contributions to make this possible. Last but not the least, we are grateful for the strong support of the managing editors and editorial office of JMS.

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