

## Preface

This volume publishes five papers contributed by invited speakers from the workshop “2019 Spring Progress in Mathematical and Computational Studies on Science and Engineering Problems” Taiwan-India Joint Workshop-Recent Progress on Flow Simulation and Stability Analysis on March 15–17, 2019 held in Center for Advanced Study in Theoretical Sciences (CASTS) at National Taiwan University.

There are five papers involving two areas, namely “Weakly nonlinear stability analysis on fluid flows” and “Scientific computing on science and engineering problems”.

Two papers in the catalog of “Weakly nonlinear stability analysis on fluid flows”, are “Simulation of Tumor-induced angiogenesis by an HOC approach and “A pseudo-transient Newton-Krylov-Schwarz method for incompressible Navier-Stokes equations with slip conditions for bifurcation analysis”. The other papers in the category of “Scientific computing on science and engineering problems”, are “Fast spectral solver for Poisson equation on an annular domain”, “A direct-forcing immersed boundary projection method for simulating the dynamics of freely falling solid bodies in an incompressible viscous fluid”, and “High accuracy compact difference schemes for differential equations in mathematical sciences”.

It is best hoped that you find these five papers to be helpful contribution to Annals of Mathematical Sciences and Applications.

Guest Editor of special issue 2020  
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