

Prologue

This special issue collects several articles from a group of invited speakers in the International Conference on Engineering and Computational Mathematics, held in 31 May - 2 June 2017 at The Hong Kong Polytechnic University. The contributed authors are leading experts in the fast-developing field of numerical PDEs, and they are from invited speakers of the following three workshops:

Stream 1: Numerical Solutions of Differential Equations

Workshop 1: Numerical Methods for Phase-field models

Workshop 3: Modeling and Computation for Flow and Transport in Porous Media

The selected articles comprise a collection of diverse but representative subjects in scientific computing, which include: calculus of variations problems, convection-diffusion equations, Hadamard finite-part integrals, Hamiltonian wave equations, phase field models, time-fractional PDEs, wormlike chains on cylindrical surfaces, etc. A myriad of powerful numerical methods are used to treat these problems, such as parallel and multigrid method, characteristic method, discontinuous Galerkin method, immersed finite element method, etc. We have enjoyed the review process for these articles, as they are inspirational for new directions in computational mathematics.

We would like to thank all authors for their important contribution to this special issue. At the same time, we wish to thank the anonymous reviewers who have worked hard to maintain the high quality of this journal (IJNAM).

About the managing editors of this special issue



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