Preface

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Preface for the special issue on "Geometric Partial Differential Equations and Applications"

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This special issue of "Geometric Partial Differential Equations and Applications" published in de Gruyter journal *Advanced Nonlinear Studies* (ANS) focusses on recent significant progress in areas connected to fully nonlinear partial differential equations, convex geometric analysis, geometric rigidity, minimal submanifolds, geometric inequalities, and complex geometric analysis, and related topics.

This special issue includes articles on *a priori* estimates for the Monge-Ampére-type equation, regularity in optimal transport, the exterior problem for the Monge-Ampére and complex degenerate k-Hessian equations, complex geometry, and Kähler-Einstein metrics. It also contains results on Minkowski-type problems for convex bodies, prescribed degenerate curvature measure problems, the classical geometric theory of extrinsic geometric flows of Euclidean hypersurfaces, Ricci flow, minimal surfaces, geometric inequalities and rigidity, the classification of constant mean curvature surfaces of finite index, the capillary problem, and compactness with pinching for hypersurfaces.

In this special issue, we invited articles from both well-established mathematicians and young scholars. Many of them are leading researchers in the areas of geometric partial differential equations, differential geometry, and convex geometry. We are grateful to all the contributors and reviewers for making this special issue possible.

Advanced nonlinear studies (ANS) was founded as a traditional journal in 2001. It publishes cutting-edge original research on nonlinear problems, particularly those involving partial differential equations, calculus of variations, geometric analysis, nonlinear analysis and related topics. We are confident that this special issue contributes to strengthening and broadening the scope of this journal.

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