



## Aero/Hydrodynamics and Symmetry

Guest Editor:

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Deadline for manuscript  
submissions:

**closed (31 January 2020)**

### Message from the Guest Editor

The scope of this Special Issue contains, but is not limited to, the state-of-the-art computational, theoretical, and experimental works dealing with symmetry and its breaking, which are in line with the aero-/hydro-dynamics applications. Potential topics dealing with the following subheadings are deemed suitable for publication, but are not limited to

- Mathematical models such as the symmetry method, homotopy perturbation method, homotopy analysis method, lie group, integral transform, and so on;
- Equilibrium and out of equilibrium thermodynamics and fluid mechanics
- Hydrodynamics for symmetric exclusion;
- Hydrodynamics with multiple higher-form symmetries;
- Ideal order and dissipative fluids with q-form symmetry;
- Partial and fractional order differential equations;
- Finite difference, finite volume, finite element, smoothed particle hydrodynamics, moving particle semi-implicit, lattice Boltzmann methods, and so on;
- multiphysics phenomena, such as non-Newtonian flows, multiphase flows, phase change, nanofluidic, magnetohydrodynamics, electrohydrodynamics, and so on;
- Symmetry and its breakdown in transitional and turbulent flow.





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## Editor-in-Chief

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## Message from the Editor-in-Chief

Symmetry is ultimately the most important concept in natural sciences. It is not surprising then that very basic and fundamental research achievements are related to symmetry. For instance, the Nobel Prize in Physics 1979 (Glashow, Salam, Weinberg) was received for a unified symmetry description of electromagnetic and weak interactions, while the Nobel Prize in Physics 2008 (Nambu, Kobayashi, Maskawa) was received for the discovery of the mechanism of spontaneous breaking of symmetry, including CP symmetry. Our journal is named *Symmetry* and it manifests its fundamental role in nature.

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