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Design and Optimization of Fluid Machinery, 2nd Edition

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Message from the Guest Editors

Dear Colleagues,

Fluid machinery refers to fluid as the working medium for energy conversion machinery. With the emergence of artificial intelligence, machine learning, and various advanced optimization algorithms, the design and optimization of fluid machinery has re-emerged in the research community. In particular, with the help of CFD technology, people can observe the abnormal flow phenomenon in fluid machinery more intuitively and achieve rapid design and automatic optimization of fluid machinery structures by setting different optimization objectives. Potential topics include but are not limited to the following:

- Design and optimization of fluid machinery;
- Cavitation performance and its control;
- Numerical simulation of transient flow and instabilities;
- Flow-induced vibration in fluid machinery;
- Advanced optimization algorithm;
- Application of artificial intelligence and machine learning in optimization;
- Innovative technologies for flow control;
- Suppression of unsteady flow.



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Special issue



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Message from the Editor-in-Chief

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