

Foreword

Selected papers from the 12th Japan-U.S. Seminar on Two-Phase Flow Dynamics

Guest Editors

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It is our great pleasure to introduce this *Nuclear Technology* special issue derived from the 12th Japan-U.S. Seminar on Two-Phase Flow Dynamics (JP-US STPF'D'22). The seminar was hosted, via a virtual meeting platform, by the College of Engineering, University of Michigan, May 9–11, 2022. Since the first meeting held in 1979 in Kansai, Japan, the JP-US STPF'D has provided an excellent platform for the scientists and researchers working on multiphase flows from both countries to share the latest research findings and receive feedback, as well as promote mutual research collaboration.

This 12th edition of JP-US STPF'D was originally scheduled to take place in May 2020, but due to the pandemic, it was postponed. With the hope of having an in-person meeting, the seminar was repeatedly pushed back. In February 2022, it was decided that JP-US STPF'D'22 would be held in a virtual format to protect the health of the attendees. The seminar was co-organized

by the University of Michigan and the Japanese Society for Multiphase Flow. A total of 42 papers, including one plenary lecture and three keynote lectures, were presented at the seminar.

This special issue includes 13 selected articles from JP-US STPF'D'22. These articles cover important topics in multiphase flow, including advanced instrumentation, insightful and innovative experiments, multiphase turbulence and interfacial area transport modeling, model validation and uncertainty quantification, and radioactive aerosol control and decontamination. Though there were other valuable papers, not all could be included in this special issue. We hope the readers find this special issue informative and helpful to their work.

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