

## Special Issue on the 2019 ASME–JSME–KSME Joint Fluids Engineering Conference

The ASME *Journal of Fluids Engineering* (JFE) and the ASME Fluids Engineering Division (FED) present a special issue of papers that were presented at the 2019 ASME–JSME–KSME (AJK) Joint Fluids Engineering Conference. The conference chairs were Dr. Mark R. Duignan (Chair for ASME) and Dr. Judith Bamberger (Co-chair for ASME), Professor Shinnosuke Obi (Chair for JSME) and Professor Satoshi Watanabe (Co-chair for JSME), and Professor Haecheon Choi (Chair for KSME) and Professor Gihun Son (Co-chair for KSME). The conference was a great success due to the hard work and dedication of the conference chairs and the volunteers from ASME, JSME, and KSME.

The conference is an international collaboration that initially began with Japan two decades ago and was held every four years in the U.S. In 2011, ASME partnered with KSME and JSME, thus creating the AJK Fluids Engineering Conference. The AJK2011 venue was in Hamamatsu, Japan, followed by the AJK2015 in Seoul, Korea, and the conference returned to the U.S. in 2019.

The conference was held at Hyatt Regency in San Francisco, CA during July 28 to Aug. 1, 2019, providing an ideal opportunity to disseminate new research, interact with attendees, and celebrate and recognize the achievements of our colleagues. Highlights of the conference activities included six main tracks aligned with the six FED technical committees, 627 technical presentations of which 444 accompanied papers, and nine plenary sessions.

The AJK2019 special issue includes 11 research papers that were presented as technical publications at the conference on a variety of topics including mixing, multiphase flow, turbomachinery, and heat transfer. The special issue also presents the winners of the Flow Visualization competition, which is a new FED initiative that began in 2017. The lead organizer, Professor Philipp Epple, announced the winners at the FED Awards Banquet, which were based on video submissions. The winners were:

- (1) *First Place*: “Numerical Analysis of Sweeping Jets for Active Flow Control Application,” Dr. Shawn Aram (Naval Surface Warfare Center Carderock Division).
- (2) *Second Place*: “Dual Functions of Insect Wings in an Odor-guided Aeronautic Navigation” Professor Chengyu Li (Villanova University), Professor Haibo Dong (University of Virginia), Professor Kai Zhao (The Ohio State University).
- (3) *Third Place*: “Numerical Simulation of Flow over Stationary and Rotating Golf Ball on Cartesian Grid,” Mr. Gwangsoo Go and Professor Hyung Taek Ahn (University of Ulsan), Gibeom Gu, and Min Ah Kim (Korea Institute of Science and Technology Information).
- (4) *Honorable Mention*: “Fluid-Structure Interaction Simulation of Lactating Human Breast,” Mr. Jamasp Azarnooosh and Professor Fatemeh Hassanipour (University of Texas at Dallas).
- (5) *Honorable Mention*: “Numerical Analysis of a Surface Ship in Waves,” Dr. Shawn Aram (Naval Surface Warfare Center Carderock Division).

After the passing of Dr. Malcolm J. Andrews in January 2019, the FED organized two activities to commemorate our dear colleague and friend. Dr. Andrews served as JFE editor for one decade, and was an active member of FED, regularly attending the ASME International Mechanical Engineering Congress and Exposition and the FED summer meetings, and contributing to the multiphase flow community. An *In Memoriam* was published in JFE [1] and a special issue to appear in July 2020 will include papers that complement Dr. Andrews’ contributions to experiments and simulations in Rayleigh–Taylor instabilities, buoyancy-shear-driven flows, and multiphase flows. The conference also held a dedicated symposium to commemorate Dr. Andrews. The symposium was composed of two sessions, one to celebrate his life and research contributions, and the other to honor his legacy with contemporary research presentations. The symposium was organized by Professor Arindam Banerjee, Professor Francine Battaglia, Dr. Oleg Schilling, Professor Joseph Katz, Dr. Marianne Francois, and Dr. Mark R. Duignan. The event was well-attended by Dr. Andrews’ former students and colleagues, along with his wife Dr. Farzaneh Jebrael, and daughter, Ms. Nasim Andrews. Alongside the technical talks were heart-warming stories as the audience reflected on how Malcolm touched their lives.

In closing, I would like to acknowledge those individuals whose invaluable service helped create the special edition. I am grateful for the efforts of JFE associate editors, Professor Jun Chen, Professor Philipp Epple, Dr. Marianne Francois, Professor Haoxiang Luo, Professor Robert Kunz, Professor Pierre Sullivan, Professor Wayne Strasser, and Professor Ning Zhang, who shared in the responsibilities. I would also like to thank the JFE editorial assistant, Ms. Colette Montague, and ASME staff, especially Ms. Beth Darchi, Mr. Philip DiVietro, Ms. Erica Hodge, Mr. Colin McAteer, Ms. Tamiko Fung, and Ms. Kai Purnell. As no journal is possible without the assistance of our colleagues, a final thanks to those who served as reviewers and of course the authors. It has been my privilege to participate in this endeavor to share and disseminate the contributions of the fluids engineering community.

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### Reference

- [1] Katz, J., and Battaglia, F., 2019, “In Memoriam of Dr. Malcolm J. Andrews (1958–2019),” *ASME J. Fluids Eng.*, **141**(5), p. 050101.