Preface: ILASS-Europe Conference 2023

This special issue of Atomization and Sprays compiles extended versions of selected papers presented at the 32nd European Conference on Liquid Atomization and Spray Systems, which was held at the University “Federico II” School of Engineering in Naples, Italy, September 4–7, 2023.

ILASS Europe has its roots in the idea of the late Paul Eisenklam to establish in Europe an Institute for Liquid Atomization and Spray Systems. ILASS Europe, which became a registered association in 2003, had its first general meeting at the University of Manchester Institute of Science and Technology (UMIST) in 1983.

Many scientists contributed along the years to the consolidation and growth of ILASS Europe toward its current role as a scientific reference for the European researchers in the field of liquid atomization and spray systems. It is worth remembering Arthur Lefebvre and Norman Chigier, who are celebrated by the association with scientific awards entitled with their names.

Since then, ILASS Europe regularly organized annual scientific meetings where academia and industry met and debated the latest advances in atomization and spray systems, with a wide variety of topics from the basics of atomization phenomena, numerical modeling, novel diagnostic techniques, and a diversity of applications, from combustion to biomedical sprays.

The 32nd European Conference on Liquid Atomization and Spray Systems followed a difficult period, during which, due to the Covid pandemic, the meetings were held online and with a reduced program. The 32nd meeting returned to the traditional in-person format. During the three-and-a-half-day program, 150 scientists from 20 countries presented, either in oral or poster form, 118 original studies. Each manuscript was reviewed by at least two members of an international scientific committee before acceptance. The contributions were organized in topical sessions on fundamental science in atomization and sprays; numerical methods and solutions; diagnostic techniques; liquid drops and interfaces; fuel sprays and combustion; and biomedical, biological, and biomimetic.

Following a preliminary selection process and an evaluation by the session chairs during the meeting, a list of the 20 best contributions was prepared and the authors were invited to submit extended versions of their studies to the Atomization and Sprays journal. The papers in this special issue are high-quality research studies, carefully revised after rigorous peer review, given from the “ILASS community” to the wide scientific community reading and following research on atomization and sprays.

The guest editors take this opportunity to acknowledge all the contributing authors for their commitment in improving their work, all the reviewers for investing their time and effort into scrutinizing and providing valuable insights into the manuscripts, and Begell House for the support in the editorial work and for managing the publication process efficiently and meticulously.

We hope this special issue can inspire and bring a good background to foster new findings on liquid atomization and spray systems, while contributing to a continuous rise of the impact of our journal in the scientific community.

Guest Editors:

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Raffaele Ragucci
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