Preface: 2019 International Symposium on Quantum Fluids and Solids (QFS2019)

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The International Symposium on Quantum Fluids and Solids (QFS2019) was held from August 7 through August 13, 2019. Talks and poster sessions took place in the Centennial Centre for Interdisciplinary Sciences on the University of Alberta campus in Edmonton, Canada. The program and full details about the conference are available on the QFS2019 Web site: qfs2019.org.

This meeting was the 24th in the QFS series of conferences, which are held annually except in years when the QFS community meets as part of the larger International Conferences on Low Temperature Physics (LT conferences). QFS2019 attracted 168 registered participants from 20 different countries. The highest participation came from Japan (36), followed by the USA (33), Canada (30), UK (18), Finland (7), Korea (7), France (6), Germany (5), India (4), Australia (3), Czech Republic (3), Russia (3), and Slovakia (3). There were also 13 registered accompanying persons from five different countries. Conference sponsors included the International Union of Pure and Applied Physics (IUPAP), the Department of Physics and the Faculty of Science of the University of Alberta, Oxford Instruments, BlueFors, CryoMech, Agilent, Zurich Instruments, and the Journal of Low Temperature Physics.

The conference program was prepared by the local organizing committee consisting of the QFS2019 co-chairs, John Beamish and John P. Davis, together with Lindsay LeBlanc and Joseph Maciejko. Speakers were selected based on input from the QFS2019 International Advisory Committee, which included 30 members of the QFS community from 13 countries. The final program included 43 invited talks plus an additional 17 oral presentations selected from the submitted abstracts. The 60 speakers came from 17 different countries. The talks were supplemented by three poster sessions with a total of 109 poster presentations. From these, an international committee of poster judges selected nine winners of “best poster” awards.

The scientific program covered the traditional QFS core topics: superfluid ^3He and ^4He , 2D films and confined helium, quantum solids, electrons on helium,

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Participants at the International Symposium on Quantum Fluids and Solids (QFS2019), held in Edmonton, Alberta, Canada, from August 7 to 13, 2019

quantum turbulence and vortices, and experimental techniques and devices. The conference also included sessions on related areas of physics, including superfluid optomechanics, cold atoms, topological and quantum Hall systems, and dark matter detection. A satellite half-day workshop on quantum turbulence was organized by Wei Guo and Makoto Tsubota and held at the QFS venue on August 10, with 12 oral presentations and nearly 40 participants.

Conference social activities included Sunday excursions to a botanical garden with Japanese and Islamic gardens and a kayak trip down the North Saskatchewan River in Edmonton. QFS2019 participants received an Edmonton city transit pass and a ticket to visit the new Royal Alberta Museum, where the conference dinner was held on August 11.

The conference awarded financial support to 22 participants, which included local accommodation costs for all students who applied, and support for six established researchers from institutions and countries where financial support is limited (including India, Ukraine, Brazil).

Contributions to this conference are published in this Special Issue, with John Beamish as the Guest Editor. Altogether 22 articles have been accepted, and each paper has been refereed by at least two independent reviewers, applying the criteria and standards of regular JLTP papers.

We would like to acknowledge and thank the International Scientific Advisory Committee, and the Local Organizing Committee, for all their work in making the conference an exciting scientific event, continuing the QFS tradition of collegial and enjoyable meetings of colleagues studying quantum fluids and solids.

John Beamish (Guest Editor) and John Davis
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Co-Chairs of QFS2019

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