The VI AMMCS International Conference

AMMCS-2023 is a major international forum and interdisciplinary conference focused on mathematical and computational sciences, with their applications to modeling natural, social, and engineering systems. The AMMCS Conference Series aims to promote interdisciplinary research and collaboration involving these disciplines within a larger international expert community. The 2023 meeting follows the traditions of highly successful previous biennial meetings in this series.

AUGUST 14 - 18
Wilfrid Laurier University
WATERLOO - ONTARIO - CANADA

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PLENARY SPEAKERS

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Mark Alber	University of California, Riverside
Genevera Allen	Rice University, Houston
Kathryn Leonard	Occidental College, Los Angeles
Herve Moulin	University of Glasgow
Peter Mucha	Dartmouth College, Hanover, NH
Tuomas Sandholm	Carnegie Mellon University
Clayton Scott	University of Michigan, Ann Arbor
M. Angeles Serrano	Universitat de Barcelona
Rene Vidal	Johns Hopkins University, Baltimore

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AMMCS Conference Series

Waterloo, Ontario, Canada

For over a decade, the AMMCS Conference Series has provided a unique opportunity for in-depth technical discussions and exchange of ideas in all areas involving mathematical and computational sciences, modelling and simulation, as well as their applications in natural and social sciences, engineering and technology, industry and finance. It has offered to researchers, industrialists, engineers and students to present their latest research, interact with the experts in the field, and foster interdisciplinary collaborations required to meet the challenges of modern science, technology, and society.

This AMMCS Conference Series aims to promote interdisciplinary research and collaboration involving mathematical and computational sciences within a larger international community, highlighting recent advances in Applied Mathematics, Modeling and Computational Science (AMMCS). This conference series has been organized in cooperation with AIMS and SIAM since its inception. Among the main themes of the 2023 edition of this series has been the focus on the ubiquitous nature of coupled systems and multiscale dynamics, their modelling, and their applications.

With this focus in mind, a special multidisciplinary symposium has been organized to cover diverse areas of science and engineering unified by the key role of coupled phenomena, physical fields, and effects, as well as by multiple-scale interactions at the local and/or entire system levels. The problems arising from such considerations are ubiquitous and often termed "coupled problems." The development of state-of-the-art models for such problems and their solutions are at the forefront of challenges of modern science and its applications in all areas of human endeavour. This event has welcomed theoretical, computational, and experimental advances in this pivotal field, covering all aspects of these problems and the systems from nano to macro scales. It has been organized in honour of Professor Roderick Melnik, who has pioneered many advanced mathematical models and has significantly contributed to this field over the past decades.

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Coupled Complex Systems and Networks with Multiple Scales, Their Modelling, and Applications

A special journal issue on "Coupled Complex Systems and Networks with Multiple Scales, Their Modelling, and Applications" is being organized where potential topics include but are not limited to, continuum-based modelling, discrete simulation, and data-driven methodologies, as well as their efficient combinations applied to physical, engineering, biological, and social systems. Among others, applications addressing present and imminent societal challenges, which embrace global sustainability, are also welcome. To address such challenges, new systematic efforts and momentous developments in the interdisciplinary field of coupled complex systems are required. This special issue will explore and assess the state-of-the-art in coupled complex systems and call attention to future research directions in this rapidly developing field that significantly impacts our society.

Two other special journal issues are being organized, a special issue of Mathematical and Computational Applications and a special issue of the Bioengineering journal. The latter will include the areas of coupled complex systems and networks, focusing on their applications to biomedical science and engineering.

For Further Details, Visit:

AMMCS.WLU.CA/2023/SPECIAL-JOURNAL-ISSUE

A symposium and a special issue in honour of

Roderick Melnik