

Algorithms and Complexity in Mathematics, Epistemology and Science



May 6,7,8 2015

Western University

North Campus Bldg.

Rooms 114 & 117

acmes.org

Held in conjunction with Southern Ontario Numerical Analysis Day (SONAD)

Invited Speakers in Computational Science

Invited Speakers in Epistemology of Science



Max Gunzburger Florida State University, USA

Uncertainty quantification for complex systems

Francis Eppes Distinguished Professor of Mathematics
S. Ed. SIAM/ASA Journal on Uncertainty Quantification, SIAM Fellow
uncertainty quantification, control theory, finite element methods



Anouk Barberousse Université Lille I, France

Community modeling systems: the challenge of reliability

Professor of History and Philosophy of Science
epistemology of modeling and computer simulations,
foundations of evolutionary theory



Ursula Martin Oxford University, UK

Collaborative mathematics: an empirical view

Professor of Computer Science
EPSRC Established Career Fellowship, CBE
formal methods, computational logic, automated theorem proving



Robert Batterman University of Pittsburgh, USA

Asymptotics and minimal models

Professor of Philosophy
Fellow of Royal Society of Canada
epistemology of intertheoretic relations, special functions, and universality



Jesús Sanz-Serna Univ. Carlos III de Madrid, Spain

Blind to randomness

Professor of Mathematics, Cátedra Excelencia
Iberdrola Research Prize, SIAM Dahlquist Prize, SIAM Fellow
geometric numerical integration, Monte Carlo methods



Mark Wilson University of Pittsburgh, USA

The greediness of scales

Professor of Philosophy
Fellow of American Academy of Arts and Sciences
explanatory structure, epistemology of scientific and natural languages

A multidisciplinary conference focusing on combining the **science of reliability** and uncertainty quantification with **conceptual and foundational issues** concerning the **reliable application of scientific theories** to real phenomena.

Longer talks from invited speakers are integrated with shorter research contributions from others, including graduate students, in computational science and epistemology of science.

Abstracts for contributed talks by researchers and graduate students in computational science and philosophy due **March 8**. Please submit abstracts to acmes.conference@gmail.com.

Limited financial support is available for graduate student travel.

Program Committee:

Robert Corless, Western
Nicolas Fillion, SFU
Chris Smeenk, Western
Robert Moir, Western



Department of Philosophy
Department of Applied Math



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