Algorithms and Complexity in Mathematics, Epistemology and Science

acmes

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

May 6,7,8 2015

Western University
North Campus Bldg.
Rooms 114 & 117
acmes.org

Invited Speakers in Computational 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

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

Jesús Sanz-Serna Univ. Carlos III de Madrid, Spain
Blind to randomness
Professor of Mathematics, Cáthedra Excelencia
Iberdrola Research Prize, SIAM Dahlquist Prize, SIAM Fellow
geometric numerical integration, Monte Carlo methods

Invited Speakers in Epistemology of Science

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

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

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

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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 February 22.** Please submit abstracts to **acmes.conference@gmail.com.**
Limited financial support is available for graduate student travel.

Program Committe:
Robert Corless, Western
Nicolas Fillion, SFU
Chris Smeenk, Western
Robert Moir, Western

Western
UNIVERSITY · CANADA
Department of Philosophy
Department of Applied Math

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Rotman Institute of Philosophy
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