

Dear Colleagues,

We cordially invite you to participate in our workshop!
Please forward the call for papers to your colleagues.



The 16th Multiscale Modelling and Simulation Workshop

In conjunction with the
International Conference on Computational Science
12-14 June 2019
Faro, Portugal

Submission is open at: <https://easychair.org/conferences/?conf=iccs20190>

Introduction

Modelling and simulation of multiscale systems constitutes a grand challenge in computational science, and is widely applied in fields ranging from the physical sciences and engineering to the life science and the socio-economic domain. Most of the real-life systems encompass interactions within and between a wide range of spatio-temporal scales, and/or on many separate levels of organization. They require the development of sophisticated models and computational techniques to accurately simulate the diversity and complexity of multiscale problems, and to effectively capture the wide range of relevant phenomena within these simulations. Additionally, these multiscale models frequently need large scale computing capabilities as well as dedicated software and services that enable the exploitation of existing and evolving computational ecosystems. This workshop, which is part of the [International Conference on Computational Science](#) aims to provide a forum for multiscale application modellers, framework developers and experts from the distributed infrastructure communities to identify and discuss challenges in, and possible solutions for, modelling and simulating multiscale systems, as well as their execution on advanced computational resources and their validation against experimental data.

Topics

Specific topics include (but are not limited to):

- Simulation and modelling of multiscale systems.
- Challenging applications in science, industry or society.
- Verification, validation and uncertainty quantification in a multiscale simulation/modelling context.
- New approaches for coupling and scale bridging, to combine different models and scales in one application.
- Advanced numerical methods for solving multiscale problems.
- Software approaches for simulating multiscale systems, and handling the complex workloads accompanying it.
- Executing multiscale models on advanced computational infrastructures (distributed, HPC, cloud, etc.).
- Performance analysis of multiscale applications and/or tools.

Papers

We kindly invite you to submit a paper reporting original, unpublished research and recent developments in the broad area of modeling and simulation of multiscale systems. Depending on your preferences, there are two options for submission available.

Full papers

You can submit your paper through the [ICCS EasyChair system](#). Please be sure to select the Workshop on Multiscale Modelling and Simulation as your target workshop. All ICCS papers are of up to 10 pages, written in English and complying with the Procedia format.

Out of the submitted full papers to the main track and workshops, we will select some 30% high-quality papers for presentation at the conference and publication in the proceedings. These are published by Springer in the [Lecture Notes in Computer Science \(LNCS\) series](#) and indexed by Scopus, EI Engineering Index, Thomson Reuters Conference Proceedings Citation Index (included in ISI Web of Science), and several [other indexing services](#). The papers will contain linked references, XML versions and citable DOI numbers.

After the conference, selected papers will be invited for a special issue of the [Journal of Computational Science](#) (Impact Factor: 1.925).

Abstract only

While we encourage full paper submissions, the “Abstract Only” option caters to researchers who can only publish in specific journals or work for companies in circumstances such that they cannot publish at all, but still want to present their work and discuss it with their peers at ICCS. In the “Abstract Only” option, a short abstract is published in a book of abstracts, but not in LNCS. Abstracts, too, are submitted through the [ICCS EasyChair system](#).

Important Dates

Paper submission: **15 December 2018**

Notification of acceptance: 15 February 2019

Camera-ready papers: 5 April 2019

Workshop Organisers

[Derek Groen](#), Brunel University London, United Kingdom;

[Lin Gan](#), Tsinghua University, China;

Stefano Casarin, Houston Methodist Hospital, United States;

[Alfons Hoekstra](#), University of Amsterdam, The Netherlands and ITMO University, Russia;

Bartosz Bosak, Poznan Supercomputing and Networking Center (PSNC), Poland.

Contact E-mail

mms2019@googlegroups.com

Programme Committee (provisional)

Bartosz	Bosak	Poznan Supercomputing and Networking Center (PSNC)
Stefano	Casarin	Houston Methodist Hospital
Bastien	Chopard	University of Geneva
David	Coster	Max Planck Institute for Plasma Physics
Daan	Crommelin	CWI (Netherlands)
Wlodzimierz	Funika	Institute of Computer Science AGH
Lin	Gan	Tsinghua University
Yuriy	Gorbachev	Coddan Technologies LLC
Derek	Groen	Brunel University London
Alfons	Hoekstra	University of Amsterdam
Vytautas	Jancauskas	Leibniz Rechenzentrum Garching
Jiří	Jaroš	Brno University of Technology
Hao	Jing	Tsinghua University
Valeria	Krzhizhanovskaya	University of Amsterdam
Kenneth	Leiter	Army Research Laboratory
Zhao	Liu	National Supercomputer Center in Wuxi
Stefan	Luding	University of Twente
Scott	MacLachlan	Memorial University of Newfoundland
Roderick	Melnik	Wilfrid Laurier University

Roeland	Merks	CWI and NCSB-NISB
Philipp	Neumann	Deutsches Klimarechenzentrum
Tomasz	Piontek	PSNC
Simon	Portegies Zwart	Leiden University
Robin	Richardson	University College London
Katarzyna	Rycerz	AGH University of Technology
Ulf D.	Schiller	Clemson University
James	Suter	University College London
Jannis	Teunissen	CWI, KU Leuven
Wenlai	Zhao	Tsinghua University