ECCOMAS
Thematic Conference

COMPCANCER - 2019

Computational Simulation of Cancer: Molecular and Cellular Dynamics

9-11th October 2019 | Porto - Portugal

CompCancer
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ECCOMAS and APMTAC Support

COMPCANCER 2018 is a thematic conference of the European Community of Computational Methods in Applied Sciences (ECCOMAS) and it has been promoted by the "Associação Portuguesa de Mecânica Teórica, Aplicada e Computacional" (APMTAC).
www.eccomas.org/vpage/1/14/2019
www-ext.lnec.pt/APMTAC/

Location

The selected venue is in a conference centre in the downtown of the city of Porto – Portugal.
www.visitporto.travel

Important Dates

Action	Date
Deadline for presenting one page Abstract	31/01/2019
Acceptance of the contributions	28/02/2019
Deadline for early payment and for speaker registration (*)	31/05/2019
Deadline for the full paper submission (not mandatory)	31/05/2019
Deadline for registration	31/09/2019

(*) speaker are required to register by May 31, 2019, to correctly finalize the programme of the conference.

Registration Fee

	Early Fee	Regular Fee	Late Fee
Deadline	31/03/2019	31/05/2019	31/09/2019
Delegates	400 €	450 €	500 €
PhD Students	300 €	350 €	400 €
MSc Students	100 €	150 €	200 €

Delegate fee includes: presenting up to 2 works, conference proceedings, attendance at all scientific sessions, coffee-breaks, lunches and banquet.
PhD Student fee includes: presenting up to 2 works, conference proceedings, attendance at all scientific sessions, coffee-breaks, lunches and banquet.
MSc Student fee includes: presenting 1 work, conference proceedings, attendance at all scientific sessions and coffee-breaks (lunches and banquet are not included).

compcancerconf.wixsite.com/compcancer

Focus

This conference focuses in the recent developments and improvements of the existent computational tools and techniques to predict tumour growth and its molecular and cellular interactions. Thus, this meeting is interested in multidisciplinary scientific approaches and all kinds of research works dealing with the in-silico simulation of cancer. The works addressing the following areas are welcomed:

- Mechanical properties of isolated cells, organelles or molecules obtained in-vitro;
- Numerical techniques to predict the cell's mechanical behaviour or function;
- Computational techniques for cell/tumour growth (discrete, continuum and hybrid models);
- Models to simulate the molecular and cellular transport;
- Cellular multiscale structural or remodelling analysis (multi spatial-temporal scales);
- Nonlinear modelling of cancer and its cellular/molecular mechanisms;
- Drug ministration models for cancer regression, etc.

This conference focuses in the recent development and improvement of existent computational models to simulate the molecular and/or cellular interactions in cancer, as well as in the presentation of new numerical approaches and applications in the context of computational simulation of cancer progression and regression.

Main topics

The present proposal cover the following scientific and technical areas:

- Mathematical and theoretical biology (biomathematics)
- Computational chemical and fluid dynamics
- Imaging techniques for Biology / Oncology
- Computational Mechanics / Biomechanics
- Computational Biology / Oncology
- Bioinformatics and Biostatistics
- Dynamic Analyses of Systems
- Big data in cellular biology
- Biomaterials in oncology
- Biomedical engineering
- Multiscale models
- Bioengineering

Chairs of the Conference

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Supporting Organizations

- European Community of Computational Methods in Applied Sciences (ECCOMAS)
- Associação Portuguesa de Mecânica Teórica, Aplicada e Computacional (APMTAC)
- School of Engineering, Polytechnic of Porto (ISEP-IPP)
- Faculty of Engineering of the University of Porto (FEUP)
- Instituto Nacional de Engenharia Biomédica (INEB)
- Institute of Science and Innovation in Mechanical and Industrial Engineering (INEGI)
- Fundação para a Ciência e a Tecnologia (FCT)

About COMPCANCER-2019

Several computational approaches to predict the molecular and cellular behaviour and interactions (under several academic/clinical perspectives) were developed in the last years to assist cancer research. This never-ending scientific production demand more frequent thematic meetings, in order to allow the update the current state-of-the-art and the exchange of ideas and concepts.

Presently, the modern computer capabilities combined with highly improved numerical approaches allow researchers to predict in-silico the tumour growth with a high level of accuracy. This ECCOMAS thematic conference intends to be a privileged meeting point between research teams, permitting the exchange of ideas and recent progresses on the computational simulation of the molecular/cellular behaviour of tumours and also on the acquired technical and scientific knowledge. One of the main objectives of this ECCOMAS thematic conference is to offer to the participants the opportunity to present their work on the topic. Additionally, this meeting aims to favour the exchange of ideas and knowledge by showing the recently develop scientific concepts and the applied technological advances.