

## SCOPE AND OBJECTIVES

The 4th Polish Congress of Mechanics continues the tradition of scientific meetings on Mechanics, initiated around 12 years ago during the 1st PCM in Warsaw.

The Congress presents the current state of the art research in all disciplines of classical and quantum mechanics, solid and fluid mechanics, computational mechanics, applied mathematics and physics, as well as structural mechanics and engineering.

The 23rd International Conference on Computer Methods in Mechanics continues the 46-years old series of conferences dedicated to numerical methods and their applications in the mechanics-based problems.

The scientific meetings, organized biannually since 1973, provide a forum for presentation and discussion of new ideas referring to theoretical background and practical applications of computational mechanics.

## CONGRESS FORMAT

During the Congress, plenary and keynote lectures, joint sessions, mini-symposia and parallel sessions, as well as oral and poster presentations, will be delivered in the auditoria and lecture rooms of the Jagiellonian University and the University of Science and Technology AGH in Kraków.

The language of the Congress will be English.

The social program of the Congress includes a get-together party, banquet, Cracovia walking tour, and other events. More information on all events will be available on the Congress website.

## CONGRESS PROCEEDINGS

The accepted abstracts will be printed in the Congress Book of Abstracts (electronic version). Full-length articles contributed by plenary and keynote speakers will appear in the Journal of Theoretical and Applied Mechanics. In addition, a list of recommended journals, to which the Congress articles may be submitted, will be announced. Details of the article format, and the list of journals will be available on the Congress website.

## TOPICS

The authors are cordially invited to submit papers on all aspects of theoretical, applied, and computational mechanics, including:

### Solid Mechanics

- Biomechanics and Biomaterials
- Contact and Friction
- Damage and Fracture Mechanics
- Elasticity, Plasticity, Viscoplasticity and Creep
- Geophysics and Geomechanics
- Impact Mechanics and Wave Propagation
- Multicomponent Materials and Composites
- Multibody, Vehicle and Structural Dynamics
- Nanostructures and MEMS
- Phase Transitions and Thermomechanical Phenomena
- Vibrations, Control and Stability of Structures

### Fluid Mechanics

- Biological Fluid Mechanics
- Boundary Layers
- Compressible Flow
- Drops, Bubbles and Multiphase Flow
- Flow Instability and Transition
- Geophysical and Environmental Fluid Dynamics
- Low Reynolds Number Flow
- Micro- and Nano-fluidics
- Non-Newtonian and Complex Fluids
- Turbulence and Vortex Dynamics

### Solid/Fluid Mechanics

- Acoustics, Chaos and Pattern Formation
- Actuating and Smart Materials
- Experimental Methods
- Foams and Cellular Materials
- Granular Materials and Flows
- Fluid Structure Interactions

### Computational Mechanics

- Advanced FEM, FVM, BEM, and DEM
- Artificial and Computational Intelligence Methods
- Inverse Problems and Optimization
- Meshless Methods
- Numerical Approach to Initial and Boundary Value Problems
- Parallel, Soft, and Exascale Computing
- Sensitivity and Reliability Analysis

## PLENARY LECTURERS

Plenary lectures dedicated to the most recent achievements in all aspects of theoretical, applied, and computational mechanics will be given by the following researchers of international renown:

**Leszek Demkowicz**, University of Texas at Austin, USA

**Fionn Dunne**, Imperial College London, G. Britain

**Tomasz Lewiński**, Warsaw University of Technology, Poland

**Shaker Meguid**, University of Toronto, Canada

**Andreas Menzel**, Technical University of Dortmund, Germany

**Jerzy Pamin**, Cracow University of Technology, Poland

**Henryk Petryk**, Institute of Fundamental Technological Research, Poland

**Nobutada Ohno**, Nagoya University, Japan

**Franz G. Rammerstorfer**, Technical University of Vienna, Austria

**Meir Shillor**, Oakland University, USA

## CHAIRMANSHIP

### Congress President

Michał Kleiber (Polish Academy of Sciences)

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### Chairman of the Scientific Committee

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### Chairman of the Permanent PCM Committee

Zbigniew Kowalewski (President of the Polish Society of Theoretical and Applied Mechanics)

### Chairman of the Permanent CMM Committee

Jerzy Rojek (President of the Polish Association for Computational Mechanics)

## DEADLINES

<b>December 31st, 2018</b>	Very early registration fee
<b>December 31st, 2018</b>	Mini-Symposia proposals
<b>January 31st, 2019</b>	Mini-Symposia acceptance
<b>February 28th, 2019</b>	Abstract submission
<b>March 31st, 2019</b>	Notification of acceptance
<b>April 30th, 2019</b>	Early bird registration fees
<b>June 30th, 2019</b>	Regular registration fees
<b>August 26th, 2019</b>	Late Registration

## REGISTRATION

Registration for the Congress and abstract submission, as well as notification of acceptance and qualification for the oral or poster presentation will be done electronically.

## FEES (PLN)

The Congress fee includes the Congress proceedings and materials, access to all scientific sessions, refreshments and lunches, get-together party, banquet and Cracovia tour.

	<b>Very Early</b>	<b>Early</b>	<b>Regular</b>
<b>Participants</b>	1700	1900	2100
<b>PhD student/student</b>	1050	1250	1500
<b>Accompanying persons</b>	850	1050	1250

Discount for members of PTMTS and PTMKM 100 PLN

## VENUE

The Congress will be hosted in the Conference Center of the Jagiellonian University located within walking distance of the main square of the Old City.

## ACCOMMODATION

A list of suggested hotels located in close proximity of the Congress venue will be available in the Congress Website.

## CONGRESS OFFICE

PCM-CMM-2019 Organizing Committee  
Cracow University of Technology  
24 Warszawska Street  
31-155 Cracow, Poland  
CONGRESS WEBSITE & E-MAIL  
<https://pcm-cmm2019.com/>  
[office@pcm-cmm2019.edu.pl](mailto:office@pcm-cmm2019.edu.pl)

## ORGANIZING COMMITTEE

### Chairman

Błażej Skoczeń  
Cracow University of Technology

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## ORGANIZED BY

Polish Society of Theoretical and Applied Mechanics  
Polish Association for Computational Mechanics  
Cracow University of Technology  
University of Science and Technology AGH  
Jagiellonian University  
Institute of Fundamental Technological Research of the Polish Academy of Sciences  
Committee on Mechanics of the Polish Academy of Sciences  
Committee on Civil Engineering and Hydroengineering of the Polish Academy of Sciences  
Committee on Machine Building of the Polish Academy of Sciences



# The 4th Polish Congress of Mechanics and The 23rd International Conference on Computer Methods in Mechanics

8-12 September 2019 Kraków, Poland

