

PARTICLES 2017

26 - 28 September 2017, Hannover, Germany

How to register and submit contributions

Authors are invited to submit individual contributions on any of the conference topics. Submissions and conference registration should be performed electronically via the conference website:

<http://congress.cimne.com/particles2017>



International Center for Numerical Methods in Engineering

CIMNE Congress Bureau

Campus Nord UPC, Building C3 - "Zona Comercial"

Jordi Girona, 1-3 (08034), Barcelona, Spain

Tel. +34 93 405 4694 / Fax +34 93 205 8347

particle-basedmethods@cimne.upc.edu

Location

The conference will take place at Leibniz Universität Hannover (LUH), Conti-Campus, Königsworther Platz 1, 30167 Hannover, Germany.

Hannover is a major centre of Northern Germany and the country's thirteenth largest city. The city is of national importance because of its universities and medical school, its international airport and its large zoo. It is also a major crossing point of railway lines and highways, connecting European main lines in both the east-west and north-south directions.

Preliminary Registration Fees

	Early Fees If paid by May 26, 2017	Late Fees If paid after May 26, 2017
Delegates	555 €	655 €
Students	415 €	495 €

ECCOMAS and IACM members will have a 5% reduction on the delegate fees.

Registration fees include: Conference proceedings, attendance at all scientific sessions, coffee breaks, reception and banquet.

Supporting Organizations:

- Leibniz Universität Hannover
- International Center for Numerical Methods in Engineering (CIMNE)
- Universitat Politècnica de Catalunya (UPC), Barcelona, Spain
- European Community on Computational Methods in Applied Sciences (ECCOMAS)
- International Association for Computational Mechanics (IACM)

ECCOMAS and IACM Support

PARTICLES 2017 is a Thematic Conference of the European Community in Computational Methods in Applied Sciences (ECCOMAS). www.eccomas.org

PARTICLES 2017 is a Special Interest Conference of the International Association for Computational Mechanics (IACM) www.iacm.info



PARTICLES 2017

V International Conference on Particle-Based Methods.

Fundamentals and Applications

26-28 September, 2017, Hannover (Germany)



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HOST INSTITUTION:

111
102
1004
Leibniz
Universität
Hannover

Objectives

The Fifth Conference on Particle-Based Methods (PARTICLES 2017) will be organised on 26-28 September 2017 in Hannover, Germany. The previous four conferences of this series were held in Barcelona on 25-27 November 2009 and 26-28 October 2011, in Stuttgart on 18-20 September 2013, and again in Barcelona on 28-30 September 2015.

PARTICLES 2017 will address both the fundamental basis and the applicability of state-of-the-art particle-based computational methods that can be effectively used for solving a variety of problems in engineering and applied sciences.

The denotation "Particle-Based Methods" basically stands for two different computational models in solid and fluid mechanics. On the one hand, it represents discretization concepts in which the response of a continuum is projected onto "particles" carrying the mechanical information during deformations. Typical representatives are Meshless Methods, Smoothed Particles Hydrodynamics (SPH), Moving Particle Simulation (MPS), Particle Finite Element Method (PFEM), Material Point Method (MPM) and the Lattice-Boltzmann-Method (LBM).

On the other hand, the notion expresses the computational representation of physical particles existing on different scales. Classical versions are Molecular Dynamics (MD) or the Discrete (Distinct) Element Method (DEM). In some cases the two models of discretization and physical particles are even interconnected.

PARTICLES 2017 covers both concepts of particle-based methods because of their strong interrelation in their computation as well as application point of view.

Organizing Committee

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Conference Topics

Fundamentals

Discretization techniques

- Meshless methods
- Smoothed Particles Hydrodynamics (SPH)
- Moving Particle Simulation (MPS)
- Particle Finite Element Method (PFEM)
- Material Point Method (MPM) and the Lattice-Boltzmann-Method (LBM)

Physical particles procedures

- Molecular Dynamics (MD) and Discrete (Distinct) Element Methods (DEM)

Applications

- Bio-medical engineering
- Composites
- Computational chemistry
- Contact problems
- Damage, fracture & fatigue
- Disintegration processes
- Earth and rock-fill dams
- Environment and geosciences
- Forming processes
- Free surface flows
- Geomechanics
- Geophysics
- Granulation processes
- High velocity impact and blast problems
- Industrial applications
- Melting of objects in fire
- Mixing processes
- Multi-body and non-linear dynamics
- Multi-fracturing solids systems
- Multi-physics problems
- Multi-scale material models
- Multiphase flows
- Nano-mechanics
- Oil and gas exploration and extraction
- Parallel processing
- Quantum mechanics
- Radiation damage
- Real time computing
- Ship hydrodynamics

Important Dates

Deadline for presenting a one page abstract	February 10, 2017
Acceptance of the contributions	March 10, 2017
Deadline for submitting the full paper (not mandatory), presenting author's registration(*) and early payment	May 26, 2017

(*) Presenting authors are required to finalize their registration before May 26, 2017 in order to get the presentation included in the Conference Program.

