Program
5th Aspherix® & CFDEM® 26.-27.9. Conference 2024
Haus der Ingenieure, Eschenbachgasse 9, 1010 Vienna (https://w3w.co/protests.value.cotton)
Entrance: "Österreichischer Ingenieurs- und Architektenverein"

Thursday, 26. September 2024

Ballroom - Festsaal (2nd Floor)	Room 'Mozart' (1st Floor)	Room 'Beethoven' (1st Floor)	Room 'Strauss' (1st Floor)
COFFEE & REGISTRATION **08:00 - 09:00**			
09:00 Welcome			
Rouven Weiler (BASF) Tackling the Question About Chemical Industry, Bulk Materials & the Discrete-Element-Method **09:05-09:40 (Chair: Kloss, C.)**			
Jidong Zhao (HKUST) High-Fidelity Simulations of Complex Particle-Fluid Interactions in Granular Media **09:40-10:15 (Chair: Kloss, C.)**			
Coffee Break 10:15-10:35			
Andrea Benassi (Chiesi Farmaceutici) Open Issues in CFD-DEM Simulation of Orally Inhaled Drug Products **10:35-11:10 (Chair: Weiler, R.)**			
Erich Wimmer (Materials Design) Multiscale Modeling: From Macroscopic to Atoms – and Back **11:10-11:45 (Chair: Weiler, R.)**			
Lunch Break 11:45-12:55 (2nd Floor)			*OFCFD **OpenFOAM Symposium**
*GTA I **Abdennadher M.**, 12:55-13:15 Numerical Simulation of One-Dimensional Compr. In Geotechn. Engineering Using CT	*IA **Capozzi L.**, 12:55-13:15 Densification and Segregation in Hot Isostatic Pressing using DEM	*WBE **Vollmann S.**, 12:55-13:15 Coupled CFD-DEM Simulation of Flow-Induced Erosion in Cohesive Materials	***Kevnote* Naev J.**. 12:55-13:35 Software Methodology for Characterization of Cerebral Aneurysms
*GTA I **Sayakov O.**, 13:15-13:35 Ehanced Simulation of Triaxial Tests by a Coupled DEM-FEM Method	*IA **Louw D.**, 13:15-13:35 Large Scale 3-Dimensional Numerical Model of a Industrial Biomass Furnace using Ext. DEM	*WBE **Zeng L.**, 13:15-13:35 Aggregation and Breakage Dynamics of Alumina Particles under Laminar Shear ...	
*GTA I **Rakotonirina A.**, 13:35-13:55 An Unresolved CFD-DEM Approach for the Simulation of The Ocen Cleanup Systems	*IA **Middelkoop V.**, 13:35-13:55 3D Printing of Structures for Chemistry and Energy Applications	*WBE **Katterfeld A.**, 13:35-13:55 Simulation, Calibration and Validation of Abrasive Wear in Bulk Material Handling	**Raonic Z.**, 13:35-13:55 Modelling Strategies for Turbulent Combustion, Emissions, and Thermal Management ...
*GTA I **Broseghini M.**, 13:55-14:15 Towards a Resolved CFD-DEM Model for the Analysis of Stability of Loose Armor Stone ...	*IA **Tang Y.**, 13:55-14:15 CFD-DEM Model Development for Large-Scale Reactive Flows: Blast Furnace as an Example		**Ghafoor U.**, 13:55-14:15 Implementation of refined WSGGM in OpenFOAM
Coffee Break 14:15-14:35			
*EX **Ratka M.**, 14:35-14:55 Solids Conveying of Polymer Powder in Twin-Screw Extruders Investigated by Means of DEM	*F&G **Togni R.**, 14:35-14:55 CFD-DEM Simulation of the Drying and Solidification Behavior of Individual Droplets During Spray Drying	*DCSI **Dr. Stukowski A.**, 14:35-14:55 OVITO for Custom Post-Processing of Simulation Results	**Lier A.**, 14:35-14:55 Compaction of elastic-plastic microparticles in a centrifuge
*EX **Austermeier L.**, 14:55-15:15 The Potential of DEM Simulation for the Prediction of Torque Differences in the Melting Zone ...	*F&G **Municchi F.**, 14:55-15:15 (online) Eulerian-Lagrangian Simulations of Particle Dispersion in Fluidized Bed Heat Exchangers	*DCSI **Moura A.**, 14:55-15:15 A Cloud-Based Platform for Engineering and Scientific Applications	**Radl S.**, 14:55-15:15 Simulation of Electro-Etching with a Multi-Region Solver in OpenFOAM
Aaron Olson (NASA / Swamp Works) - Live VideoCall NASA Kennedy Space Center Swamp Works and the Artemis Program's Future Lunar Surface Operations **15:15-15:50 (Chair: Katterfeld, A.)**			
Break 15:50-16:00			
Goniva C. & Kloss C. (DCS Computing) 3 Axis of a Modelling Coordinate System: From Model Fidelity to Fast Results,... **16:00-16:35 - *'Ballroom'* (Chair: Radl, S.)**			
Social Event, Networking, Drinks **at 'Haus der Ingenieure'** **16:35 - 17:40** **Ballroom - Festsaal**			

(17:40-18:40 time to check-In at Hotels)

Group Walk to the Museum
17:40 (Meeting Point outside of House der Ingenieure)

Welcome Reception 17:50-18:40
18:40 - 23:00 Conference Dinner and Guided Tour at 'Kunsthistorisches Museum' (1st Floor)
Maria-Theresien-Platz 1, 1010 Vienna (https://w3w.co/rich.soup.teacher)

Information on Technical Sessions DAY 1:
*GTA I Geo-Technical Applications (Chair: Zhao, J. & Kwakkel, M.)
*EX Extrusion (Chair: Katterfeld, A. & Kwakkel, M.)
*IA Industrial Applications (Chair: Herskind, M. & Togni, R.)
*F&G Fluidization and Granulation (Chair: Lubej, M. & Togni, R.)
*WBE Wear, Breakage and Erosion (Chair: Magalhaes, J. & Seil, P.)
*DCSI DAY 1 - DCS Invited (not peer reviewed) (Chair: Kloss, C.)
*OFCFD OpenFOAM CFD (Chair: Nagy Jozsef)

(short-term changes to the programme can be possible)

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Friday, 27. September 2024

Ballroom - Festsaal (2nd Floor)	Room 'Mozart' (1st Floor)	Room 'Beethoven' (1st Floor)	Room 'Strauss' (1st Floor)
COFFEE & REGISTRATION **08:00 - 09:00**			
09:00 Welcome			
Mark Herskind (Grundfos) Enhancing Simulation-Driven Development at Grundfos: Leveraging Aspherix & CFDEM **09:05-09:40 (Chair: Goniva, C.)**			
Martin Lubej (Novartis) Mechanistic Modeling of Fluidized Bed Granulation: A CFDEM Approach for Equipment Transfer and Scale-Up **09:40-10:15 (Chair: Goniva, C.)**			
Coffee Break 10:10-10:35			
Stefan Heinrich (TU Hamburg) Challenges in Modelling and Understanding of Particle Formulation by Spray Granulation **10:35-11:10 (Chair: Soldati, A.)**			
Stefan Radl (TU Graz) The Uncertainty Inherent to Granular Flows **11:10-11:45 (Chair: Soldati, A.)**			
Plenary Discussion Jose Magalhaes (John Deere) / Mark Hesrkind (Grundfos) Kasper Joenck (Rockwool) / Alfredo Soldati (TU Wien) Benedikt Ziebarth (H.C. Starck / Christoph Goniva (DCS) **11:45-12:00 (Chair: Radl, S.)**			
Lunch Break 12:00-13:10 (2nd Floor)			
*BA **Soldati A.**, 13:10-13:30 Droplets Inhalation and Deposition in the Human Upper Airways	*INM **Pirker S.**, 13:10-13:30 Time-Exploration of Pseudo-Periodic flows by recurrence CFD - Doing the Homework ...	*DCSI **Moura A.**, 13:10-13:30 CFD-DEM Simulation of a Fuel Cell in the OpenModel Platform	*GTA II **Heinrich D.**, 13:10-13:30 Membrance Particle Interaction in Triaxial Testing: FEM-DEM Coupling and CT Imaging Insights
*BA **García-Villalba M.**, 13:30-13:50 Assessing the Risk of Thrombogenesis in the Left Atrium using CFD	*INM **Aigner A.**, 13:30-13:50 Simplified Fluid Model for Confined Domains	*DCSI **C. Guimarães M.**, 13:30-13:50 Mixing of Passive Scalars in Turbulent Viscoelastic Wakes and Jets Analysed by Direct Numerical Sim.	*GTA II **Zad A.**, 13:30-13:50 (online) Evaluation of the Pull Out Capacity of Dynamic Anchors Considering Different Shape and Size of Particles ...
*BA **Wadood K.**. 13:50-14:10 Computational and Experimental Investigation of Dispersion and Dissolution in Pharmac. Powders	*INM **Kwakkel M.**. 13:50-14:10 Comparing Aspherix against Open-Source DEM Frameworks for Simulations of Common Bulk Proc.	*DCSI **Giammarini A.**. 13:50-14:10 Modeling the Coupling among Different Processes in Biological Systems	*GTA II **Lamoine T.**. 13:50-14:10 DEM Based Erosion Simulation of a Lunar Landing Pad
Coffee Break 14:10-14:30			
*IBM **Niemann M.**, 14:30-14:50 Liquid-Gas Flow Around Resolved Densely-Packed Objects in CFD-DEM	*INM **Schilde C.**, 14:30-14:50 DEM Surrogate Modelling of Particulate Processes	*DCSI **Jamieson J.**, 14:30-14:50 Developing a correlation strategy for Dry Powder Inhaler CFDEM Modelling	*CM **Wu Charley**, 14:30-14:50 DEM-SPH Study of Particles Dispersion in Fluid
*IBM **Saeedipour M.**, 14:50-15:10 Small-Scale Investigation of Bubble-Particle Interactions using a Coupled VOF-IB Method	*FUN **Füvesi B.**, 14:50-15:10 Mixing in Coarse-Grained Rotating Drum Simulation	*DCSI **Barros de Souza E.**, 14:50-15:10 Numerical Development of Thermal Pre-Treatment For Recycling of Li-Ion Batteries	*CM **Seil P.**, 14:50-15:10 Coupled Electric Field Calculations in DEM and CFD-DEM
*IBM **Saraei S.**. 15:10-15:30 IBM-DEM Approach to Consider the Suspension Rheology	*FUN **Mitterlindner M.**. 15:10-15:30 Modeling of Cohesive and Interlocking Bulk Solids using Tetrahedral Multi-Spheres	*DCSI **Porcaro C.**. 15:10-15:30 Multiscale Modelling of Blood Flow for Plasma Extraction in Bio-Microfluidic Channels	*CM **Moura A.**. 15:10-15:30 Validation of Coupled DEM-FEM Simulations
		*DCSI **Samadi S.**, 15:30-15:50 Modelling Sediment Redistribution in Offshore Wind Turbine Foundation Areas using Coupled CFD-DEM	
Break 15:50-16:00			
Karthik Salish (Genentech) - Live VideoCall Investigating Particle Attrition and Overlubrication Propensity in a Feedframe Compared to a Blender using DEM **16:00-16:35 - *'Ballroom'* (Chair: Kloss, C.)**			

Closing, Drinks and Fairwell (2nd floor)
16:35-17:15
See you in 2026!

Information on Technical Sessions DAY 2:
*BA Biomedical Applications (Chair: Niemann, M.)
*IBM Immersed Boundary Methods (Chair: Aigner, A. & Venugopal, V.)
*INM Innovative Numerical Methods (Chair: Aigner, A. & Pirker, S.)
*FUN Fundamentals (Chair: Schilde, C. & Louw, D.)
*DCSI DAY 2 - DCS Invited (not peer reviewed) (Chair: Kloss, C. (13:10-14:10) & Togni, R.(14:30-15:50))
*GTA II Geo-Technical Applications (Chair: Zhao, J. & Venugopal, V.)
*CM Coupled Methods (Chair: Charley Wu & Seil, P.)

(short-term changes to the programme can be possible)

2nd Floor

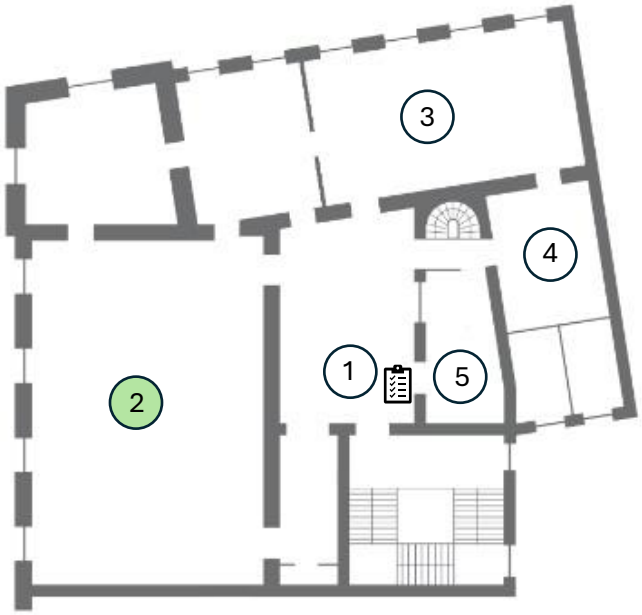
1 … Registration

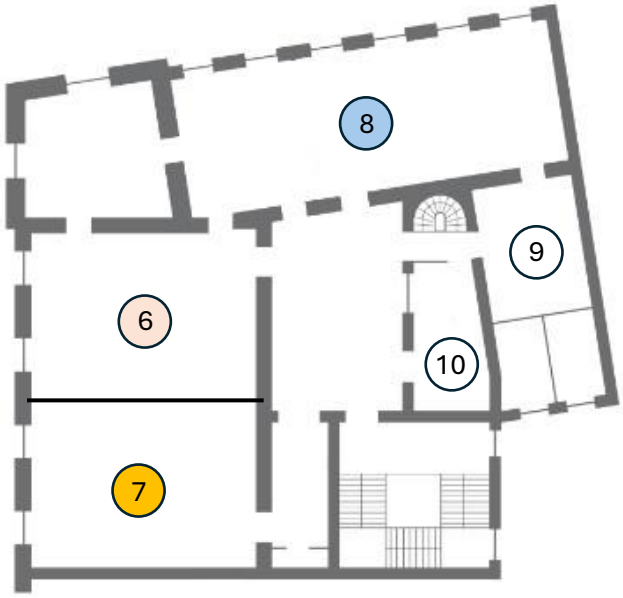
2 … Ballroom

3 … Lunch Area / Breakroom

4 … Cloakroom

5 … Restrooms





1st Floor

6 … Room Mozart

7 … Room Beethoven

8 … Room Strauss

9 … Restroom – Men

10 … Restroom - Women

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Eschenbachgasse 9, 1010 Vienna
(https://w3w.co/protests.value.cotton)

Closest Subway Station
Karlsplatz – U1 / U4

Dinner Location – 26.9.24 / 18:40
Maria-Theresien-Platz 1
(https://w3w.co/rich.soup.teacher)

MEETING DESTINATION VIENNA
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