

Tuesday, 5 July 2022

16.30-19.00	<p>Exhibition Hall Conference registration</p>
19.00-21.30	<p>Roof Terrace (Specchio di Mare & Le Divine Costiere) Welcome reception</p>

Wednesday, 6 July 2022

8.00-8.30 Exhibition Hall - Conference registration				
08.30-09.30 Plenary: Room Tafuri - Chair: Massimo Poletto New Opportunities for Granular Matter Research <u>Heinrich Jaeger</u> , University of Chicago, United States of America				
	Room Tafuri	Room Vietri	Room Furore	Room Ischia/Capri
Topic	TUSAIL Symposium	Mechanical behavior of bulk materials	Pneumatic and mechanical conveying	Multiphase flow and fluidization
Chairs	<i>J. Ooi – V. Magnanimo</i>	<i>H. Zetzener – E. McGee</i>	<i>D. Schott – A. Levy</i>	<i>B. Glasser - R. Solimene</i>
09.30-09.50	Introduction to TUSAIL Symposium <u>Jin Ooi</u> University of Edinburg	The Role of Archimedes Number in Particulate Bed Void-Fraction and Flowability <u>Haim Kalman</u> Ben-Gurion University of the Negev, Israel	Analysing Impact Forces & Overcoming Speed, Heat and Pressure Issues in High Capacity Belt Support Applications <u>Cameron Portelli</u> Kinder Australia, Australia	Confined-fluidization as a way of improving CO ₂ capture by adsorption on solid sorbents <u>Maria Turano</u> Università della Calabria, Italy
09.50-10.10	Keynote Using a commercial rheometer to determine a particle-particle cohesion model <u>Christine M. Hrenya</u> University of Colorado, United States	Case Study: Silo and System Design for Fibrous Recycling Materials <u>Hans Schneider</u> Zeppelin Systems GmbH, Germany	Motion Resistances in Trough Chain Conveyors <u>Andre Katterfeld</u> University of Magdeburg, Germany	Hydrodynamics of Pulse-Assisted Fluidization of Cohesive Powder <u>Mohammad Asif</u> King Saud University, Saudi Arabia
10.10-10.30		A combined DEM and CNN model for characterizing and evaluating the performance of ball mills <u>Yaoyu Li</u> University of New South Wales, Australia	Understanding the Total Cost of Ownership of Bulk Solids Handling Systems: A New Paradigm to Reduce Risks in Procurement of Solids Handling Systems and Equipment <u>Michael Bradley</u> Wolfson Center, United Kingdom	Fluidization and flow behavior of powder coatings when approaching their glass transition temperature <u>Helena Weingrill</u> Anton Paar GmbH, Austria
10.30-11.00 Coffee break - Exhibition Hall				
Topic	TUSAIL Symposium	Mechanical behavior of bulk materials	Pneumatic and mechanical conveying	Multiphase flow and fluidization
11.00-11.20	Keynote Benefits and open problems in coarse graining methods for DEM-based simulations of fluid-particle systems <u>Alberto di Renzo</u> Università della Calabria, Italy	Keynote Rheology of Cohesive Powder Mixtures <u>Mojtaba Ghadiri</u> University of Leeds, United Kingdom	Keynote Refill Strategy Optimization of a Twin-Screw Feeder with DEM <u>Peter Toson</u> Research Center Pharmaceutical Engineering, Austria	Keynote Hydrodynamics of a novel directly irradiated fluidized bed autothermal reactor for thermochemical energy storage <u>Stefano Padula</u> Università di Napoli Federico II, Italy
11.20-11.40				
11.40-12.00	Comparison of CFD-DEM and TFM approaches for the simulation of the single- and multiple-spout fluidized beds <u>Behrad Esgandari</u> Johannes Kepler University Linz, Austria	Experimental study of granular heap flow under vertical vibrations <u>Ghita Marouazi</u> TU Kaiserslautern, Germany	Development of bulk material dosing equipment using DEM <u>Jan Nečas</u> University of Ostrava, Czech Republic	The role of Temperature and Moisture on Polymer Materials for Additive Manufacturing, and their Implications for the Process <u>Denis Schuetz</u> Anton Paar GmbH., Austria
12.00-12.20	Modelling fluidization by recurrence CFD (rCFD) <u>Varun Dongre</u> Johannes Kepler University Linz, Austria	How a Granular Pile becomes a Glass <u>Stefan Boettcher</u> Emory University, USA	Effect of Particle Size Distribution on Frictional Head Loss in Pipe Flow of Sand-Water Slurry <u>Vaclav Matousek</u> Czech Academy of Sciences, Czech Republic	Classification of fine gas born particles in superposed electric and acoustic fields <u>Krischan Sandmann</u> Leibniz Institute for Materials Engineering - IWT, Germany
12.20-12.40	Workshop Upscaling Particle Systems	Density Instabilities and Compaction Efficiency in a tapped granular pile. <u>Paula Alejandra Gago</u> Imperial College London, United Kingdom	Exploring "Big Data" on the Effect of Different Materials on Pressure Drops in Pneumatic Conveying, Identifying Bend and Straight Pipe Losses and Bend Equivalent Lengths <u>Michael Bradley</u> University of Greenwich, United Kingdom	Investigation of the wet contact behavior of particles in CFD-DEM simulations of a rotor granulator <u>Philipp Grohn</u> TU Kaiserslautern, Germany
12.40-13.00		Optimization of a Flighted Rotary Drum Cross-Sectional Characteristics <u>Dmitry Portnikov</u> Ben-Gurion University of the Negev, Israel	Study on characteristics of flow rate regulation in the dense-phase pneumatic conveying of pulverized coal <u>Lizhuo Zhu</u> East China University of Science and Technology, China	An experimental investigation on channelized granular flows <u>Luca Sarno</u> Università di Salerno, Italy

Wednesday, 6 July 2022

13.00-14.30 Lunch				
14.30-15.30	<p align="center">Plenary: Room Tafuri - Chair: Diego Barletta DEM-based metamodelling - the booster for design of bulk solids handling equipment? <u>Dingena Schott</u>, Delft University of Technology, The Netherlands</p>			
	Room Tafuri	Room Vietri	Room Furore	Room Ischia/Capri
Topic	Computational models	Mechanical behavior of bulk materials	Pneumatic and mechanical conveying	Multiphase flow and fluidization
Chairs	<i>A. Benassi – S. Luding</i>	<i>H. Schneider – H. Wilms</i>	<i>F. Rizk – P. Toson</i>	<i>S. Heinrich - M. Troiano</i>
15.30-15.50	<p align="center">Keynote DEM Calibration of Cohesive Bulk Materials <u>Corne Coetzee</u> University of Stellenbosch, South Africa</p>	<p align="center">Keynote Comparison of different test methods for the flow property evaluation of fibrous materials <u>Steffen Beitz</u> Zeppelin Systems GmbH, Germany</p>	<p align="center">Keynote Determining and Comparing Breakage Matrices to Predict Particle Attrition in Pneumatic Conveyors <u>Michael Bradley</u> University of Greenwich, United Kingdom</p>	<p align="center">Keynote Neural network-based filtered drag model for cohesive gas-particle flows <u>Josef Tausendschön</u> University of Graz, Austria</p>
15.50-16.10				
16.10-16.30	<p align="center">DEM Model for the Quantitative Prediction of Cohesive Powder (ESKAL) Flowability. <u>Maheandar Manokaran</u> Université de Technologie de Compiègne, France</p>	<p align="center">Reverse Janssen Effect in Narrow Granular Column <u>Massimo Pica Ciamarra</u> Nanyang Technological University, Singapore</p>	<p align="center">Pneumatic Conveying of Solids: Scale-Up and Design of Long Line Systems <u>Farid Rizk</u> R & D Solids Handling BASF Formerly, Germany</p>	<p align="center">Terminal Velocity and Drag Coefficient for Accelerating Spherical Particles <u>Haim Kalman</u> Ben-Gurion University of the Negev, Israel</p>
16.30-17.00 Coffee break - Exhibition Hall				
Topic	Computational models	Silo design	Pneumatic and mechanical conveying	Multiphase flow and fluidization
17.00-17.20	<p align="center">DEM Simulation of Moist Sand over a Transfer Point <u>Otto Scheffler</u> University of Stellenbosch, South Africa</p>	<p align="center">Proposal to Structure Silo Failure Analysis <u>Harald Wilms</u> Wilms-ITC, Germany</p>	<p align="center">Workshop Pneumatic conveying</p>	<p align="center">Investigation of endogenous bubble-induced segregation of a single biomass particle in fluidized bed reactors <u>Stefano Iannello</u> University College London, United Kingdom</p>
17.20-17.40	<p align="center">DEM Modelling of Elastic-Plastic Contact Behavior for Cohesive Powders <u>Robert Hesse</u> TU Kaiserslautern, Germany</p>	<p align="center">Process intensification of hopper discharge of cohesive powders based on modulated pulsed airflow <u>Lizhuo Zhu</u> East China University of Science and Technology, China</p>		<p align="center">Solids mixing/segregation in high temperature dense gas-solid fluidized beds by capacitance and pressure measurements <u>Laura Molognani</u> Università di Napoli Federico II, Italy</p>
17.40-18.00	<p align="center">An SPH study on the compaction of soft deformable grains <u>Francisco Goio</u> Graz University of Technology, Austria</p>	<p align="center">Parametric study and flow regime map for planar silos and hoppers <u>Evgeny Rabinovich</u> Ben-Gurion University of the Negev, Israel</p>		<p align="center">Efficiency of stand-alone filters: effects of filter aperture and meshing design <u>Paula Alejandra Gago</u> Imperial College London, United Kingdom</p>
18.00-19.00				CHoPS International Scientific Committee Meeting

Thursday, 7 July 2022

Plenary: Room Tafuri - Chair: Haim Kalman Flow of bulk materials into small confined spaces: characterisation and modelling Chuan-Yu (Charley) Wu, University of Surrey. United Kingdom				
	Room Tafuri	Room Vietri	Room Furore	Room Ischia/Capri
Topic	Computational models	MATHEGRAM Symposium	Powder testing and characterization	Particle design and manufacturing
Chairs	<i>M. Sousani – A. Katterfeld</i>	<i>C. Wu – A. Venkatesh</i>	<i>D. Schuetz – P. Garcia-Triñanes</i>	<i>A. Kwade – P.A. Gago</i>
08.30-09.30				
09.30-09.50	Simulation of hierarchical structure formation during spray drying using CFD-DEM coupling <i>Silas Wolf</i> TU Braunschweig, Germany	Heat generation by friction and deformation during an oblique impact <i>Francisco Kisuka</i> University of Surrey, United Kingdom	An X-ray micro tomography study of packing behaviour metal powders during filling, compaction and ball indentation process <i>Mozhdeh Mehrabi</i> University of Leeds, United Kingdom	Keynote Production of Composite Materials from Spray Drying and Warm Compaction <i>Hannah Sophia Rothberg</i> Hamburg University of Technology, Germany
09.50-10.10	CFD-DEM simulations of strongly polydisperse particulate solids in the cyclonic flow of dry powder inhalers <i>Alberto Di Renzo</i> Università della Calabria, Italy	CFD-DEM simulations of a Rotary Kiln <i>Aman Rastogi</i> Johnson Matthey, United Kingdom	Soft wheat flour quality parameters assessment by Near Infrared Spectroscopy (NIR): from laboratory to shelf <i>Riccardo Gasbarrone</i> Sapienza - Università di Roma, Italy	
10.10-10.30	Using the Material Point Method (MPM) to Model Bulk Materials <i>Corne Coetzee</i> University of Stellenbosch, South Africa	DEM modelling of granular material swelling <i>Domenica Braile</i> University of Surrey, United Kingdom	Bulk solids on the Moon - Characterization of the innovative Lunar Regolith Simulants TUBS-M, TUBS-T and TUBS-I <i>Lisa Windisch</i> TU Braunschweig, Germany	The Virtual Formulation Laboratory: A Novel Means to Facilitate Smooth Transition of New Powder Formulations Across the Divide Between Formulation Development and Manufacturing <i>Michael Bradley</i> Universities of Greenwich, United Kingdom
10.30-11.00	Coffee break - Exhibition Hall			
Topic	Computational models	MATHEGRAM Symposium	Powder testing and characterization	Particle design and manufacturing
11.00-11.20	Keynote Multiscale modelling of granular materials – Calibration of discrete particle models <i>Thomas Weinhart</i> University of Twente, The Netherlands	Modeling particle-scale deformation and heat conduction for a highly dense granular system with finite volume method <i>Ranian Dhakal</i> Graz University of Technology, Austria	Keynote Effect of Moisture Content, Size Distributions and Particle Shape on Flowability: Angle of Repose, Tilting Angle, and Hausner Ratio <i>Haim Kalman</i> Ben-Gurion University of the Negev, Israel	Keynote Predicting Turbulent Shear Stress in Pharmaceutical Vessels <i>Roisin Hurley</i> University of Limerick, Ireland
11.20-11.40		CFD-DEM Model for High-Temperature Processes <i>Jelena Macak</i> DCS Computing GmbH, Austria		
11.40-12.00	An in-depth study of mixing and turning behavior of a compost pile using Discrete Element Method and Big-Data analysis <i>Mohsin Aimal</i> , <i>Max Cichocki</i> O.v.Guericke U, Germany Graz UT, Austria	Sources of error when measuring the hydraulic conductivity of a granular material at different temperatures <i>Marina Bortolotto</i> Imperial College London, United Kingdom	An investigation into the effect of drying on the flowability of the bulk pulverised cassava grits <i>Hamed Johnny Samavi</i> University of Greenwich, United Kingdom	A regime map for dry powder coating <i>Marv Khala</i> University of Surrey, United Kingdom
12.00-12.20	An optimal calibration procedure for the Discrete Element Method <i>Farheez Mohamed</i> Université de Technologie de Compiègne, France	Fundamental basis for a novel approach to indirectly measure the effective thermal conductivity of granular materials <i>Tokio Morimoto</i> Imperial College London, United Kingdom	Moisture Caking: Accelerated Caking Tests <i>Jairo Paternina</i> Jenike & Johanson Inc., United States	Investigating particle properties and process parameters for generating efficient dry particle coated system <i>Vikram Karde</i> University College of London, United Kingdom
12.20-12.40	Digital twins to improve the calibration of DEM simulation of powder processes <i>Aurélien Neveu</i> Granutools, Belgium	The effect of temperature on the spreading of powder layers in selective laser sintering <i>Sina Zinatlou Ajabshir</i> Università di Salerno, Italy	A novel method developed to measure tensile strength of cohesive powders <i>Vivek Garg</i> University of Greenwich, United Kingdom	Water Storing Bulk Granular Materials for Concrete 3D Printing <i>Leigh Duncan Hamilton</i> TU Braunschweig, Germany
12.40-13.00	Robust Estimation and Validation of Contact Parameters of Iron Ore for Transfer Chute Simulation <i>Rodrigo Magalhães de Carvalho</i> Universidade Federal do Rio de Janeiro, Brazil	In-situ monitoring and modeling of single-layer selective laser sintering of polyamide powders <i>Balaji Soundararajan</i> Università di Salerno, Italy	Influence of particle size and void fraction on evaluation of flowability and cohesiveness of a test of powder discharge by air pressure <i>Koichiro Ogata</i> National Institute of Technology, Japan	Development of hyperspectral imaging classification model applied to the recognition and sorting of post-earthquake construction waste <i>Oriana Trotta</i> Sapienza - Università di Roma, Italy

Thursday, 7 July 2022

13.00-14.30	Lunch				
14.30-15.30	Plenary: Room Tafuri - Chair: Arno Kwade The Rheology of Granular Materials: from Fundamentals to Applications <u>Raffaella Ocone</u> , Heriot-Watt University, United Kingdom				
	Room Tafuri	Room Vietri	Room Furore	Room Ischia/Capri	
Topic	Computational models	MATHEGRAM Symposium	Powder testing and characterization	Miscellaneous	
Chairs	<i>T. Weinhart – C. Coetzee</i>	<i>C. Wu – J. Macak</i>	<i>K. Ogata – W.P. Goh</i>	<i>R. Cenni- A. Neveu</i>	
15.30-15.50	Keynote Investigations of abrasive sliding and impact wear - a DEM calibration approach <u>Thomas Roessler</u> University of Magdeburg, Germany	A Numerical Study of Heat Transfer Mechanisms in Dense Particulate Systems Using DEM <u>Rafael Rangel</u> Universitat Politècnica de Catalunya, Spain	Keynote Comparison of low-stress flowability measurement techniques: ball indentation and shear cell <u>Colin Hare</u> University of Surrey, United Kingdom	Poster flash presentations	
15.50-16.10		Analysis of sintering of ceramic powder systems by in-situ synchrotron nano-tomography <u>Aatreya Maniulaqiri Venkatesh</u> Université Grenoble Alpes - SIMAP, France			
16.10-16.30	DEM Simulations of Industrial Scale Granular Chute Flows <u>Satyabrata Patro</u> Indian Institute of Technology Kanpur, India	Modeling grain growth and arbitrarily shaped particles in sintering with the discrete element method <u>Brayan Paredes Goyes</u> Université Grenoble Alpes - SIMAP, France	Measurement of Particle Contact Area Using a Mechanical Surface Energy Tester and Influences of Surface Texture of Powders on Particle Adhesion <u>Vivek Garg</u> The Wolfson Centre for Bulk Solids Handling Technology, United Kingdom		
16.30-16.50	Predicting Time Dependent Behavior of Surface Granular Flows <u>Anurag Tripathi</u> Indian Institute of Technology Kanpur, India		Flowability and granular compaction from industrial powders to frontier science seeking for the missing key <u>Maria Graciela Cares</u> Université de Lorraine, France		
16.50-17.10	Coffee break - Exhibition Hall				
18.30-23.00	Arechi Castle Social dinner				

Friday, 8 July 2022

<p style="text-align: center;">Plenary - Room Tafuri - Chair: Mojtaba Ghadiri Interaction between dry grains and liquids inspired by industrial processes <i>Pierre Jop</i>, Glass Surface and Interfaces, CNRS/Saint-Gobain, France</p>				
	Room Tafuri	Room Vietri	Room Furore	Room Ischia/Capri
Topic	Computational models	Industrial case studies	Compaction and tableting	
Chairs	<i>A. Di Renzo – J. Morrissey</i>	<i>K. Johanson - T. Destoop</i>	<i>M.G. Cares – A. Santomaso</i>	
08.30-09.30				
09.30-09.50	Resolved simulation of particle collisions on wet microstructured surfaces <u>David Strohner</u> TU Kaiserslautern, Germany	Improving a Pneumatic Conveying System for Coffee Beans to Reduce Attrition <u>Harald Wilms</u> Wilms-ITC, Germany	Modeling the shear sensitivity of lubricated powders in a paddle feeder <u>Daniel Puckhaber</u> TU Braunschweig, Germany	MATHEGRAM Meeting
09.50-10.10	Development and application of BPM-DEM to study mechanics of frozen granular materials <u>Tsz Tung Chan</u> Hamburg University of Technology, Germany	Leveraging Artificial Intelligence to speed up DEM simulations: A wheel loader case study <u>Marina Sousani</u> Altair Engineering, United Kingdom	Processing of Living Microorganisms: Fluidized-bed Granulation and Tableting <u>Karl Vorländer</u> TU Braunschweig, Germany	
10.10-10.30	Multi-Scale and Multi-Physics Modelling of Particle and Fluid-Particle Flow using DEM and CFD-DEM <u>Christoph Goniva</u> DCS Computing GmbH, Austria	Innovations in particle technology modelling to improve industrial product development <u>Stefan Bellinghausen</u> Siemens, United Kingdom	Material and Process Analyses for the Derivation of Process and Property Models in Food Compaction <u>René Rösemeier-Scheumann</u> TU Braunschweig, Germany	
10.30-11.00	Coffee break - Exhibition Hall			
Topic	Computational models	Industrial case studies	Compaction and tableting	Thermomechanical behaviour of granular materials
				<i>Chairs: C. Schilde – J. Necas:</i>
11.00-11.20	Keynote Tensor-based Coarse Graining Method <u>Zorica Ristic</u> DCS Computing GmbH, Austria	Keynote The Application of Multi Screw Feeders to Avoid Flow Problems <u>Eddie McGee</u> Ajax Equipment Limited, United Kingdom	Keynote Modeling of High-Density Compaction of Pharmaceutical Tablets Using Multi-Contact Discrete Element Method <u>Kostas Giannis</u> TU Braunschweig, Germany	Keynote Powder Flow and Heat Transfer in a Rotary Kiln with Baffles <u>Benjamin Glasser</u> Rutgers University, United States
11.00-11.40				
11.40-12.00	On the use of coarse-graining to bridge the discrete and continuum descriptions of granular materials <u>Hongyang Cheng</u> University of Twente, The Netherlands	Improved processing in extrusion by BASF <u>Rou Hua Chua</u> BASF SE, Germany	Three-dimensional discrete element modelling of diametrical compression of annular tablet <u>Chuan-yu Wu</u> University of Surrey, United Kingdom	Hot or Cool; Powder Characterization in non-ambient conditions – High- and Low-Temperature Ring Shear Testing <u>Denis Schuetz</u> Anton Paar GmbH, Austria
12.00-12.20	Modelling hopper discharge of elongated particles with different shape representation methods <u>Marina Sousani</u> Altair Engineering Ltd, United Kingdom	Examples for Handling of Post-Consumer Plastic Waste <u>Harald Wilms</u> Wilms-ITC, Germany	Material-independent description of die filling in rotary tablet presses <u>Ann Kathrin Schomberg</u> TU Braunschweig, Germany	Influence of temperature on the packing dynamics of powders <u>Aurélien Neveu</u> Granutools, Belgium
12.20-12.40	Effect of coarse-grain scaling in Discrete Element Method (DEM-CFD) modelling of CFB riser reactors <u>Erasmo Salvatore Napolitano</u> Università della Calabria, Italia	Estimation of the temporal variations of the feed of a sinterization process aided by a voxelization-based numerical approach <u>Horacio Andrés Petit</u> Universidade Federal do Rio de Janeiro, Brazil	The effect of particle adhesion on die filling performance in a gravity filling device <u>Mohammadreza Alizadeh Behjani</u> University of Surrey, United Kingdom	The effect of temperature on the flow properties of SiC powders <u>Pablo Garcia-Triñanes</u> University of Greenwich, United Kingdom
12.40-13.00	MercuryDPM: Fast, flexible, particle simulations <u>Anthony Thornton</u> University of Twente, The Netherlands	Modeling of stockpile drainage and seepage in real applications <u>Jairo Paternina</u> Jenike & Johanson, United States	The protective potential of cushioning coatings on enteric-coated pellets during tableting <u>Jan Henrik Finke</u> TU Braunschweig, Germany	DEM simulation study: the effect of temperature on powder spreading in selective laser sintering <u>Sina Zinatlou Ajabshir</u> Università di Salerno, Italy

Friday, 8 July 2022

13.00-14.30	Lunch			
14.30-15.30	<p align="center">Plenary - Room Tafuri - Chair: Christine Hrenya Potential and limitations of CFD and DEM simulation in the design of orally inhaled drug products <u>Andrea Benassi</u>, Chiesi Farmaceutici S.p.A, Italy</p>			
	Room Tafuri	Room Vietri	Room Furore	Room Ischia/Capri
Topic	Computational models	Mixing and Segregation	Agglomeration and Granulation	Dust and aerosol emissions
Chairs	<i>A. Thornton – C. Hare</i>	<i>M. Ghadiri – S. Kiesgen de Richter</i>	<i>J. Paternina - J.H. Finke</i>	<i>H. Kalman – R.H. Chua</i>
15.30-15.50	<p align="center">Keynote Triaxial Testing for Granular Materials Using the Discrete Element Method <u>John Morrissey</u> University of Edinburgh, United Kingdom</p>	<p align="center">Keynote Description of size segregation in multicomponent mixtures using a probabilistic continuum model <u>Andrea C. Santomaso</u> Università di Padova, Italy</p>	<p align="center">Keynote Novel Approach for the Characterization of Powder Caking <u>Alessandra Hausmann</u> Imperial College London, United Kingdom <u>Lukas Blesinger</u> BASF SE, Germany</p>	<p align="center">Optimization of a sampling method of airborne metallic ultrafine particles by cascade impactors <u>Naima GAUDEL</u> INRS, France</p>
15.50-16.10				<p align="center">Novel technique for economic and continuous analysis of dust exposure levels in real-life production <u>Michael Pilz</u> BASF SE, Germany</p>
16.10-16.30	<p align="center">Coupling of DEM and Flowsheet Simulations for Screen Mills in Roller Compaction Process <u>Christian Eichler</u> Hamburg University of Technology, Germany</p>	<p align="center">Solid state material driven turbine to reduce segregation effects in bunkers <u>Michael Denzel</u> University of Leoben, Austria</p>	<p align="center">Pellet Screenings Sintering <u>Antonio Peres</u> Federal University of Minas Gerais, Brazil</p>	<p align="center">Impact of powders flowability improvement on their dustiness generation <u>Maria Camila Jimenez Garavito</u> Université de Lorraine, France</p>
16.30-17.00	Coffee break - Exhibition Hall			
Topic	Computational models	Mixing and Segregation	Agglomeration and Granulation	
17.00-17.20	<p align="center">Benchmark of different discrete particle models for the simulation of pneumatic conveying of additive manufacturing metallic powders <u>Lorenzo Pedrolli</u> University of Deusto, Spain</p>	<p align="center">The development of new radial stress theory to predict segregation: The relationship between mass flow, segregation prevention, and stress and gas pressure gradients <u>Kerry Johanson</u> Material Flow Solutions Inc., United States</p>	<p align="center">Parametric Study of Residence Time Distributions and Granulation Kinetics as a Basis for Process Modeling of Twin-Screw Wet Granulation <u>Timo Plath</u> University of Twente, The Netherlands</p>	
17.20-17.40	<p align="center">Analysis of micron-sized particle emission from the capsule of a DryPowder Inhaler through DEM simulations <u>Francesca Orsola Alfano</u> Università della Calabria, Italy</p>	<p align="center">Batch versus Continuous Powder Mixing of Excipients and Active Pharmaceutical Ingredients <u>Maarten Jaspers</u> DFE Pharma GmbH & Co, Germany</p>	<p align="center">Influence of Spray Configuration and Material on Particle Formulation in Fluidized Beds with Liquid Injection <u>Maike Orth</u> Hamburg University of Technology, Germany</p>	
17.40-18.00	<p align="center">Wear deformation prediction of convex pattern surface using DEM <u>Yunpeng Yan</u> Delft University of Technology, The Netherlands</p>	<p align="center">Advantages of a continuous measurement of great mass flows in a mixing process for cement plant application using an electromagnetic + time of flight online massflow meter <u>Gilles Campagnola</u> ENVEA SpA, Italy</p>	<p align="center">Structuration of plant-based milk powder for improved reconstitution <u>Kathrin Kramm</u> Hamburg University of Technology, Germany</p>	

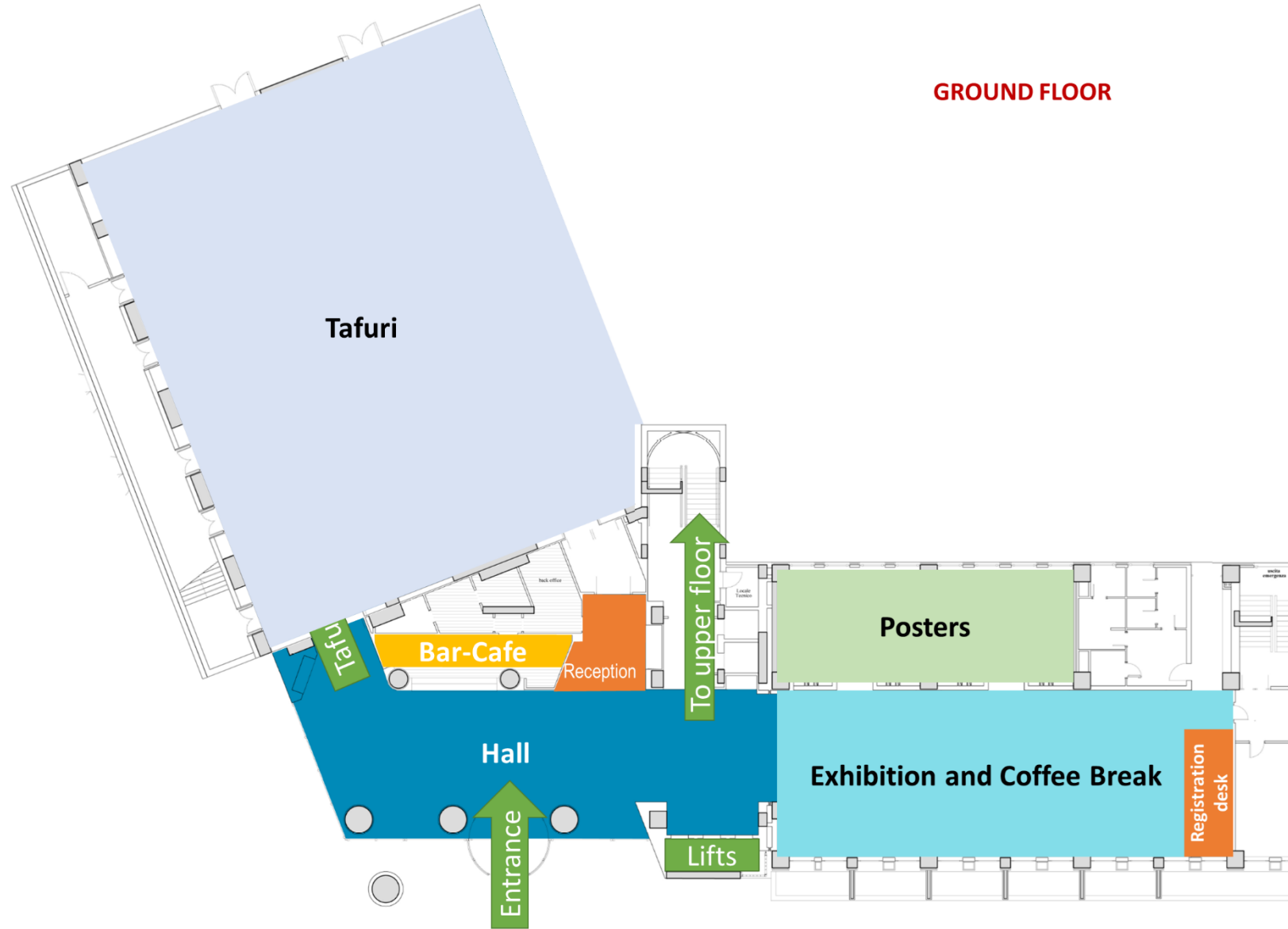
Saturday, 9 July 2022

Plenary - Room Tafuri - Chair: Stefan Luding Characterization of feedstock materials for powder bed fusion Additive Manufacturing Jochen Schmidt, Friedrich Alexander University Erlangen, Germany			
	Room Tafuri	Room Vietri	Room Furore
08.30-09.30			
Topic	From particle contacts to bulk behavior	Additive manufacturing and powder sintering	Particle deformation
Chairs	<i>S. Luding - V. Garg</i>	<i>J. Schmidt – D. Barletta</i>	<i>K. Hanley – R. Tarodiya</i>
09.30-09.50	Modeling Snow Deformation: From A Meso Grain to Bulk Behavior <u>Mohammed Hassan</u> University of Twente, Netherlands Antilles	Surface tailored metal particles for additive manufacturing <u>Arne Lüddecke</u> TU Braunschweig, Germany	Particle-Wall Collision Characteristics for Non-Spherical Particles Under Normal Impact: Numerical Investigation <u>Avi Levv</u> Ben-Gurion University of the Negev, Israel
09.50-10.10	A Study on the Charge Neutralising Effect of Aluminium Stearate in Triboelectrification <u>Jiachen Guo</u> University of Leeds, United Kingdom	Material properties and process parameter optimization in Selective Laser Sintering of polymers <u>Federico Lupone</u> Polytechnic of Turin, Italy	Discrete Element Modeling of Strongly Deformed Particles in Dense Shear Flows <u>Nazanin Ghods</u> Graz University of Technology, Austria
10.10-10.30	Adhesive particle-particle contact and how it affects ceramic's bulk flow behaviour <u>Zohreh Farmani</u> Wageningen University & Research, The Netherlands	Fluidized bed machining of AlSi10Mg samples produced by additive manufacturing <u>Maurizio Troiano</u> Università di Napoli Federico II, Italy	Water Content Related Changes on Wood Pellet Properties <u>Abdullah Sadeq</u> Hamburg University of Technology, Germany
10.30-11.00	Coffee break - Exhibition Hall		
Topic	From particle contacts to bulk behavior	Additive manufacturing and powder sintering	Wear and attrition
11.00-11.20	Keynote From particles to continuum: Review of micro-macro approaches <u>Stefan Luding</u> University of Twente, The Netherlands	Keynote Quantitative analysis of the powder layer quality in the Selective Laser Sintering process: Experiments and DEM modelling <u>Marco Lupo</u> Università di Salerno, Italy	Keynote Understanding structured particle breakage using population balance modeling coupled with FEM calculation and phase-field model (PFM) prediction of crack propagation <u>Kerry Johanson</u> Material Flow Solutions Inc., United States
11.20-11.40			
11.40-12.00	Implementation and Calibration of a Viscoelastic Bonded-Particle model: comparison of Burgers and Generalized Maxwell Relations and their flow prediction ability <u>Michael Mascara</u> Graz University of Technology, Austria	Spreadability versus Flowability: Transient Jamming Makes Them Different <u>Wei Pin Goh</u> University of Leeds, United Kingdom	Modelling of Surface Erosion for Polymers and Polymer Composites due to Solid Particle Impact <u>Rahul Tarodiya</u> Ben-Gurion University of The Negev, Israel
12.00-12.20	Concrete parts from the powder bed – Material modification for selective cement activation <u>Niklas Meier</u> TU Braunschweig, Germany	Modelling of selective laser sintering of visco-elastic powders <u>Juan E. Alvarez</u> University of Twente, The Netherlands	Modelling Particle Breakage Using a Bonded Particle Model <u>John Morrissey</u> University of Edinburgh, United Kingdom
12.20-12.40	Prediction of Bulk Flow Properties using Mechanical Surface Energy Tester <u>Vivek Garg</u> University of Greenwich, United Kingdom	A comparative study on polymeric materials for the selective laser sintering process <u>Daniele Sofia</u> Università di Salerno, Italy	Numerical Investigation of Hydro-abrasive Erosion of Pelton Turbine Injector <u>Rahul Tarodiya</u> Ben Gurion University of Negev, Israel
12.40-13.00	ACCES: Autonomous Characterisation and Calibration using Evolutionary Simulation x <u>Andrei Leonard Nicusan</u> University of Birmingham, United Kingdom	A New Approach to Quantify Powder's Bed Surface Roughness in Additive Manufacturing <u>Hamid Salehi</u> University of Leeds, United Kingdom	Simulation of surface abrasion in DEM <u>Rosario Capozza</u> University of Edinburgh, United Kingdom
13.00-13.10	Conference Closure - Chairs: Massimo Poletto & Diego Barletta		
13.10-14.30	Lunch		

Posters, Room Atena

P1	<p>A numerical assessment of different bend geometries for reducing erosion during pneumatic conveying <u>Harald Kruggel-Emden</u> TU Berlin, Germany</p>
P2	<p>Pneumatic Handling of Bio and Recycled Solids (PHOBARS project) <u>Manuela Quezada Henry</u> Université de Technologie de Compiègne, France</p>
P3	<p>Impact of powder and tableting parameters on tablet properties <u>Amine Ait Ouazzou</u> Hamburg University of Technology, Germany</p>
P4	<p>Coating of the refractory materials by fine particles to increase the resistance against thermo-mechanical stresses <u>Olha Aleksieieva</u> Donetsk National Technical University, Ukraine</p>
P5	<p>Experimental investigation on the role of particle shape and cohesion in the bulk flow behaviour of glass particles in a rotating drum <u>Wei Pin Goh</u> University of Leeds, United Kingdom</p>
P6	<p>Preliminary investigation of fluidized bed reactors for carbon dioxide methanation by TPSIM Win software <u>Alessandro Guzzini</u> Università di Bologna, Italy</p>
P7	<p>Investigation of the Agglomeration of Particulate Matter in Chimneys Using Acoustic Flow <u>Kristina Kilikevičienė</u> Vilnius Gediminas Technical University, Lithuania</p>
P8	<p>Meso-scale DEM for flowability assessment of weakly consolidated fine powders in industry <u>Rahul Sharma</u> Università di Salerno, Italy</p>
P9	<p>DEM (meso-)particle property calibration with powder flow characterization techniques <u>Assem Zharbossyn</u> Università di Salerno, Italy</p>
P10	<p>Analysis of the interaction of a fine particle as a droplet on a specific surface <u>Rimantas Kacijanuskas</u> Vilnius Gediminas Technical University, Lithuania</p>

GROUND FLOOR



MEZZANINE FLOOR

