Gentle Reminders

- ✓ **Oral Presentation:**
  Please check the program and confirm whether the information of your presentation is correct. And if you are no longer planning to attend this conference, please inform us also (please email to:lucya@aiche.org, klxh_meeting@ipe.ac.cn).

  Oral presenters can put up posters of their work on the day of their oral presentation. Their posters can be displayed until 21:00 that day.

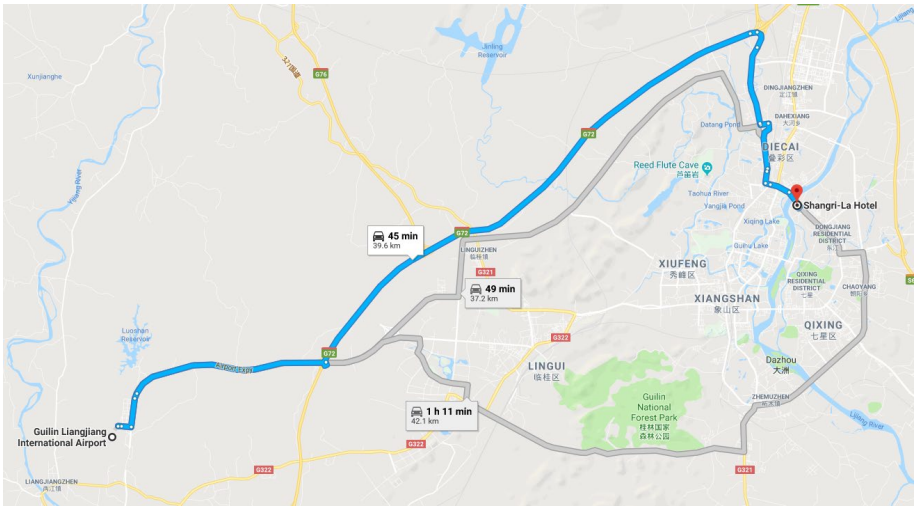
  The poster board surface will be 83 cm x 59 cm (A1 size), portrait orientation only.

- ✓ **Hotel booking:**
  The price of the hotel rooms may be increased after April 20th, so you are advised to book the hotel according to your schedule in advance.
  Reservation:
  http://www.shangri-la.com/reservations/booking/en/index.aspx?hid=SLGL&group_code=ZKY260519&check_in=20190526&check_out=20190530

- ✓ **Visa Application:**
  Once you have paid the registration fee, we can issue an official invitation letter for you to apply a visa to China. In this case would you please supply the following information at your earliest convenience: (please email to: klxh_meeting@ipe.ac.cn)
  Full Name (exactly as in your passport)
  Institution (Affiliation)
  Abstract ID
  Address
  Passport Number
  Your Nationality
  Your Gender
  Your Date of Birth
  Your Phone Number
  Your Email
  The dates you expect to arrive and depart China

Conference venue

Shangri-La Hotel, Guilin 桂林香格里拉大酒店
111 Huan Cheng Bei Er Lu, Guilin, Guangxi, 541004, China
Phone: (86 773) 269 8888
Fax: (86 773) 269 8887
Email: slgl@shangri-la.com, reservations.slgl@shangri-la.com



All the sessions, Panel Discussion, Poster Session and Gala Banquet are arranged on the 2nd Floor. Registration, lunch and Dinner are arranged on the 1st Floor.

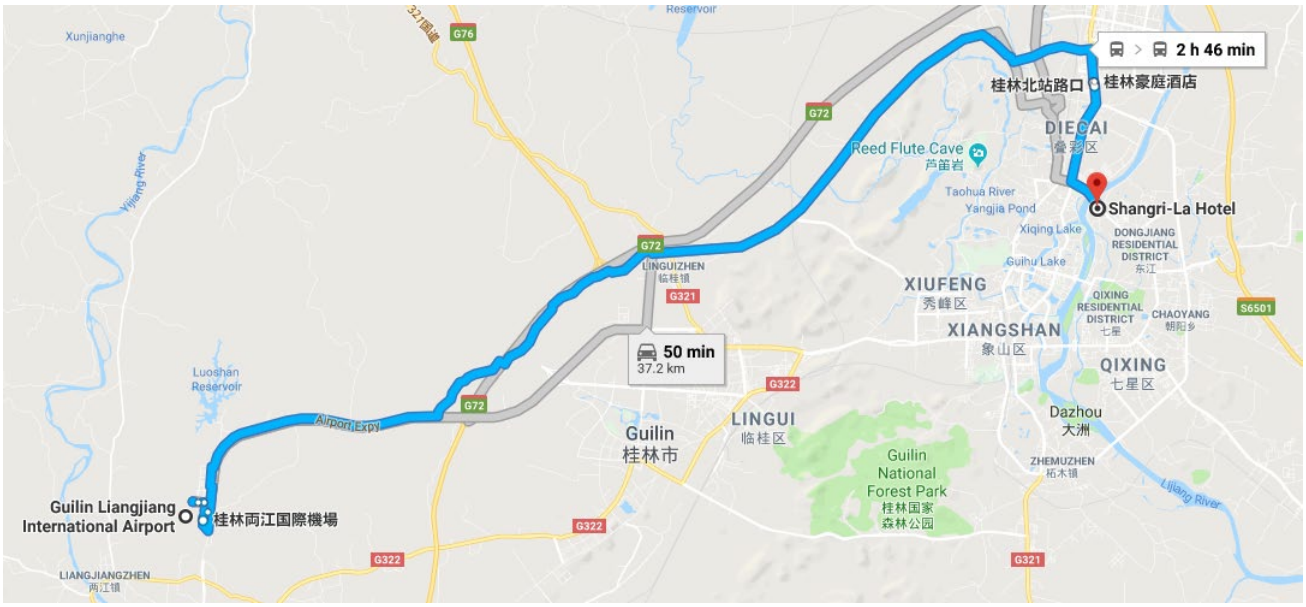
Airport Connections

The Hotel is approximately 45 minutes from Guilin Liangjiang International Airport, and several options are available for the transportation between them:

Free Shuttle Bus departs from the Airport to the Conference venue at 12:00, 13:30, 15:00, 16:30, 18:00, 19:30 and 21:00 on May 26th.

Taxis can be found on the ground floor of the domestic and international arrival halls. The taxi fare is approximately RMB 150, including toll fees, about 45 minutes' drive.

Public Transportation: The buses stop at the city centre and each journey costs about RMB 25. Take the shuttle bus Airport Shuttle Guilin Haoting Hotel Line to Guilin Haoting Hotel(桂林豪庭酒店), walk to Guilin Beizhanlukou Station(桂林北站路口站)，take the NO.32 bus to Yushan Bridge Station(虞山桥站), about 3 hours' drive.



Hotel Limousine can be booked by providing your flight details and estimated time of arrival when booking online.

Alternatively, you can contact the hotel directly by calling (86 773) 269 8888 or emailing reservations.slgl@shangri-la.com. Please make your booking at least two days in advance.

Hotel Limousine Charges

Benz E300A	RMB 694
Buick GL8	RMB 446
Toyota Coaster	RMB 892
Nissan 250	RMB 377

Complimentary Wi-Fi access is available in the limousine.

Fluidization XVI Program Overview

Sunday, May 26, 2019		
08:00-18:30	**Registration**	VIP Lounge
18:30-20:30	**Welcome Reception**	1st Floor Li Café
Monday, May 27, 2019		
08:00-08:20	**Opening Ceremony**	Junior Ballroom
08:20-08:30	**Group Photo**	
08:30-10:30	**Plenary Session 1**	
10:30-10:50	Coffee Break	
10:50-12:10	**Plenary Session 2**	
12:10-13:30	**Lunch Break**	1st Floor Li Café
13:30-15:30	**Parallel Technical Sessions 1**	Nanning Room No. 1, Nanning Room No. 2, Yangshuo Room, Beihai Room
15:30-16:00	Coffee Break	
16:00-18:00	**Parallel Technical Sessions 2**	
18:00-18:30	Break	
18:30-20:30	**Gala Banquet**	2nd Floor Junior Ballroom
Tuesday, May 28, 2019		
08:30-10:30	**Parallel Technical Sessions 3**	Nanning Room No. 1, Nanning Room No. 2, Yangshuo Room, Beihai Room
10:30-10:50	Coffee Break	
10:50-12:10	**Parallel Technical Sessions 4**	
12:10-13:30	**Lunch Break**	1st Floor Li Café
13:30-15:30	**Plenary Talk & Panel Discussion**	Junior Ballroom
15:30-16:00	Coffee Break	
16:00-18:00	**Poster Session**	
16:00-18:00	**International Advisory Board Meeting**	Beihai Room
18:00-18:30	Break	
18:30-20:30	**Dinner**	1st Floor Li Café

Wednesday, May 29, 2019		
08:30-10:30	**Parallel Technical Sessions 5**	Nanning Room No. 1, Nanning Room No. 2, Yangshuo Room, Beihai Room
10:30-10:50	Coffee Break	
10:50-12:10	**Parallel Technical Sessions 6**	
12:10-13:30	**Lunch Break**	1st Floor Li Café
13:30-15:30	**Parallel Technical Sessions 7**	Nanning Room No. 1, Nanning Room No. 2, Yangshuo Room, Beihai Room
15:30-16:00	Coffee Break	
16:00-18:00	**Parallel Technical Sessions 8**	
18:00-18:30	Break	
18:30-20:30	**Dinner**	1st Floor Li Café
Thursday, May 30, 2019		
08:30-10:30	**Plenary Session 3**	Junior Ballroom
10:30-10:50	Coffee Break	
10:50-12:10	**Plenary Session 4**	
12:10-13:30	**Lunch Break**	1st Floor Li Café
13:30-18:30	**Technical Tour**	
18:30-20:30	**Farewell Dinner**	1st Floor Li Café
Friday, May 31, 2019		
08:30-11:30	**Technical Tour**	
End of Conference		

Fluidization XVI Program

26, May, 2019

Time	
8:00- 18:30	**Registration** VIP LOUNGE
18:30- 20:30	**Welcome Reception** Li Cafe on the 1st Floor

27, May, 2019

Time	Room: Junior ballroom	
8:00- 8:20	**Opening Ceremony**	
8:20- 8:30	**Group Photo**	
Plenary Session 1 Room: Junior ballroom Session Chairs: Joachim Werther, Chi-Hwa Wang		
8:30- 9:10	564006	Recent Advances in the Multi-Scale Simulation of Mass, Momentum and Heat Transfer in Dense Gas-Particle Flows J.A.M. Kuipers, Technische Universiteit Eindhoven
9:10- 9:50	560549	Fluidized Bed Mineral Roasting: From Fundamental to Application Qingshan Zhu, Institute of Process Engineering, Chinese Academy of Sciences
9:50- 10:30	579553	Tailor-Made Particles by Fluidized and Spouted Bed Spray Granulation: Opportunities and Recent Advancements Stefan Heinrich, Technische Universität Hamburg
10:30- 10:50	**Coffee Break**	
Plenary Session 2 Room: Junior ballroom Session Chairs: Karl-Ernst Wirth, Wei Ge		
10:50- 11:30	560542	Fluidization and Fluid Particle Systems Research Contribution in Creating a Pathway to Sustainable Society Hamid Arastoopour, Illinois Institute of Technology
11:30- 12:10	554110	Innovations in Fluidization, Inspired by Nature Marc-Olivier Coppens, University College London
12:10- 13:30	**Lunch Break** Li Cafe on the 1st Floor	

27, May, 2019

Nanning Room No.2: Fluidization in Nature & Fundamentals of Fluidization

Afternoon

Time	Abstract ID	Title
Parallel Session 1A: Fluidization in Nature Room: Nanning Room No.2 **Session Chairs: J.A.M. Kuipers, Charley Wu**		
13:30- 13:55	551507	**Keynote Lecture:** An Overview on Should-be-Challenged Issues Relevant to Fluidization in Nature Masayuki Horio, Tokyo University of Agriculture and Technology

13:55-14:07	545210	Cycle Times in Sawdust Conical Spouted Beds Equipped with Fountain Confiner and Draft Tube Juan F. Saldarriaga, Universidad de los Andes
14:07-14:19	549139	Improving Performances of Gas Cyclones for Hot Gas Cleaning Guogang Sun, China University of Petroleum, Beijing
14:19-14:31	549236	Fine Generation Ratio of Iron Ore at the Cyclone in a Gas-Solid Circulating Fluidized Bed Woo Chang Sung, Sungkyunkwan University
14:31-14:43	549359	Chaotic Vibration Characteristics of a Graphite Tube with an Internal Vapor-Liquid-Solid Flow Boiling Xiaoping Xu, Tianjin University
14:43-14:55	550847	Radial Distribution of Particle Concentration in Downer Yafei Zhao, China University of Petroleum
14:55-15:07	549138	Separation Characteristics of Feedstock at Different Regions in the Gas-Solid Dense-Phase Separation Fluidized Bed Yanhong Fu, China University of Mining & Technology
15:07-15:19	548892	Reactor Design of Canmetenergy‘s Pilot-Scale Pressurized Chemical Looping Conversion Dennis Lu, Natural Resources Canada
15:19-15:31	551633	Experimental Study on Flow Deposition Characteristics of Inorganic Salt Particles in a Transpiring Wall Reactor for Supercritical Water Oxidation Donghai Xu, Xi’an Jiaotong University
15:31-16:00	Coffee Break	
Parallel Session 2A: Fundamentals of Fluidization Room: Nanning Room No.2 **Session Chairs: Masayuki Horio, Stefan Heinrich**		
16:00-16:25	548736	**Keynote Lecture:** Visualisation of Pharmaceutical Fluidised Beds by Electrical Capacitance Tomography Haigang Wang, Institute of Engineering Thermophysics, Chinese Academy of Sciences
16:25-16:37	550979	Hydrodynamics and Heat Transfer during Fluidization of Fine Particles Pablo Garcia Triñanes, University of Greenwich, UK
16:37-16:49	549355	Particle Residence Time Measurement in Dual Fluidized Bed Pyrolysis Unit Christoph Pfeifer, University of Natural Resources and Life Sciences
16:49-17:01	550933	The Effect of Kaolin as Bed Material in an Oxy-CFB Combustor Hoang Khoi Nguyen and Byungho Song, Kunsan National University
17:01-17:13	548994	A Machine Learning Approach for Electrical Capacitance Tomography Measurement of Gas-Solid Fluidized Beds Qiang Guo, Dalian Institute of Chemical Physics, Chinese Academy of Sciences
17:13-17:25	549135	Heat Transfer Study in Corrugated Wall Bubbling Fluidized BED Reactor: Experiments and CFD Simulations Alam Nawaz Khan Wardag, Pakistan Institute of Engineering and Applied Sciences

17:25-17:37	549251	Investigation the Strong Swirling Gas-Solids Flow in Cyclone Separators Based in a Circulating Fluidized Bed Based on Process Tomography and CFD Simulation Haigang Wang, Institute of Engineering Thermophysics, Chinese Academy of Sciences
	Break	
18:30-20:30	**Gala Banquet** Junior ballroom on the 2nd Floor	

27, May, 2019

Yangshuo Room: Fundamentals of Fluidization

Afternoon

Time	Abstract ID	Title
Parallel Session 1B: Fundamentals of Fluidization Room: Yangshuo Room **Session Chairs: Raffaella Ocone, Marc-Olivier Coppens**		
13:30-13:42	549222	Particle Cluster Acceleration and Stabilization in the Feeding Section of a Downer Unit Cesar A. Medina-Pedraza, Western University
13:42-13:54	549185	Effect of Temperature on Hydrodynamics of a Gas-Solid Fluidized Bed Kai Huang, Dalian Institute of Chemical Physics, Chinese Academy of Sciences
13:54-14:06	549568	Fluidization in Small-Scale Gas-Solid 3D-Printed Fluidized Beds Vladimir Zivkovic, Newcastle University
14:06-14:18	549255	What Is Happening Above Your Fluidized Bed? S.B. Reddy Karri, Particulate Solid Research, Inc.
14:18-14:30	549311	Fluidized Bed Rheology: Direct Measurements of Apparent Viscosity through Stokesian and Bingham Approaches Denis Schütz, Anton Paar Gmbh Rheology
14:30-14:42	549361	Particle Attrition in a Fluidised Bed Fabio Fulchini, University of Leeds
14:42-14:54	549431	Methodology for the Estimation of Sphericity of Fiber and Hull Shaped Biomass Particles Diana Carolina Guío-Pérez, Universidad Nacional de Colombia
15:30-16:00	Coffee Break	
Parallel Session 2B: Fundamentals of Fluidization Room: Yangshuo Room **Session Chairs: Hugo de Lasa, Christine M. Hrenya**		
16:00-16:25	549340	**Keynote Lecture:** Development of a New Methodology for Measurements of Particle Stresses in Fluidised Beds Raffaella Ocone, Heriot-Watt University
16:25-16:37	549441	Thermal Behaviour of Compartmented Fluidized Beds Under Uneven Fluidization Conditions Roberto Solimene, Consiglio Nazionale delle Ricerche
16:37-16:49	549425	Experimental Characterization and CFD Simulations of Gas Maldistribution Relevant to Fluidized Beds of Group A Particles

		Maurizio Troiano, Università degli Studi di Napoli Federico II
16:49-17:01	549378	Comparative Study on Different Types of Liquid-Solid Fluidization Systems: Upflow, Downflow and Countercurrent Flow Tian Nan, University of Western Ontario
17:01-17:13	557899	Applications of Tribo-electric Probes in Fluidized Beds Yuan Li, Western University
17:13-17:25	552116	Interpenetrating Mixture Theory for Fluidized Beds:Thermodynamics and Turbulence Charles A. Petty, Michigan State University
	Break	
18:30-20:30	**Gala Banquet** Junior ballroom on the 2nd Floor	

27, May, 2019

Nanning Room No.1: Fluidized Bed Applications

Afternoon

Time	Abstract ID	Title
Parallel Session 1C: Fluidized Bed Applications Room: Nanning Room No.1 **Session Chairs: Jürgen Karl, Abdelghafour Zaabout**		
13:30-13:55	548472	**Keynote Lecture:** Investigation of the Bubble Dynamics in a Semi-Cylindrical Gas-Solid Fluidized Bed Navid Mostoufi, University of Tehran
13:55-14:07	549496	An Experimental Study of CO_2 Separation Using a Bench-Scale Dual-Fluidized Bed Calcium Looping Process Tadaaki Shimizu, Niigata University
14:07-14:19	550375	Fluidization Characterization of Coal Powder in a Novel Fluidized Bed with the Inner Cyclone Wenhao Song, Institute of Engineering Thermophysics, Chinese Academy of Sciences, University of Chinese Academy of Sciences
14:19-14:31	549579	Positron Imaging of Segregation, Mixing and Transport of Plastics in Fluidised Beds: Toward a Circular Economy for Plastics Christopher Windows-Yule, University of Birmingham
14:31-14:43	549703	Electrostatic Charging of Powders during Pneumatic Conveying Milad Taghavivand, University of Ottawa
14:43-14:55	550843	Experimental Study of Gas-Solid Separation in Gas-Solid Concurrent Axial Moving Bed Han Lv, China university of petroleum, Beijing
14:55-15:07	549269	Study on Particle Concentration Distribution in a Dense-Phase Gas-Solid Separation Fluidized Bed Chenglong Duan, China University of Mining and Technology
15:07-15:19	546938	Discharge Characteristics of Lognormal Particle Size Distributions from a Conical Hopper Jia Wei Chew, Nanyang Technological University

15:19-15:31	549028	Investigation of the Dynamic Behaviour of the Spray Granulation in Continuously Operated Horizontal Fluidised Beds Stefan Heinrich, Hamburg University of Technology
15:31-16:00	Coffee Break	
Parallel Session 2C: Fluidized Bed Applications Room: Nanning Room No.1 **Session Chairs: Navid Mostoufi, Tadaaki Shimizu**		
16:00-16:25	549356	**Keynote Lecture:** An Innovative Hydrogen and Power Coproduction System Based on Integrated Exergy Recuperative Biomass Gasification and SOFC by Using an Internal Circulating Fluidized Bed Atsushi Tsutsumi, The University of Tokyo
16:25-16:37	550856	NO Emissions Under Pulverized Char Mild Combustion in O_2/CO_2 Preheated by a Circulating Fluidized Bed: Effect of H_2O Addition Shujun Zhu, Institute of Engineering Thermophysics, Chinese Academy of Sciences
16:37-16:49	549244	Development of Gas-Solid Reactor for Activating Iron-Based Fischer-Tropsch Catalysts Congli Cheng, National Institute of Clean-And-Low-Carbon Energy
16:49-17:01	549134	Performance of Anaerobic Fluidized Bed Microbial Fuel Cell with Different Porous Anodes Xiuli Zhang, Qingdao University of Science and Technology
17:01-17:13	549150	Partial Regeneration of Spent SAPO-34 Catalyst in Methanol to Olefins Process Via Steam Gasification Jibin Zhou, Dalian Institute of Chemical Physics, Chinese Academy of Sciences
17:13-17:25	549159	Pressurized Gas Switching Combustion in a Pre-Pilot Scale Reactor Cluster Abdelghafour Zaabout, SINTEF Industry
17:25-17:37	549254	Gas-Solids Fluidized Bed Strippers - a Review Allan Issangya, Particulate Solid Research, Inc.
	Break	
18:30-20:30	**Gala Banquet** Junior ballroom on the 2nd Floor	

27, May, 2019

Beihai Room: Modeling and Simulation

Afternoon

Time	Abstract ID	Title
Parallel Session 1D: Modeling and Simulation Room: Beihai Room **Session Chairs: Jesse Zhu, Ji Xu**		
13:30-13:55	548864	**Keynote Lecture:** Massively Parallel Numerical Simulation of Hydrodynamics and Transfers in a Polydispersed Reactive Gas-Particle Fluidized Bed at Industrial Scale with a Very Fine Mesh, over One Billion of Cells Hervé Neau, CNRS
13:55-14:07	549136	Numerical and Experimental Study of Electrostatic Charge in Gas-Solid Fluidized Bed

		Youssef Nasro-Allah, Université de Toulouse, CNRS-Toulouse
14:07-14:19	548991	Circulating Fluidized Beds in Three Different Scales Qiuya Tu, Institute of Engineering Thermophysics, Chinese Academy of Sciences
14:19-14:31	549126	Numerical Investigation of Electrostatic Effect on Particle Dispersion in Turbulent Pipe Flows Jun Yao, China University of Petroleum, Beijing
14:31-14:43	549018	CPFD Simulation of a Full-Scale Calciner Operating with Refuse Derived Fuel Mohammadhadi Nakhaei, Technical University of Denmark
14:43-14:55	549019	CFD-PBM Simulation on Gas-Liquid Mass Transfer in a Gas-Liquid-Solid Circulating Fluidized Bed Xiuhong Zhou, Tianjin University
14:55-15:07	549379	Investigation on Bubble Characteristics in a Gas Fluidized Bed: Evaluation of Different Drag Models Junnan Zhao, Harbin Institute of Technology
15:07-15:19	549124	CFD-DEM Modeling of Bubble Movement in a Rectangular Fluidized Bed Navid Mostoufi, Uniersity of Tehran
15:19-15:31	549180	Modelling of a Combined Biomass ClC Combustion and Renewable-Energy-Based Methane Production System for CO_2 Utilization Piero Bareschino, Università degli Studi del Sannio
15:31-16:00	Coffee Break	
Parallel Session 2D: Modeling and Simulation Room: Beihai Room **Session Chairs: Hervé Neau, Tingwen Li**		
16:00-16:25	549547	**Keynote Lecture:** Long-Time Simulation of MTO Reactors with EMMS-Based Discrete Particle Method Ji Xu, Institute of Process Engineering, Chinese Academy of Sciences
16:25-16:37	549147	Predicting the Residence Time Distribution in Large-Scale Continuous Apparatuses Using Recurrence CFD Paul Kieckhefen, Hamburg University of Technology
16:37-16:49	549200	Eulerian Charge Model for Gas-Solid Flows with Bi-Disperse Particles Lise Ceresiat, Heriot-Watt University
16:49-17:01	549211	3D Full-Loop Simulation of the Effect of Air Distribution on Gas-Solid Flow Uniformity in a Pilot-Scale CFB Apparatus Zhao Yang, Institute of Engineering Thermophysics, Chinese Academy of Sciences, University of Chinese Academy of Sciences
17:01-17:13	549228	Theoretical Analysis of the Particle Collision Model for Multi-Phase-Particle-in-Cell (MP-PIC) Calculation of Dense Particle Flows with Application to Simple Shear Flow and Bi-Disperse Particle Settling Olivier Simonin, Université de Toulouse, CNRS-Toulouse
17:13-17:25	549235	CFD Modelling of Hydrodynamics in a Dual Circulating Fluidized Bed: Effect of Drag Models Shuyue Li, the University of New South wales

17:25-17:37	549105	Experimental and Numerical Study of the Solid Circulation Rate in an Interconnecting Dual Fluidized Bed Kai Lyu, Hamburg University of Technology
17:37-17:49	549123	Investigating the Effects of Particle's Parameters and Operating Conditions on the Flow Hydrodynamics in a Wurster Type Fluidized Bed Based on DEM-CFD Simulation Seyedmohammadjavad Hosseinipaeinkoulaei, University of Chinese Academy of Sciences
	Break	
18:30-20:30	**Gala Banquet** Junior ballroom on the 2nd Floor	

28, May, 2019

Yangshuo Room: Fundamentals of Fluidization

Morning

Time	Abstract ID	Title
Parallel Session 3A: Fundamentals of Fluidization Room: Yangshuo Room **Session Chairs: Raymond Lau, Xiaoke Ku**		
8:30-8:55	547918	**Keynote Lecture:** Fluidization of Graphene Nanoplatelets: From Microstructure to Hydrodynamics J. Ruud van Ommen, Delft University of Technology
8:55-9:07	549021	Characterization of Dynamics of Binary Gas-Solid Flow of Particles with Different Density and Shape Using Digital Image Analysis Sirisha Parvathaneni, Indian Institute of Technology Delhi
9:07-9:19	550986	Accelerated Carbonation of Mineral Wastes in Fluidized Beds Pablo Garcia Triñanes, University of Greenwich
9:19-9:31	548832	Homogeneous, High Packing Fraction Fluidization of Coarse Particles Using a Combination of Gas Flow and Vibration Christopher M. Boyce, Columbia University
9:31-9:43	548927	Forces on Inserted Objects in Fluidized Beds Yongmin Zhang, China University of Petroleum, Beijing
9:43-9:55	548848	An Experimental Study of Bubble Size Distribution in a Two-Dimensional Gas-Solid Tapered Fluidized Bed Lipak Sahoo, Indian Institute of Technology Madras
9:55-10:07	549384	Effects of Granular Temperature on Inter-Phase Heat Transfer in Gas-Solid Flows Zhe Qing Huang, Xi'an Jiaotong University
10:07-10:19	546195	Study on the Influence of Different Carrier Gases on the Fluidization Properties of Glass Bead and FCC Powders Yong Jin, East China University of Science and Technology
10:30-10:50	Coffee Break	
Parallel Session 4A: Fundamentals of Fluidization Room: Yangshuo Room **Session Chairs: J. Ruud van Ommen, Daoyin Liu**		
10:50-	549735	Evaluation of Particle Material Property Using Planetary Ball Mill

11:02		Raymond Lau, Nanyang Technological University
11:02-11:14	548902	Experimental Study on the Hydrodynamic Characteristics and Flow Structures of Slugging Fluidized Bed with Electrical Capacitance Volume Tomography Measurement Dawei Wang, The Ohio State University
11:14-11:26	548926	Forces on an Immersed Horizontal Baffle Made of Multiple Inclined Slats in Fluidized Beds Duiping Liu, China University Of Petroleum, Beijing
11:26-11:38	550915	Adsorption of Volatile Organic Compounds with Multistage Fluidized Bed Wenli Song, Institute of Process Engineering, Chinese Academy of Sciences
11:38-11:50	551067	Numerical Analysis of Electrostatic Force and Electric Potential Distribution in Charged Gas-Solid Fluidized Bed Zhen Tan, Institute for Process Modelling and Optimization
12:10-13:30	**Lunch Break** Li Cafe on the 1st Floor	

28, May, 2019

Nanning Room No.1: Fluidized Bed Applications

Morning

Time	Abstract ID	Title
Parallel Session 3B: Fluidized Bed Applications Room: Nanning Room No.1 **Session Chairs: Wei Wang, Jia Wei Chew**		
8:30-8:42	550932	Experimental Characterization of Liquid Film Behavior during Droplets-Polyethylene Particles Collision Behavior Xiang Ren, Zhejiang University
8:42-8:54	548370	Analysis of L-Valve Performance Feeding Spent Coffee Ground Powders into a Circulating Fluidized Bed Lucas Massaro Sousa, Federal University of São Carlos
8:54-9:06	548497	Defluidization Study on Industrial Reactive Powders at High Temperature Domenico Macri', University College London
9:06-9:18	548677	High Efficient Hydrogen Production through Novel Gas Switching Water Splitting (GSWS) and Reforming (GSR) Using High Iron Content Oxygen Carrier Ambrose Ugwu, Norwegian University of Science and Technology
9:18-9:30	548841	Chemical Looping Combustion in a Pressurized Internally Circulating Fluidized-Bed Reactor Operated with a $CaMnO_{3-\delta}$-Based Oxygen Carrier Mogahid Osman, Norwegian University of Science and Technology
9:30-9:42	548980	Experimental Study on Separation Characteristics of a Gas-Liquid Cyclone Separator in WGS Wen Zhou, China University of Petroleum, Beijing
9:42-9:54	549000	Investigation on the Mass Transfer Rates in Fluidized Bed Membrane Reactors Niek de Nooijer, Eindhoven university of technology
9:54-10:06	549627	Hydrodynamics of a Few Coarse Particles in a Fluidized Bed of Fine Particles Sangram Roy, Indian Institute of Technology Delhi
10:30-	Coffee Break	

10:50		
Parallel Session 4B: Fluidized Bed Applications Room: Nanning Room No.1 **Session Chairs: Jun Yao, Feng Wu**		
10:50-11:02	549113	Hydrodynamics of a Novel High-Speed MTO Loop Reactor: Profiles of Solids Concentration and Circulation Rate Fenfen Wang, China University of Petroleum, Beijing
11:02-11:14	549007	Experimental Investigation of High-Temperature Fluidization Using Endoscopic Particle Image Velocimetry-Digital Image Analysis Technique (ePIV/DIA) Aitor Cruellas, Eindhoven University of Technology
11:14-11:26	549099	Coal Separation Intensification and Bed Density Computational Model By Using a Binary Mixture Dense Media Gas Solid Fluidized Bed Chenguo Liu, China University of Mining and Technology
11:26-11:38	549461	High Recovery of Rees through Acid Baking of Their Bearing Minerals in a Fluidized Bed Reactor Mohammad Latifi, Ecole Polytechnique Montreal
11:38-11:50	550785	Gas Solids Phase Separation in Multi-Stage Fluidized Beds Chenxi Zhang, Tsinghua University
12:10-13:30	**Lunch Break** Li Cafe on the 1st Floor	

28, May, 2019

Nanning Room No.2: Fluidized Bed Applications

Morning

Time	Abstract ID	Title
Parallel Session 3C: Fluidized Bed Applications Room: Nanning Room No.2 **Session Chairs: Wenli Song, Guogang Sun**		
8:30-8:55	579447	**Keynote Lecture:** Fine iron powder as renewable dense energy carrier Niels Deen, Eindhoven University of Technology
8:55-9:07	549357	Effect of Gas Switching on Powder Fluidization Haifeng Lu, East China University of Science and Technology
9:07-9:19	549287	The Impact Fragmentation Tendency of Limestone Particles in Calcium Looping Cycles in the Presence of Steam and Sulphur Dioxide Fabio Scala, Università degli Studi di Napoli Federico II
9:19-9:31	549291	SO_2 Removal Efficiency in Fluidized Bed Combustor Burning Coals of Different Sulfur Content Bin Liang and Tian Lan, Yankuang Group Co. Ltd.
9:31-9:43	549306	Scale-up Considerations of the Ubfb Solar Receiver Huili Zhang, School of Life Science and Technology, Beijing University of Chemical Technology
9:43-9:55	549401	Thermochemical Energy Storage Employing Fluidized Bed Technology: Experimental Investigations with $CaO/Ca(OH)_2$ on a 21kWh Reactor Manuel Wuerth, Technical University of Munich
9:55-10:07	554008	On-LINE Transition between Incompatible Catalysts Nayef Enazi, Polyethylene Technology, SABIC

10:30-10:50	Coffee Break	
Parallel Session 4C: Fluidized Bed Applications Room: Nanning Room No.2 **Session Chairs: Niels Deen, Christopher M. Boyce**		
10:50-11:02	549457	Impact of Fluidized Bed Hydrodynamics on the Distribution of Liquid Sprayed into the Bed Yuan Li, Western University
11:02-11:14	549424	Fluidized Bed Combustion of Solid Lignin-Rich Residues from Bioethanol Production Roberto Solimene, Consiglio Nazionale delle Ricerche
11:14-11:26	549427	Directly Irradiated Fluidized Bed Reactor for Thermochemical Energy Storage and CO_2/H_2O Splitting Claudio Tregambi, Università degli Studi di Napoli Federico II
11:26-11:38	521625	CPFD Model Optimization for Simulation of Segregation in a Fluidized Bed of Particles with Different Sizes and Densities Alex Kokourine, Hatch Ltd.
11:38-11:50	549447	Impact of Column Geometry and Internals on Gas and Particle Flows in a Fluidized Bed with Downward Solids Circulation Yohann Cochet, Western University
12:10-13:30	**Lunch Break** Li Cafe on the 1st Floor	

28, May, 2019
Beihai Room: Modeling and Simulation
Morning

Time	Abstract ID	Title
Parallel Session 3D: Modeling and Simulation Room: Beihai Room **Session Chairs: Daniel J. Holland, Qiang Zhou**		
8:30-8:55	549336	**Keynote Lecture:** Mechanistic Analysis of Air-Induced Segregation during Powder Flow into a Confined Space Charley Wu, University of Surrey
8:55-9:07	549342	Simulation Research on CO_2 Capture Process By Chemical Method Based on Self-Heat Recuperation Technology Dongliang Chen, Taiyuan University of Technology
9:07-9:19	549259	Drag Model Modifications for Gas-Solids Two-Phase Flows with Clusters in Circulating Fluidized Bed Risers Zeneng Sun, Western University
9:19-9:31	549293	Numerical Simulation of Hydrodynamic Behaviours in a Novel Gas-Solids Moving Bed Reactor Under a Downer Guoqing Guan, Hirosaki University
9:31-9:43	549318	Coupled LBM/DEM Simulations with a Multi-Particle Partially Saturated Method-Theoretical and Computational Details Chrysovalantis Tsigginos, STFC Daresbury Laboratory

9:43- 9:55	549335	Numerical Simulation of Gas-Solid Flow in Downer with a New Drag Model Based on the Fluidized Spatial Superposition Xueer Pan, Taiyuan University of Technology
9:55- 10:07	549412	Review of Fluid-Particle Drag Experimental Validation Ben Freireich, Particulate Solid Research, Inc.
10:07- 10:19	547687	CFD Simulation of the Coal Pyrolysis in a Fluidized-Bed Reactor Yanjun Guan, North China Electric Power University
10:19- 10:31	549231	Considerations for Practical Industrial CFD Simulations of Fluidized Systems Ali Akhavan, CPFD Software, Peter Blaser, CPFD, LLC, and Ray Cocco, Particulate Solid Research, Inc.
10:31- 10:50	Coffee Break	
Parallel Session 4D: Modeling and Simulation Room: Beihai Room **Session Chairs: Haigang Wang, Xiaogang Hao**		
10:50- 11:02	549419	CFD-DEM Simulation of the Fluidization Behavior of Particles during Coating in a New Developed Spouted Bed Apparatus Philipp Grohn, Technische Universität Kaiserslautern
11:02- 11:14	550818	Simulation on the Cal System with Dual Fluidized Bed Reactor Zhixin Li, Zhejiang university
11:14- 11:26	549423	Experimentations and Simulations in a 4m Height Heated Ubfb Solar Receiver Renaud Ansart, Université de Toulouse, CNRS-Toulouse
11:26- 11:38	549393	Minimum Spouting Velocity for Fountain Confined Conical Spouted Beds of Fine Particles Mikel Tellabide, University of the Basque Country
11:38- 11:50	549247	Fully Resolved Simulation of Char Particle Combustion By Immersed Boundary-Lattice Boltzmann Method Maoqiang Jiang, Huazhong University of Science and Technology
11:50- 12:02	549270	Modeling of Oxy Gasification of High Ash Coal in Fluidized Bed Gasifier Sangram Roy, Indian Institute of Technology Delhi
12:10- 13:30	**Lunch Break** Li Cafe on the 1st Floor	

28, May, 2019

Afternoon

Time	Room: Junior ballroom
13:30- 14:00	**Plenary Lecture: Fluidization in 100 Years - Future Perspectives** Jesse Zhu, The University of Western Ontario
14:00- 15:30	**Panel Discussion**：**Emerging Topics on Fluidization in the Twenty-first Century** Chairs: Clive Davies, Massey University Atsushi Tsutsumi, The University of Tokyo Members： Xiaotao Bi, University of British Columbia Liang-Shih Fan, Ohio State University

	Masayuki Horio, Tokyo University of Agriculture and Technology Olivier Simonin, INP Toulouse Joachim Werther, Hamburg University of Technology Aibing Yu, Monash University Jesse Zhu, The University of Western Ontario
15:30-16:00	**Coffee Break**
16:00-18:00	**Poster Session**
16:00-18:00	**International Advisory Board Meeting at Beihai Room**
18:00-18:30	**Break**
18:30-20:30	**Dinner** Li Cafe on the 1st Floor

29, May, 2019

Yangshuo Room: Fundamentals of Fluidization

Morning

Time	Abstract ID	Title
Parallel Session 5A: Fundamentals of Fluidization Room: Yangshuo Room **Session Chairs: Pablo Garcia Triñanes, Qingshan Zhu**		
8:30-8:55	551350	**Keynote Lecture:** A Reflection of Gas-Solid Fluidization Regimes Xiaotao Bi, University of British Columbia
8:55-9:07	549133	Measurement of Residence Time Behavior in a Continuously Operated Spouted Bed Swantje Pietsch, Hamburg University of Technology
9:07-9:19	549284	Effect of Elevated Pressure on Gas-Solid Flow Characteristics in a Circulating Fluidized Bed Jialong Song, Daoyin Liu, Jiliang Ma and Xiaoping Chen, Southeast University
9:19-9:31	549166	Eulerian Simulations of Mixing and Segregation of Binary Gas-Solid Flow of Particles with Different Densities Sirisha Parvathaneni, Indian Institute of Technology Delhi
9:31-9:43	549225	Experimental Study of a 3D-Printed 3-Phase Miniaturized Fluidized Bed for Bioprocessing Screening Yi Zhang, Newcastle University
9:43-9:55	549262	Measuring the Velocity of Gas and Particles in and Around a Single Bubble in a 3D Fluidised Bed Daniel J. Holland, University of Canterbury
9:55-10:07	549353	Solid Circulation Control with L-Valves: A Parametric Study Sina Tebianian, IFP Energies Nouvelles
10:07-10:19	551795	Simultaneously Production of High Quality Tar and CH_4 from Catalytic Bituminous Coal Hydrogasification in a Pressurized Fluidized Bed Shuai Yan, Institute of Coal Chemistry, Chinese Academy of Sciences

10:19-10:31	551069	A Generalized Model on Prediction of Solid Flow Rate Though L-Valve Pengfei He, The Ohio State University
10:31-10:50	Coffee Break	
Parallel Session 6A: Fundamentals of Fluidization Room: Yangshuo Room **Session Chairs: Guangwen Xu, Juan F. Saldarriaga**		
10:50-11:02	549388	Key Sub-Grid Quantities Affecting the Filtered Drag Force Qiang Zhou, Xi'an Jiaotong University
11:02-11:14	549367	Temperature Influence on Fluid Dynamics at the Transition from Bubbling to Turbulent Fluidization for Geldart's Group B Particles Tom Wytrwat, Hamburg University of Technology
11:14-11:26	550779	Development of a Heterogeneous Drag Model for Gas-Solid Flows Based on Particle-Resolved Direct Numerical Simulations Nan Song, Xi'an Jiaotong University
11:26-11:38	547894	Experimental and Numerical Investigations into the Charge Distribution and Particle Velocity Characteristics in the Freeboard of a Bubbling Fluidized Bed Wenbiao Zhang, North China Electric Power University
11:38-11:50	547936	Characterization of Multi-Scale Structures in Gas-Solids Circulating Fluidized Beds by Recurrence Quantification Analysis Chengxiu Wang, China University of Petroleum
11:50-12:02	549156	Fluidized Beds with Internals: A Real-Time Magnetic Resonance Imaging Study of Gas Bubbles and Particle Motion Nicholas Conzelmann, Empa, Swiss Federal Laboratories for Material Science and Technology
12:10-13:30	**Lunch Break** Li Cafe on the 1st Floor	

29, May, 2019

Nanning Room No.1: Fluidized Bed Applications

Morning

Time	Abstract ID	Title
Parallel Session 5B: Fluidized Bed Applications Room: Nanning Room No.1 **Session Chairs: Adam Luckos, Yaning Zhang**		
8:30-8:42	549009	Design and Proof of Concept of a Continuous Pressurized Multistage Fluidized Bed Unit for Deep Sour Gas Removal Using Adsorption Rick T. Driessen, University of Twente
8:42-8:54	549020	Modelling of Autothermal Chemical Looping Reforming for Syngas Production Zirui He, Universite catholique de Louvain (UCL)
8:54-9:06	549125	Combustion Behavior of High Ash Bituminous Coal in a Pilot Scale Circulating Fluidized Bed Rig Yerbol Sarbassov, PI "National Laboratory Astana", Nazarbayev University
9:06-9:18	549172	A Novel Method to Investigate Lateral Mixing of Solids in Bubbling Fluidized Beds Guillermo Martinez Castilla, Chalmers University of Technology
9:18-	549187	Strategy for Coating of Aerogels Using Spouted Bed Technology

9:30		Monika Goslinska, Hamburg Univeristy of Technology
9:30-9:42	549196	Production and Stability Assessment of Oxygen Carrier Produced By Sewage Sludge Fluidized Bed Combustion Antonio Coppola, University of Naples Federico II
9:42-9:54	549198	Leaching of Potassium from Rock Ilmenite Used As a Bed Material in Fluidized Bed Boiler Performed Under Acidic and Alkaline Conditions Ewa Krymarys, Chalmers Univeristy of Technology
9:54-10:06	547913	Elucidating Bubble Deformation in Fluidized Beds with Vertical Tube Banks Using X-Ray Tomography and Optical Probes Philipp Riechmann, Paul Scherrer Institute
10:31-10:50	Coffee Break	
Parallel Session 6B: Fluidized Bed Applications Room: Nanning Room No.1 **Session Chairs: Yongmin Zhang, DongHyun Lee**		
10:50-11:02	548909	Fluidization Characteristics of Silicon Carbide in Fluidized Bed Under Microwave Irradiation Yaning Zhang, Harbin Institute of Technology
11:02-11:14	549208	Testing Different Sorbents for Sorption-Enhanced Methanation in a Dual Fluidized Bed System Antonio Coppola, University of Naples Federico II
11:14-11:26	549252	Enhancement of Particle Segregation By Air-Staging in a Circulating Fluidized Bed Denghao Jiang, Institute of Engineering Thermophysics, Chinese Academy of Sciences
11:26-11:38	549289	Gaseous Emissions during Oxy-Fuel Combustion of Sewage Sludge in a Circulating Fluidized Bed Adam Luckos, University of the Witwatersrand
11:38-11:50	548008	Swing Adsorption Reactor Cluster (SARC) in Post Combustion CO_2 Capture: Multistage Fluidization Effect on Heat Transfer and Reactor Performance Abdelghafour Zaabout, SINTEF Industry
11:50-12:02	548484	Effects of Feed Jets on Pressure Distribution in FCC Riser Zihan Yan, China University of Petroleum, Beijing
12:10-13:30	**Lunch Break** Li Cafe on the 1st Floor	

29, May, 2019

Nanning Room No.2: Modeling and Simulation

Morning

Time	Abstract ID	Title
Parallel Session 5C: Modeling and Simulation Room: Nanning Room No.2 **Session Chairs: Weigang Lin, Sungwon Kim**		
8:30-8:55	579448	**Keynote Lecture:** Modelling of reacting flows and industry applications: some examples Yansong Shen, University of New South Wales

8:55- 9:07	524279	Interactive Realtime Simulation of a Lab-Scale Circulating Fluidized Bed - an Example of Virtual Process Engineering Wei Ge, Institute of Process Engineering, Chinese Academy of Sciences
9:07- 9:19	547020	Euler-Euler Simulation of a Bubbling Fluidized Bed Gasifier: Development of an Intrinsic Particle Conversion Model Philip Rößger, TU Bergakademie Freiberg
9:19- 9:31	544365	Large-Scale Direct Numerical Simulation for Investigating the Mesoscale Structure in Gas-Solid Flow Limin Wang, Chinese Academy of sciences
9:31- 9:43	547697	Evaluation of a Dual-Grid Method for Multiscale TFM and CFD-DEM Simulations of Dense Gas-Solid Flows Daniel Hirche, Technical University of Munich
9:43- 9:55	546598	CFD Simulation of Wet Fluidized Beds Using TFM with Variable Particle-Particle Restitution Coefficient Qingang Xiong, General Motors
9:55- 10:07	547937	Particle-Scale Characterization of Spout Deflection in a Spout Fluidized BED Yansong Shen, University of New South Wales
10:07- 10:19	548101	Similarity Analysis of Gas Phase Flow Field in the Cyclone Separator ZhiYong Yang, Xiangli Cai, Jing Wang, Xinjiang Engineering Institute and Yaodong Wei, China University of Petroleum-Beijing at Karamay
10:19- 10:31	549383	Fluid-Particle Drag in Low-Reynolds-Number Bidisperse Suspensions Fan Duan, Xi'an Jiaotong University
10:31- 10:50	Coffee Break	
Parallel Session 6C: Modeling and Simulation Room: Nanning Room No.2 **Session Chairs: Yansong Shen, Limin Wang**		
10:50- 11:02	548932	A CFD-DEM-IBM Method for Cartesian Grid Simulation of Gas-Solid Flow in Complex Geometries Junwu Wang, Institute of Process Engineering, Chinese Academy of Sciences
11:02- 11:14	547960	Characterization of Drag Force on Agglomerates in Fluidized Beds Yali Tang, Eindhoven University of Technology
11:14- 11:26	548012	Numerical Investigation of Electrostatic Charging on the Hydrodynamics of Gas-Solid Fluidized Beds Marzieh Kordnejad, Eindhoven University of Technology
11:26- 11:38	548088	CFD-DEM Simulations of Heat Transfer inside Fluidized Beds at Elevated Temperatures Milan Mihajlovic, Eindhoven University of Technology
11:38- 11:50	549502	A Comprehensive Model for the Interface-Based Crystal Particle Autoselection Via Membrane Crystallization Xiaobin Jiang, Dalian University of Technology
11:50- 12:02	549630	Design and Simulation of a New Micro Fluidized Bed Reactor by Computational Fluid Dynamics Mohammad Latifi, Ecole Polytechnique Montreal
12:10-	**Lunch Break**	

13:30	Li Cafe on the 1st Floor

29, May, 2019
Beihai Room: Modeling and Simulation
Morning

Time	Abstract ID	Title
Parallel Session 5D: Modeling and Simulation Room: Beihai Room **Session Chairs: Fabrizio Scala, Weizhong Qian**		
8:30-8:55	565711	**Keynote Lecture:** Generating Macroscopic Quantities of Particle-Fluid Flows of Coarse Particles by an Averaging Method and its application to fine particle fluidization Qinfu Hou, Monash University
8:55-9:07	550904	Multiscale Simulation of Different-Sized Methanol-to-Olefins Fluidized Bed Reactors with Consideration of Coke Distribution Bona Lu, Institute of Process Engineering, Chinese Academy of Sciences
9:07-9:19	549460	Euler-Euler Model for Charge Transport in Fluidized Beds of Polyethylene Particles Manjil Ray and Alberto Passalacqua, Iowa State University
9:19-9:31	550926	Simulation of Spatial Trajectory and Regulation of Chemical Pesticide Droplets Shidong Xue, Dalian University of Technology
9:31-9:43	550923	Simulation of Proppant Transport in Fractures with DNS-Derived Drag Correlations Xiaolong Yin, Colorado School of Mines
9:43-9:55	549348	DEM Simulation on Particle Agglomerates Flow Behaviors during Drying Process in a Bubbling Fluidized Bed Tianqi Tang, Harbin Institute of Technology
9:55-10:07	550977	Assessing the Validity of Monte Carlo Techniques for Simulating Particulate Flows Aaron Morris, Purdue University
10:07-10:19	549334	LBM-DEM Analysis of Inertial Migration of Neutrally Buoyant Particle Suspensions in Planar Poiseuille Flow Charley Wu, University of Surrey
10:31-10:50	Coffee Break	
Parallel Session 6D: Modeling and Simulation Room: Beihai Room **Session Chairs: Qinfu Hou, Xiaolong Yin**		
10:50-11:02	549366	Numerical Simulation of Flow Characteristics of Two-Component Particles in Magnetically Controlled Gas-Solid Bubbling Bed Biao Wang, Harbin Institute of Technology
11:02-11:14	551381	The MP-PIC Method for CFD-Simulation of Fluidized Beds - Comparison of Two Different Implementations Timo Dymala, Hamburg University of Technology
11:14-11:26	549560	Experimental Study and DEM Modelling of the Contact Behaviour of Cylindrical Particles

		Philipp Grohn, Technische Universität Kaiserslautern
11:26-11:38	550942	A New Particle Cluster Diameter Model for Fluidized Bed Fei Li, Chinese Academy of Sciences
11:38-11:50	549395	Evaluation of Drag Models for Simulating Gas-Solid Fluidization of Geldart A and B Particles Junnan Zhao, Harbin Institute of Technology
12:10-13:30	**Lunch Break** Li Cafe on the 1st Floor	

29, May, 2019

Yangshuo Room Fundamentals of Fluidization

Afternoon

Time	Abstract ID	Title
Parallel Session 7A: Fundamentals of Fluidization Room: Yangshuo Room **Session Chairs: Ulrich Muschelknautz, Fei Li**		
13:30-13:55	550908	**Keynote Lecture:** A Definition of Micro Fluidized Bed in Terms of in-Bed Gas Back-Mixing Guangwen Xu, Shenyang University of Chemical Technology
13:55-14:07	549295	CFD-DEM Simulation of a Fluidized Bed of Particles with Inter-Particle Cohesive Force Zhiduan Zhao, Daoyin Liu, Jiliang Ma and Xiaoping ChenSoutheast University
14:07-14:19	551359	Experimental and Numerical Investigation of Coherent Motion in Slugging Gas-Solid Fluidization Musango Lungu, Zhejiang University
14:19-14:31	550947	Experiments and Numerical Simulations of Hydrodynamics in Gas-Liquid-Solid Min-/Micro-Fluidized Beds Mingyan Liu, Tianjin University
14:31-14:43	549442	A Novel Method for Gas to Particulate Mass Transfer Measurements in Fluidized Beds Anna Köhler, Chalmers University of Technology
14:43-14:55	548958	Characterization of Granular Electrostatics Generation Jun Yao, China University of Petroleum, Beijing
14:55-15:07	548104	Nonequilibrium Features in a Bubbling Fluidized Bed Haifeng Wang, Institute of Process Engineering, Chinese Academy of Sciences
15:07-15:19	549181	Instabilities in an Underflow Standpipe Operating in a Bubble-Upflow Regime Reddy Karri, Particulate Solid Research, Inc. and Bing Du, ExxonMobil Research and Engineering
15:19-15:31	548072	Experimental and Numerical Studies of the Fluidization and Electrostatic Characteristics of Non-Spherical Particles in a Pseudo-2D Fluidized Bed Bojian Qi, North China Electric Power University
15:31-16:00	Coffee Break	
Parallel Session 8A: Fundamentals of Fluidization Room: Yangshuo Room **Session Chairs: Reddy Karri, Mingyan Liu**		

16:00-16:12	549175	Cyclones with and without an Eccentrically Positioned Vortex Finder Ulrich Muschelknautz, Particulate Solid Research, Inc.
16:12-16:24	548713	A Pressure-Drop Method for Real-Time Monitoring the Solid Flux in Circulating Gas-Solid Process Sihong Gao, China University of Petroleum, Beijing
16:24-16:36	548942	Study on the Staggered Electrodes for 3D Electrical Capacitance Tomography Jingjing Shen, Dalian Institute of Chemical Physics, Chinese Academy of Sciences
16:36-16:48	549042	Mixing Behavior of Binary Mixtures of Biomass and Silica Sand in a Fluidized Bed Tolu Emiola-Sadiq, University of Sask
16:48-17:00	549053	Synchrotron Based X-Ray Imaging Technique for Understanding of Pharmaceutical Powder Granulation Chen Li, University of Saskatchewan
17:00-17:12	549140	Fluidization Behavior of Elongated Particles - CFD-DEM Simulations and X-Ray Tomography Experiments Ivan Mema, Delft University of Technology
	Break	
18:30-20:30	**Dinner** Li Cafe on the 1st Floor	

29, May, 2019

Nanning Room No.1. Fluidized Bed Applications

Afternoon

Time	Abstract ID	Title
Parallel Session 7B: Fluidized Bed Applications Room: Nanning Room No.1 **Session Chairs: Christoph Pfeifer, Songgeng Li**		
13:30-13:55	579542	**Keynote Lecture:** Fluidization engineering in chemical looping combustion/gasification Qingjie Guo, Ningxia University
13:55-14:07	549294	The Impact of Multifunctional Additives on NO_X Emission and Bed Agglomeration in Fluidized Bed Combustion of Biomass Burak Ulusoy, Technical University of Denmark, Sino-Danish Centre for Education and Research
14:07-14:19	549298	Oxy-Fuel Combustion of Solid Recovered Fuels in the Fluidized Bed Calciner of a 1 MW_{th} Calcium Looping Unit Martin Haaf, Technische Universität Darmstadt
14:19-14:31	549303	Release and Migration Behavior of Nitrogen in Chemical-Looping Gasification Process Based on Iron-Based Oxygen Carrier Yankun Li, Ningxia University
14:31-14:43	549300	Agglomeration in Fluidized Bed Gasification of Biomass Liyan Zhao, Technical University of Denmark
14:43-14:55	549323	Evaluation of the Fluid-Dynamically Down-Scaled Model of a ~200 MW_{th} CFB Boiler

		David Pallarès, Chalmers University of Technology
14:55-15:07	549326	Movement and Mixing of Biomass or Coal Particles in a Fluidized Bed Combustor Under High Temperatures Zhihao Yang, Southeast University
15:07-15:19	549330	Gas Velocity Distributions in Conical Spouted Beds with High Density Particles Neslin Guler, Middle East Technical University
15:19-15:31	548773	Energy Storage by Sand in Fluidized Bed Zhihong Liu, IHI Corporation
15:31-16:00	Coffee Break	
Parallel Session 8B: Fluidized Bed Applications Room: Nanning Room No.1 **Session Chairs: Qingjie Guo, David Pallarès**		
16:00-16:25	549385	**Keynote Lecture:** Assessment of Combustion and Gasification Behaviour in Pilot Scale for Additivated Biomass Christoph Pfeifer, University of Natural Resources and Life Sciences
16:25-16:37	550412	Indirect Heating of Bubbling Fluidized Beds by Means of Liquid Metal Heat Pipes Jürgen Karl, Friedrich-Alexander-University Erlangen-Nuremberg
16:37-16:49	549375	Performance of Large Scale Prepared Iron-Based Oxygen Carrier Tian Ren, Ningxia university
16:49-17:01	549623	Verification of Coarse-Grained CFD-DEM in Multiple Flow Regimes Junjie Lin, Zhejiang University
17:01-17:13	549389	Triboelectric Separation of Fine Coal by Using an Electric Field Fluidized Bed Xuejie Bai, China University of Mining and Technology
17:13-17:25	549474	Performance Assessment of a Vertical Pneumatic Conveying System for High Temperature Solar Particle Receivers Using a New Correlation for Minimum Transport Boundary Woei L. Saw, The University of Adelaide
17:25-17:37	548961	Design and Experimental Investigation of a Novel Interconnected Fluidized Bed for Chemical Looping Conversion of Solid Fuel Yongzhuo Liu, Qingdao University of Science and Technology
17:37-17:49	549004	Full-Loop CPFD Simulation on the Multi-Scale Gas-Solids Flow Characteristics of a Pressurized Circulating Fluidized Bed Xiaoli Zhu, Institute of Engineering Thermophysics, Chinese Academy of Sciences
17:49-18:01	550241	Multi-Stage Fluidized Bed for Methanol to Aromatics Weizhong Qian, Tsinghua University
	Break	
18:30-20:30	**Dinner** Li Cafe on the 1st Floor	

29, May, 2019

Nanning Room No.2: Modeling and Simulation

Afternoon

Time	Abstract ID	Title

Parallel Session 7C: Modeling and Simulation Room: Nanning Room No.2 **Session Chairs: Alberto Di Renzo, Sreekanth Pannala**		
13:30-13:55	548908	**Keynote Lecture:** CFD Simulation of Combustible Solid Waste Pyrolysis in a Fluidized Bed Reactor Qingang Xiong, General Motors
13:55-14:07	548168	Drying of Cohesive Powders in a Pilot Plant Scale Vibrated Fluidized Bed Sören E. Lehmann, Hamburg University of Technology
14:07-14:19	548776	Transient Gas/Solid Flow Characteristics in Gas-Solid Cyclone Reactor Based on Euler/Lagrange Approach Anjun Li, China University of Petroleum, East China
14:19-14:31	548495	Eulerian Modeling of Monodisperse Gas-Particle Flow with Electrostatic Forces Carlos Montilla, Université de Toulouse, CNRS-Toulouse
14:31-14:43	548505	Detailed CFD-DEM Simulation of Biomass Gasification in a Fluidized Bed Reactor Peter Ostermeier, Techinal University of Munich
14:43-14:55	548941	Simulations of the Hydrodynamics in a Novel Spouted Bed Structure with the Swirling Flow Effects Feng Wu, Northwest University
14:55-15:07	548720	Particle Scale Modelling of Bubble Dynamics in a Single Jet Fluidized Beds Zongyan Zhou, Monash University
15:30-16:00	Coffee Break	
Parallel Session 8C: Modeling and Simulation Room: Nanning Room No.2 **Session Chairs: Qingang Xiong, Zongyan Zhou**		
16:00-16:25	548898	**Keynote Lecture:** Evaluation of Coarse Graining Strategy and Degree in DEM-CFD Simulations of Cyclone Flow Alberto Di Renzo, University of Calabria
16:25-16:37	548732	Eulerian-Eulerian Modeling and Validation of Heat Transfer in Bubbling and Spouted Fluidized Beds Lukas Porter, TU Bergakademie Freiberg
16:37-16:49	548269	Development of a Refined Grid Model for an Industrial Gas-Solid Flow System Kazuya Takabatake, The University of Tokyo
16:49-17:01	548979	CFD-DEM Simulation of Biomass Gasification in Fluidized Bed Reactors Under Thermally Thick Treatment Jin Wang, Zhejiang University
17:01-17:13	548845	Evolution of the Force Chain Topology with Increasing Particle Non-Sphericity in 2D and 3D Systems Nicholas Conzelmann and Christoph Mueller, ETH Zurich
17:13-17:25	548982	Mesoscale Simulation of Bubble Behavior in Bubbling Fluidized Beds Kun He, Chongqing University
17:25-17:37	548972	Fluidization and Sedimentation Patterns in a Secondary Sedimentation Tank Long Fan, Hefei University
17:37-17:49	549043	Bubbling Behaviour of Geldart Group B Particles in Pulsed Fluidization Mode: Experimental and Simulation Study

		Ali Akhavan, CPFD Software
17:49-18:01	549091	Effects of the Distributor and Baffle on the Hydrodynamic Performance of a Bubbling Fluidized Bed Xuelian Xing, University of Western Ontario
	Break	
18:30-20:30	**Dinner** Li Cafe on the 1st Floor	

29, May, 2019
Beihai Room: Modeling and Simulation
Afternoon

Time	Abstract ID	Title
Parallel Session 7D: Modeling and Simulation Room: Beihai Room **Session Chairs: Mikio Sakai, Lilian de Martín**		
13:30-13:55	547955	**Keynote Lecture:** Meso-Scale Modeling of Flow Regime Transitions in Gas-Solid Fluidized Beds Wei Wang, Institute of Process Engineering, Chinese Academy of Sciences
13:55-14:07	550931	Direct Numerical Simulation of the Two-Phase Interaction of Non-Uniform Structure in Fluid-Solid Systems Weiwei Zhao, Harbin Institute of Technology
14:07-14:19	549416	CFD Analysis of the Influence of Particle Characteristics on the Hydrodynamics of a Bubbling Fluidized Bed Muhammad Ali Uzair, Polytechnic University of Bari
14:19-14:31	549436	CFD Modelling of Industrial-Scale Fluidized Systems: A Review of Recent Advancements Ali Akhavan, CPFD Software
14:31-14:43	549399	Kinetics Investigation on the Pyrolysis of Lignite Wenhao Lian, Taiyuan University of Technology
14:43-14:55	549403	An Integrated Model Simultaneously Considering Physical and Chemical Adsorption for CO_2 Capture in the Fluidized Bed Xiayi Hu and Yefeng Zhou, Xiangtan University
14:55-15:07	549407	CFD Simulation of Biomass Gasification Fluidized Bed with a Thermal State-Based EMMS Drag Model Panxing Kang, Xiangtan University
15:30-16:00	Coffee Break	
Parallel Session 8D: Modeling and Simulation Room: Beihai Room **Session Chairs: Chenglong Duan, Bona Lu**		
16:00-16:25	579445	**Keynote Lecture:** Development and application of flexible Eulerian-Lagrangian method for industrial gas-solid flow systems Mikio Sakai, The University of Tokyo
16:25-16:37	549349	DEM Numerical Investigation of Mixing Behaviors of Binary Mixtures Containing Non-Spherical Particles in a Fluidized Bed Anxing Ren, Harbin Institute of Technology

16:37-16:49	550239	CFD-DEM Simulation of Fluidization of Non-Spherical Particles Yongzhi Zhao, Zhejiang University
16:49-17:01	550334	Size Distribution of Fluidized Nanoparticle Agglomerates from Agglomeration and Fragmentation: A Population Balance Study Lilian de Martín, Chalmers University of Technology
17:01-17:13	550854	Numerical Simulation of Catalytic Coal Hydrogasification in a Lab-Scale Pressurized Fluidized Bed Zihong Xia, East China University of Science and Technology
17:13-17:25	550955	A Mathematical Model of a Drum-Type Boiler with Thermal Stress Calculation in the Circulating Fluidized Bed Combustor Xuandai Ngo and Byungho Song, Kunsan National University
	Break	
18:30-20:30	**Dinner** Li Cafe on the 1st Floor	

30, May, 2019

Plenary Session 3 Room: Junior ballroom Session Chairs: Liang-Shih Fan, Junwu Wang		
8:30-9:10	554106	A Multistage Fluidized Bed Reactor: Stability Analysis, Suppression of Back-mixing and its Application in Heterogeneous Catalysis Fei Wei, Tsinghua University
9:10-9:50	562767	Hydrodynamics of High Temperature Gas-Solid Fluidized Beds Jamal Chaouki, Polytechnique de Montréal,
9:50-10:30	579299	Scale-up of Fluidized Bed Drying: Hydrodynamics, Mixing and Heat and Mass Transfer Benjamin Glasser, Rutgers University
10:30-10:50	**Coffee Break**	
Plenary Session 4 Room: Junior ballroom Session Chairs: Olivier Simonin, Aibing Yu		
10:50-11:30	553042	Raiding the Toolbox to Tackle Practical Issues in Particle Technology Christine M. Hrenya, University of Colorado at Boulder
11:30-12:10	579247	How pyroclastic flows outsmart granular friction during volcanic eruptions Gert Lube, Massey University
12:10-13:30	**Lunch Break** Li Cafe on the 1st Floor	
13:30-18:30	**Technical Tour**	
18:30-20:30	**Farewell Dinner** Li Cafe on the 1st Floor	

31, May, 2019

Time	
8:30-11:30	**Technical Tour**

Poster Session

No.	Abstract	Author	Abstract Title
1	541260	Liliana Olivo, IPN, Mexico	Coupled Modeling of Hydrodynamics and Kinetics to Determine Single-Pass Conversion in a Heavy Oil Hydrotreater
2	545206	Juan F. Saldarriaga, Universidad de los Andes, Colombia	Minimum Spouting Velocity for Conical Spouted BEDS of Agroindustrial Waste Biomasses
3	546072	Kenny Hari Aditya, Sepuluh Nopember Institute of Technology, Indonesia	Fluidized Bed Drying of Fruits and Vegetables
4	547595	Ninfa Casillas, Instituto Politécnico Nacional, Mexico	Numerical Simulation of a Three-Phase Fluidized Bed Reactor: Hydrodynamic Analysis of the Expansion Zone
5	548498	Xin Su, State Key Laboratory of Heavy Oil Processing, China University of Petroleum, China	Dynamics of Cluster in a Pilot High-Density Circulating Fluidized Bed Riser
6	548917	Meiqin Zheng, Ningde Normal University, China	Adsorption Desulfurization Performance and Adsorption-Diffusion Study of B2O3 Modified Ag-CeOxTiO2-SiO2
7	548944	Jiantao Li, China University of Petroleum (Beijing), China	Distribution of Particles from Inlet Pipe in Fluidized Beds with Different Inlet Structures
8	549102	Hengzhi Chen, Chongqing University, China	Cluster Velocity and Slip Velocity in the CFB Riser: Experiment and Simulation
9	549305	Zhang Yuli, Hohai University, China	Scale-Up of the Circulating Fluidized Bed Methanation Reactor: A Numerical Study
10	549132	Hongsheng Chen, Tsinghua University, China	Lbm-DEM Simulation of Particle-Laden Flows in the Presence of Liquid Bridge Forces
11	549170	Vivek V. Buwa, Indian Institute of Technology Delhi, India	Effect of Solids Viscosity on Unary and Binary Gas-Solid Fluidization: ECT Measurements and CFD Simulations
12	549238	Woo Chang Sung, Sungkyunkwan University, Korea, Republic of (South)	CPFD Simulation for Variables Affecting the Flow Regime of Pneumatic Conveying
13	549264	Hoon Chae Park, Yonsei University, Korea, Republic of (South)	Numerical Study on Segregation Characteristics of Biochar in a Bubbling Fluidized Bed with Varying Aspect Ratio
14	549309	Huili Zhang, Beijing University of Chemical Technology, China	Solar Thermal Treatment of Non-Metallic Minerals: Powder Flowability As Critical Application Parameter
15	549338	Wangmin Lin, Zhejiang University, China	Characterizing Fluidization of Cohesive Particles in Fluidized Bed By Axial Distribution of Particle Motions

16	549339	Mikel Tellabide, University of the Basque Country, Spain	Role of Temperature on TAR Characteristics in a Fountain Enhanced Conical Spouted BED Reactor
17	549373	Mikel Tellabide, University of the Basque Country, Spain	Influence of Geometric Factors of Confined Conical Spouted Beds on Fine Particle Entrainment
18	549391	Yuta Sudo, Gunma University, Japan	Investigation of Loop Seal Performance in Cold Model Circulating Fluidized Bed
19	549429	Claudio Tregambi, Università degli Studi di Napoli Federico II, Italy	Thermal Behaviour of Granular Materials in Directly Irradiated Fluidized Beds
20	549465	Mohammad Latifi, Ecole Polytechnique Montreal, Canada	Direct Production of Rare Earth Oxides from a Fresh REE Ore through Thermal Cracking in a Fluidized Bed Reactor
21	549470	Yuta Sudo, Gunma University, Japan	Investigation of Loop Seal Operation By Pulse Air Injection for Improving the Performance and Stability
22	549473	MinJi Lee, Korea National University of Transportation, Korea, Republic of (South)	Wall-to-Bed Heat Transfer Characteristics in a Fluidized Bed of CNT Particles
23	550781	Chenxi Zhang, Tsinghua University, China	Stability Analysis of Gas Solids Flow through Parallel Paths
24	550790	Wenhuan Zhang, Ningbo University, China	Lattice Boltzmann Simulation of Two-Dimensional Buoyant Impinging Streams with the Soret and Dufour Effects
25	550834	Chunyan Chu, Tianjin University, China	Gas-Liquid Two-Phase Flow and Mass Transfer of CO2 Absorption into Amino Acids Sodium Aqueous Solution in Microchannel
26	550836	Jae-Young Kim, Korea Institute of Energy Research, Korea, Republic of (South)	Impact of Horizontal Internals on the Hydrodynamics in a Gas-Solid Fast Fluidized Bed
27	550861	Yaran Yin, Tianjin University, China	Enhancement of Gas-Liquid Two-Phase Flow and Mass Transfer in the Baffled Microchannel
28	550953	Yaodong Wei, China University of Petroleum, China	Research on the Relationship between Flow Patterns of FCC Catalyst and Open Rate of Butterfly Valve in the Inclined Pipe
29	551026	Hui Yang, University of Shanghai for Science and Technology, China	Particle Dynamics of Irregular Sand Particles Flow within a Rotating Drum
30	553445	Chao Hua, Chinese Academy of Sciences, China	Study on Gas Phase Flow Characteristics and Particle Separation Efficiency of Three-Stage Internal Cyclone Separator in Fluidized Bed Reactor (FBR) of in Cold Hydrogenation Reaction

31	556656	Gyoung-Tae Jin Jin, Korea Institute of Energy Research, Korea, Republic of (South)	Solid Circulation and Reduction Characteristic of Mass Produced Particles in a 0.5 Mwth Chemical Looping Combustion System
32	557668	Yoshihide Mawatari, Kyushu Institute of Technology, Japan	Effect of a Mechanical Vibration on Particle Migration Behavior in a Gas-Solid Fluidized Bed for Fine Cohesive Powders