

The 3rd International Conference on Numerical Methods in Multiphase Flows, ICNMMF-III, June 26-29 2017, Tokyo, Japan

		Room A	Room B	Room C	Room D
6/27	8:30-8:45	Opening Remarks			
	8:45-9:30	Andrea Prosperetti			
		Coffee Break			
	10:00-10:30	Huaxiong Huang	Naoki Shikazono		
	10:40-12:00	Session A1	Session B1	Session C1	Session D1
		bubbly turbulence (1)	particle (1) IB	application (1)	compressible (1) interface
		Effects of the volume fraction on turbulent bubbly flow in a vertical pipe Kiyoun Kim, Jungwoo Kim, Haechon Choi	A three dimensional cut cell immersed boundary solver based on the discontinuous Galerkin method Dennis Krause, Florian Kummer, Martin Oberlack	High fidelity simulation of condensation and freezing Miad Yazdani, Sergei Burlatsky	Fully-coupled algorithm for interfacial flows at all speeds Fabian Denner, Cheng-Nian Xiao, Berend van Wachem
		Prediction of flow regimes using Large Eddy Simulation coupled to a multifield approach Solène Fleau, Stéphane Vincent, Stéphane Mimouni	A novel non-iterative immersed boundary method for rigid particles of arbitrary density ratio Silvio Tschigale, Tobias Kempe, Jochen Fröhlich	Analysis of Taylor flow behavior of non-Newtonian Liquids in microchannel using CLSVOF method Pankaj Pallear, Somasekhara Goud Sontti, Arnab Atta	Investigation of an implicit compressible Volume of Fluid formulation using Basilisk Daniel Fuster, Stephane Popinet
		A new model for bubble-induced turbulence based on direct numerical simulation data Tian Ma, Claudio Santarelli, Thomas Ziegenhein, Dirk Lucas, Jochen Fröhlich	Development of a 2D multiphase Immersed Boundary solver for the simulation of particle dynamics at fluid-fluid interfaces Adam O'Brien, Markus Bussmann	Coupling of Volume of Fluid and Level Set methods in condensing heat transfer simulations Recep Kahraman, Gavin Tabor	A multi-resolution conservative sharp-interface method for compressible multi-material flows based on the multi-region level-set method Shucheng Pan, Xiangyu Hu, Nikolaus A. Adams
		DNS studies of the effect of surfactants and coalescence on bubbly upflows in vertical channels Grégar Tryggvason, Jiakai Lu	Effect of conductive and convective heat fluxes in dense solid-dispersed two-phase flows Jingchen Gu, Shintaro Takeuchi, Takeo Kajishima	Simulations of struvite reactive precipitation in hydrodynamic vortex separator Bernardas Jankauskas, Gavin Tabor, Daniel Jarman	A new approach to computing compressible multiphase flow with phase change using stratified flow model Kai Fu, Xiaolong Deng
		Lunch Break			
	13:15-14:00	Jacobus Derksen			
	14:10-14:40	Anthony Wachs	Holger Marschall		
	14:40-15:10	Coffee Break			
	15:10-16:30	Session A2	Session B2	Session C2	Session D2
		bubbly turbulence (2)	particle (2) IB	application (2) drop	compressible (2) interface
		CFD-simulation of different bubbly flow situations applying the Euler-Euler framework Paolo Cifani, G.J.M. Priems, W. Michalek, J.G.M. Kuerten, C.W.M. Geld, B.J. Geurts	Direct numerical simulation of reactive fluid-solid systems using a Ghost-cell based Immersed Boundary method Jiangtao Lu, E.A.J.F. Peters, J.A.M. Kuipers	3D simulation of pinning of droplets on tilted surfaces with OpenFOAM Daniel Rettenmaier, Holger Marschall, Dieter Bothe, Cameron Tropea	A variational approach to design a numerical scheme on an arbitrary moving grid for N-fluid flow with thermodynamic consistency Thibaud Vazquez-Gonzalez, Antoine Llor, Christophe Fochesato
		A DNS-VOF study of the effect of bubbles on turbulent statistics in a channel flow Paolo Cifani, G.J.M. Priems, W. Michalek, J.G.M. Kuerten, C.W.M. Geld, B.J. Geurts	Closures for discrete suspension flow models: new insight from particle-resolved simulations and spatial data filtering Federico Municchi, Stefan Radl	Combined multifluid-population balance method for polydisperse multiphase flows Simon Lo, Alexander Vikhansky	A robust and accurate MUSCL multislope scheme for particle laden flow: application to solid rocket motor instabilities Valentin Dupif, Marc Massot, Joël Dupays, Frédéric Laurent, Clément Le Touze
		Effect of the turbulent contribution of the added mass force in bubbly jet flow Aroua Aouadi, Bellakhal, Jamel Chahed	A 3D Immersed Boundary-Lattice Boltzmann method for simulating large-scale particulate flows Baili Zhang, Ming Cheng, Jing Lou	CLSVOF study on droplet formation and breakup mechanism in a flow-focusing device Somasekhara Goud Sontti, Arnab Atta	DEM study of long term shock-particle curtain interaction Ling-Jie Jiang, Xiao-Long Deng
		Homogeneous turbulence structure and self-preservation in uniformly sheared bubbly flow Hela Ayeb Mrabtni, Ghazi Bellakhal, Jamel Chahed	Particle shape effects on sedimentation of particles Satoshi Yokojima, Hideyoshi Asada	A modelling framework for the development of fuel-coolant interaction applications Christophe Fochesato, Magali Zabiégo	Numerical investigation on the influence of gas-particle two-way coupling to the shock fluid in Lagrangian framework Dawei Chen, Haiguan Sun, Pei Wang, Xijun Yu, Dongjun Ma
		Session A3	Session B3	Session C3	Session D3
		bubble (1) scheme	particle (3) model	application (3) gas-liquid	compressible (3) scheme
		Direct numerical simulation of nucleate pool boiling at large microscopic contact angle and moderate Jakob number Grégory Huber, Sébastien Tanguy, Catherine Colin	Modifications to the kinetic theory as applied to dense granular particulate flows Efstathios E. Michaelides, Yifei Duan, Zhi-Gang Feng, Shaolin Mao	High-performance numerical model for multiphase flows with polyhedral grids and applications to sanitary-ware Akio Ikebata, Feng Xiao	High-resolution capturing of discontinuities for multi-component flows Yang-Yao Niu, Tsung-Yu Yang, Feng Xiao

16:40–18:00	A hierarchical block structured space-time spectral element method for simulating complex multiphase flows Chaoux Pei, Mark Sussman, M. Yousu Hussaini	A homogenized Lattice Boltzmann method for the simulation of arbitrary-shaped 3D particle in a fluid flow Mathias J. Krause, Fabian Klemens, Thomas Henn, Robin Trunk, Hermann Nirschl	Application of an immersed boundary method with analytical interface approximation to a bubble chain in liquid metal Benjamin Krull, Stephan Schwarz, Jochen Fröhlich, E.Strumpf, N. Shevchenko, O. Keplinger, S. Eckert	Simulation of compressible multiphase flows near the critical point using a sharp interface method Timon Hitz, Stefan Fechter, Fabian Föll, Christoph Müller, Claus-Dieter Munz
	A local level set finite element method for simulating bubble rising by using adaptive unstructured meshes Long Cu Ngo, Hyoung Gwon Choi	A fourteen-moment bi-Gaussian closure for the simulation of disperse multiphase flows Jérémie Laplante, Clinton P. T. Groth, Frédérique Laurent, Aymeric Vié	Innovative computing for complex multiphase flows Damir Juric, Jalel Chergui, Seungwon Shin, Lyes Kahouadji, Richard V. Craster, Omar K. Matar	Numerical modelling of underwater explosions of aluminized explosives using an extension of five-equation model Zhiwei Feng, Jili Rong, Dalin Xiang, Xuan He
	An extended discontinuous Galerkin method for transient multiphase flows Martin Smuda, Florian Kummer, Thomas Utz	An efficient particle tracking algorithm for Monte Carlo particles on unstructured spectral element grids Jonathan Komperda, Farzad Mashayek	Interface- and discontinuity-aware numerical schemes for plasma 3-T radiation diffusion in two and three dimensions William Dai, A.J. Scannapieco	On positivity-preserving for multi-resolution and multi-phase simulations Shucheng Pan, Xiangyu Hu, Nikolaus. A. Adams

	Room A	Room B	Room C	Room D
8:45–9:30	Tim Colonius			
	Coffee Break			
9:50–10:20	Yosuke Imai	Niels Deen		
10:30–11:50	Session A4	Session B4	Session C4	Session D4
	FSI / suspension	particle (6) turbulence	spray / jet (2)	compressible (3) scheme
	Turbulent channel flow over hyperelastic walls Marco E. Rosti, Luca Brandt	Analysis of solid-liquid mixing in a stirred tank through CFD-DEM coupling and tomography Cindy Tran, Mohammadreza Ebrahimi, Farhad Ein-Mozaffari, Ali Lohi	Improving both numerical analysis of experimental data and computational models for detailed comparisons in a pulsed polydisperse spray counterflow configuration Dennis Dunn, Jorge-César Brändle de Motta, Laurent Zimmer, Aymeric Vié, Matthieu Boileau, Marc Massot, Eleonore Riber	Compressible Navier-Stokes simulation of wall shear stress from non-spherical bubble collapse Tomoki Kondo, Keita Ando
	Numerical study on rheology of filament suspensions in the inertial regime Arash Alizad Banaei, Marco Edoardo Rosti, Luca Brandt	A Comparison of quadrature-based moment methods to Eulerian-Lagrangian methods for particle-laden flows Ravi G. Patel, Bo Kong, Jesse Capececlatro, Rodney O. Fox, Olivier Desjardins	Near critical jet simulations with a discontinuous Galerkin method and tabulated general equations of state Fabian Föll, Stefan Fechter, Timon Hitz, Claus-Dieter Munz	Simulations of compressible multiphase flows with BVD-WENO-THINC algorithm Xi Deng, Feng Xiao, Keh-Ming Shyue
	Deformable particle suspensions in shear flow Luca Brandt, Marco E. Rosti	Numerical simulation of disk-like particles in turbulent vertical channel flows Lihao Zhao, Wenjun Yuan, Niranjana Challabotla, Helge I. Andersson	Direct numerical simulation of spray formation in a turbulent gas-liquid mixing layer with a momentum-conserving Volume-of-Fluid method Yue Ling, Daniel Fuster, Grégar Tryggvason, Stéphane Zaleski	An operator splitting method for the Jordanski-Kogarko-Wijngaarden model of bubbly ow in liquid Keh-Ming Shyue
	Numerical simulations of two-phase flows in irregular domains and fluid-membrane interaction Alexis Dalmon, Mathieu Lepilliez, Sebastien Tanguy	DNS of particle concentration in a turbulent plane Couette-Poiseuille flow with no wall shear Kun Yang, Lihao Zhao, Helge I. Andersson	Statistical modeling of the gas-liquid interface using high order moment method for polydisperse evaporating sprays toward a coupling with separated flows in automotive engine Mohamed Essadki, Florence Drui, Stephane de Chaisemartin, Adam Larat, Frederique Laurent, Thibaut Menard, Marc Massot	An Eulerian-Lagrangian method for both dilute and dense compressible multiphase flows Dong-Jun Ma, Bao-Rui Wang, Da-Wei Chen, Hai-Quan Sun, Pei Wang
	Lunch Break			
12:55–13:40	Djamel Lakehal			
13:50–14:20	Dirk Lucas	Shintaro Takeuchi		
14:20–15:05	Poster session & Coffee Break			
	BLUE: A high performance code for simulation of complex multiphase flows Jalel Chergui, Damir Juric, Seungwon Shin, Lyes Kahouadji, Richard V. Craster, Omar K. Matar	Flow dynamics of coalescing and non-coalescing bubbles in a vertical channel Varun Jadon, Shu Takagi, Kajuyasu Sugiyama	Three-dimensional numerical simulations of the motion of a bubble passing through a liquid-liquid layer Kenta Tsubota, Mitsuhiro Ohta, Mark Sussman	
	Boundary conditions for modeling of moving contact lines Hanna Holmgren, Gunilla Kreiss	Flow analysis of the dam break problem with the density function method Koichi Tsubogo	Moving contact line treatment using a finite volume ALE interface-tracking method Dirk Grunding, Dieter Bothe, Holger Marschall	
	Numerical simulation of red blood cell flow in coronary microcirculation Shohei Hodota, Boyang Tang, Kazuya Shimizu, Satoshi Ii, Kazuyasu Sugiyama, Shu Takagi	Particle dispersion in a double-diffusive turbulent layer Jordi Pallares	Modeling and VOF based simulation of dynamic contact lines Mathis Fricke, Dieter Bothe	

	Session A5	Session B5	Session C5	Session D5
	bubble (2) dynamics	particle (5) turbulence / LES	spray / jet (2)	vertical gas-liquid flow
	Numerical simulation of departure from nucleate boiling (DNB) Yohei Sato, Bojan Niceno	Large-Eddy Simulation of turbulent dispersed flow: Modelling subgrid effects on particle dispersion Cristian Marchioli, Alfredo Soldati	Coupling a hierarchy of diffuse interface model with kinetic-based moment methods for primary atomization simulations in liquid propulsion Pierre Cordesse, Angelo Murrone, Marc Massot, Clément Le Touze, Aymeric Bouchet	Axial evolution of upward bubbly flow in vertical pipes using a CFD-DEM approach Carlos Peña-Monferrer, Sergio Chiva, Guillem Monrós-Andreu, Raül Martínez-Cuenca, José Luis Muñoz-Cobo
	A numerical approach for simulations of collapsing bubbles near rigid and soft materials Eric Johnsen, Shahaboddin Alahyari Beig, Mauro Rodriguez	Effect of cone heights on the flow field and performance of cyclone separators Lakhbir Singh Brar	High fidelity simulation of liquid jet atomization in excited crossflow Xiaoyi Li, Marios C. Soteriou	Validity of the two-fluid model in vertical intermittent flow Raad Issa, Francesco Galleni
15:05–16:05	DNS of a rising bubble in a viscoelastic liquid Matthias Niethammer, Holger Marshall, Gunter Brenn, Dieter Bothe	Towards Large Eddy Simulation of two-way coupled disperse phase flows David Mercier, Aymeric Vié, Marc Massot	Evaluation of an Eulerian-Lagrangian spray atomization (ELSA) Model: Modeling of coupling between dense and disperse regions Timothy F. Leung, Clinton P. T. Groth, John T. C. Hu	Numerical simulation of bubbly flows in a vertical column with different bubble size distributions Alexander Chernyshev, Alexander Schmidt
	Session A6	Session B6	Session C6	Session D6
	bio / biomass	particle (6) E-L	interface & wettability	dam break / debris
	Blood flow simulation on platelet adhesion by an immersed boundary method with GPIIb α -VWF bond formation modelling Kazuya Shimizu, Kazuyasu Sugiyama, Shu Takagi	Accurate particle-mesh methods for simulating electrically charged particle-laden flows Jesse Capecehatro, Yuan Yao	The importance of mass and momentum conservation in simulating multiphase flows Robert Chiodi, Mark Owkes, Olivier Desjardins	Dam breaking simulations: a comparison of two compressible approaches with experimental data Florence Drui, Stéphane Vincent, A. Larat, S. Kokh, M. Massot
16:15–17:15	Numerical simulation of bubbly flows in an aeration tank with biochemical reactions Khateeb Noor Ul Huda, Kazuya Shimizu, Shu Takagi	Improvements of four-way coupled Euler/Lagrange numerical models by multi-scale simulation, high performance computing Amir Esteghamatian, Anthony Wachs	GNBC-based front-tracking method for 3D simulation of droplet motion on solid surface Xinglong Shang, Zhengyuan Luo, Bofeng Bai	A VOF-based finite volume method for numerical simulation of weakly-compressible two-phase flows using higher order schemes Zhe Li, Guillaume Oger, David Le Touzé
	Direct numerical simulation of biomass-coal co-firing in a turbulent channel flow A. Awasthi, J. G. M. Kuerten, B. J. Geurts	A point-particle approach that captures fully-resolved physics for particle-laden flows S. Balachandar, G. Akiki, D. Zwick	Numerical simulation of motion of fine droplet on structured solid surface using Phase-Field model-based Lattice-Boltzmann method Naoki Takada, Kazuma Kurihara, Ryohei Hokari, Sohei Matsumoto	Numerical modelling of debris accumulations at Masonry Bridge Piers and its influence on scouring Riella, M., Kahraman, R., Kripakaran, P., Djordjevic, S., Ebrahimi, M., Tabor, G.
18:30–20:30	Banquet			

	Room A	Room B	Room C	Room D
8:45–9:30	Hiroyuki Takahira			
	Coffee Break			
10:00–10:30	Emilio Baglietto	Yuehong Qian		
10:40–12:00	Session A7	Session B7	Session C7	Session D7
	drop (1) dynamics	interface / turbulence	interface / scheme (1)	cavitation (1) model
	Viscosity-modulated breakup and coalescence of large drops in bounded turbulence Alessio Roccon, Francesco Zonta, Alfredo Soldati	A Volume of Fluid dual scale approach for modeling turbulent liquid/gas phase interfaces Dominic Kedelty, James Uglietta, Marcus Herrmann	A two-dimensional conservative front-tracking method for multi-scale multiphase flows Mathilde Tavares, Eric Chénier, Stéphane Vincent	Modeling and numerical simulations of bubble cloud dynamics in a focused ultrasound field Kazuki Maeda, Tim Colonius
	Numerical simulation of pressure generated at the liquid droplet impact on a solid surface Yuki Tatekura, Masao Watanabe, Kazumichi Kobayashi, Toshiyuki Sanada	On the ADM-tau model for sub-grid surface tension in two phase flow Large Eddy Simulations Wojciech Aniszewski	Flux-correction for fully embedded concentration boundary layers in FV-based solvers Dieter Bothe, Andre Weiner	A new perspective on cavitation modeling: Improved bubble growth and transport modeling Michael Kinzel, Robert Kunz, Jules W. Lindau
	Drop in bubble coalescence in a liquid pool Zhen Jian, Fan Yang, Erqiang Li, Sigurdur T. Thoroddsen	Modeling of intermittency region in stratified air-water flows Marta Wacławczyk, Tomasz Wacławczyk	An efficient and stable interface method for SPH Mingyu Zhang	A numerical model for three-phase liquid-vapor-gas flows with interfaces and cavitation Marica Pelanti
	Numerical simulations of multiphase flows using the CIP-CSL3ENO scheme Qijie Li, Kensuke Yokoi	Phase dispersion modeling in dispersed liquid-liquid flow in vertical pipe flow Mariem Rezig, Ghazi Bellakal, Jamel Chahed	Spurious currents reduction in two-phase flow numerical simulations using the Front tracking with non-uniform Lagrangian markers distribution Mijail Febres, Dominique Legendre	Numerical simulation of ultrasound propagation in fluid impacting with cavitating bubble cluster Xiuxiu Lyu, Xiangyu Hu, Nikolaus A.Adams
	Lunch Break			

13:15–14:00	Dominique Legendre			
14:10–14:40	Kosuke Hayashi	Cristian Marchioli		
14:40–15:10	Coffee Break			
15:10–16:30	Session A8	Session B8	Session C8	Session D8
	drop (2) evaporation	wettability / tension	interface / scheme (2)	cavitation (2) application
	Direct numerical simulation of droplet evaporation in isotropic turbulence Michael Dodd, Antonino Ferrante	Extending a hybrid Level Set / Front Tracking method for the simulation of surface tension driven flows Tobias Tolle, Tomislav Maric, Holger Marschall, Dieter Bothe	A novel variant of the THINC method with quadratic interface representation on arbitrary and hybrid unstructured grids Feng Xiao, Bin Xie	Simulation of hydraulic flip in cavitating nozzles using one-fluid and two-fluid equilibrium models Mathis Bode, Florian vom Lehn, Sutharsan Satcunanathan, Vincent Le Chenadec, Heinz Pitsch
	Direct numerical simulation of evaporating droplets Romain Alis, Sébastien Tanguy, Olivier Rouzaud, Jean-Luc Estivalezes	Effects of impact velocity and wettability on spread factor in the early stage of spreading Yang Xu, Stéphane Vincent, Qi-chang He, Hung Le-Quang	Evaluating curvature for the Volume of Fluid method via interface reconstruction Fabien Evrard, Fabian Denner, Berend van Wachem	Numerical investigation of bubble nuclei characteristics on cavitating flow around a hydrofoil by homogeneous flow approach Wakana Tsuru, Satoshi Watanabe, Shin-ichi Tsuda
	Direct numerical simulation of evaporation and burning of a fuel droplet Muhammad Irfan, Metin Muradoglu	Interfacial flows and solid boundaries treatment in Smoothed Particle Hydrodynamics Michal Olejnik, Jacek Pozorski	A unified treatment of complex geometries and interfaces with the Cut-cell method Vincent Le Chenadec	The numerical analysis of the nose shape effect on the flight stability of the underwater projectile Kohei Okuno, Akiko Matsuo
	Direct numerical simulation of evaporating drops at laminar and turbulent conditions Christopher A. Edelman, Patrick C. Le Clercq, Berthold Noll	Effective slip for flow through lubricant-impregnated surfaces under thermocapillary action Rui Sun, Chiu-on Ng	On a relation between the sharp and diffusive interface models Tomasz Wacławczyk	Numerical study of cavitation inception using a holistic approach Sung-Eun Kim
16:40–18:00	Session A9	Session B9	Session C9	Session D9
	drop (3) scheme	scheme	interface / scheme (3)	
	Hydrodynamics and mass transfer from a spherical droplet moving through a continuous phase Azeddine Rachih, Sophie Charton, Dominique Legendre, Eric Climent	Numerical quadrature of surface integrals using the surface Laplace–Beltrami operator Johannes Kromer, Dieter Bothe	Moment-of-fluid interface reconstruction with two connected lines Qinghong Zeng, Wenjun Sun	
	Advances in adaptive numerical techniques for the simulation of incompressible interfacial flows Pablo Gómez, Claudio Zanzi, Joaquín López, Julio Hernández	Dual domain material point method for multi-velocity formulations Duan Zhang	Adaptive interface sharpening scheme for modelling multiple flow regimes Mohit Tandon, Vinesh H. Gada, Ananya Ravi, Raghavendra Krishnamurthy	
	A fast mass-preserving interface-correction level set/ghost fluid method for colloidal droplets under depletion forces Zhouyang Ge, Outi Tammiola, Luca Brandt	Newton linearization and iterative schemes for Eulerian n-Fluid systems Robert F. Kunz, Ilker Topcuoglu, Sean M. McIntyre	A thickening method to simulate interfaces with phase change using the Second Gradient theory Davy Nayigizente, Thomas Schmitt, Sébastien Ducruix	
	A conservative level set approach to investigate drop spreading on a porous surface Sheng Wang, Olivier Desjardins	Modeling cyclic packed bed reactors using unit-cell concept in CFD Soumendu Dasgupta, Arnab Atta	A second order convergent PLIC algorithm for unstructured meshes Tomislav Maric, Holger Marschall, Dieter Bothe	
18:00–18:15	Closing Remarks			