

28th International Conference on Discrete Simulation of Fluid Dynamics (DSFD 2019)
JNCASR, Bangalore, INDIA. 22nd - 26th July 2019.



Monday, 22nd July 2019

Talk Identifier	Session	Time	Speaker	Affiliation	Title of talk
Opening	Morning Chair: KR Sreenivas	8.30 - 8.45	Santosh Ansumali	JNCASR, Bangalore, India	DSFD Conference Series, Welcome to 28 th DSFD, 2019
JNCASR President's Talk		8.45 - 9.00	K S Narayan	JNCASR, Bangalore, India	Welcome address
Invited Talk - 1		9.00 - 9.45	Raymond Kapral	University of Toronto, Canada	Synthetic motors and molecular machines: Active motion on nanoscales
Invited Talk - 2		9.45 - 10.30	Ignacio Pagonabarraga	University of Barcelona, Spain	Transport and instabilities in confined complex fluid flows
Tea Break (10.30 - 11.00)					
Invited Talk - 3	Pre-lunch Chair: SV Raghurama Rao	11.00 - 11.45	Santosh Ansumali	JNCASR, Bangalore, India	Entropic lattice Boltzmann methods
Long Talk - 1		11.45 - 12.15	Christophe Coreixas	Université de Genève, Switzerland	Physically sound collision models: Reality or numerical trick
Long Talk - 2		12.15 - 12.45	Dominik Wilde	Bonn-Rhein-Sieg University of Applied Sciences, Germany	Thermal and compressible lattice Boltzmann methods with semi-Lagrangian streaming step
Short Talk - 1		12.45 - 13.00	Florian Renard	CERFACS, France	Transonic flow simulation using a hybrid lattice Boltzmann method on standard lattices
Lunch (13.00 - 14.00)					
Invited Talk - 4	Post-lunch Chair: Samridhhi Ray	14.00 - 14.45	Jeremie Bec	CNRS, CEMEF-MINES ParisTech, France	Buckling and fragmentation of small inextensible fibers in turbulence
Long Talk - 3		14.45 - 15.15	Siddharth Krithivasan	JNCASR, Bangalore, India	An efficient mechanism for microfliers
Long Talk - 4		15.15 - 15.45	Benzi John	STFC Daresbury Laboratory, UK	Numerical Study of nanopore evaporation using Direct Simulation Monte Carlo
Short Talk - 2		15.45 - 16.00	Gaurav Nath	Indian Institute of Technology Delhi, India	Lattice Boltzmann simulations of amphiphilic Janus spheres
Tea Break (16.00 - 16.15)					
Invited Talk - 5	Post-tea	16.15 - 17.00	V. Kumaran	Indian Institute of Science Bangalore, India	Rheology of lamellar mesophases.
Industry Session - I	Chair: D. Fedosov	17.00 - 19.30	Bharatkumar Sharma	NVIDIA Graphics Pvt Ltd, Bangalore, India	Nvidia GPU Bootcamp
Dinner (19.00 - 21.30)					

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Talk Identifier	Session	Time	Speaker	Affiliation	Title of talk
Invited Talk - 6	Morning Chair: Ganesh Subramanian	8.30 - 9.15	Rajesh Ganapathy	JNCASR, Bangalore, India	Glassy dynamics in dense active matter
Invited Talk - 7		9.15 - 10.00	Mahendra Verma	Indian Institute of Technology Kanpur, India	Kinetic theory vs. hydrodynamics: Their powers and limitations
Long Talk - 5		10.00 - 10.30	Gauthier Wissocq	CERFACS, France	On the stability of the BGK and the regularized collision models
Tea Break (10.30 - 11.00)					
Invited Talk - 8	Pre-lunch Chair: Ignacio Pagonabarraga	11.00 - 11.45	Sumesh Thampi	Indian Institute of Technology Madras, India	Active isotropic liquid crystals
Long Talk - 6		11.45 - 12.15	Lakshminarsimha RV	JNCASR, Bangalore, India	Shear-induced migration in micro-swimmer suspensions
Long Talk - 7		12.15 - 12.45	Fabio Guglietta	University of Rome "Tor Vergata", Italy	From ab-initio mesoscale modelling of red blood cells towards macroscale simulations in biomedical devices
Short Talk - 3		12.45 - 13.00	Shaurya Kaushal	JNCASR, Bangalore, India	Revisiting closure models for dilute polymer solutions
Lunch (13.00 - 14.00)					
Invited Talk - 9	Post-lunch Chair: V. Kumaran	14.00 - 14.45	Dmitry Fedosov	Forschungszentrum Jülich Germany	Analysis of cells in microfluidics
Long Talk - 8		14.45 - 15.15	Seyed Ali Hosseini	University of Magdeburg "Otto von Guericke", Germany	Linear and numerical stability analyses of the lattice kinetic scheme
Long Talk - 9		15.15 - 15.45	Francesca Pelusi	University of Rome "Tor Vergata", Italy	Evidences of avalanche statistics in the coarsening dynamics of a biphasic system via lattice-Boltzmann simulations
Short Talk - 4		15.45 - 16.00	Miguel Chávez	Universidad Politécnica de Madrid, Spain	Optimized multiple-relaxation-time with central moments for under-resolved flow simulations
Tea Break (16.00 - 16.15)					
Short Talk - 5	Post-tea Chair: Mahendra Verma	16.15 - 16.30	Nishant Soni	JNCASR, Bangalore, India	An isotropic delayed difference scheme for solving Poisson equations
Industry Session – II		16.30 - 19.15	Intel SW team	Intel Technology India Pvt. Ltd., Bangalore, India	Essential guide to optimize simulation codes for current and next generation Intel architectures
Dinner (19.00 - 21.30)					

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Thursday, 25th July 2019

Talk Identifier	Session	Time	Speaker	Affiliation	Title of talk
Invited Talk - 10	Morning Chair: Raymond Kapral	8.30 - 9.15	Bruce Boghosian	Department of Mathematics, Tufts University, USA	The kinetic theory of wealth distribution
Invited Talk - 11		9.15 - 10.00	Jonas Latt	Université de Genève, Switzerland	Is LBM for compressible flow industrially relevant?
Long Talk - 10		10.00 - 10.30	Santhan Chandragiri	Indian Institute of Technology Madras, India	Flow patterns and topological defects of active nematics
Tea Break (10.30 - 11.00)					
Short Talk - 6	Pre-lunch Chair: Anirban Chakraborti Post-lunch	11.00 - 11.15	Sumithra Reddy	Indian Institute of Technology Madras, India	Simulation of viscoelastic fluid flows using lattice Boltzmann method
Long Talk - 11		11.15 - 11.45	Aditya Senga	TU Eindhoven, Netherlands	A multiscale microkinetic analysis of catalyst deactivation
Long Talk - 12		11.45 - 12.15	Daniele Chiappini	University of Rome "Niccolo Cusano", Italy	A lattice Boltzmann free surface model for injection moulding of a non-Newtonian fluid
Long Talk - 13		12.15 - 12.45	Pinaki Kumar	TU Eindhoven, Netherlands	A multi-component lattice Boltzmann approach for seismic causality
Short Talk - 7		12.45 - 13.00	Haijing Li	TU Eindhoven, Netherlands	Plasma induced catalysis: towards a hybrid numerical approach
Lunch (13.00 - 14.00)					
Short Talk - 8	Chair: Rajesh Ganapathy	14.00 - 14.15	Niall O'Byrnes	Turbulent Dynamics, Dublin, Ireland	Dedicated lattice Boltzmann machine provides up to 80% cost reduction
Long Talk - 14		14.15 - 14.45	Felix Milan	University of Rome, Italy	Multiscale lattice Boltzmann simulations of droplet dynamics in turbulent flows
Long Talk - 15		14.45 - 15.15	Xiao Xue	University of Rome, Italy	Effects of thermal fluctuations in particles settling in the multicomponent fluid
Long Talk - 16		15.15 - 15.45	Travis Mitchell	The University of Queensland, Australia	Multiphase lattice Boltzmann modelling of elongated bubbles in annular piping: Applications in the extraction of natural gas
Short Talk - 9		15.45 - 16.00	Himadri Basu	Indian Institute of Technology Bhubaneswar, India	A fully coupled hybrid lattice Boltzmann-finite difference method for transient electrokinetics
Tea Break (16.00 - 16.15)					

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Short Talk - 10	Chair: Sumesh Thampi	16.15 - 16.30	Yos Sitompal	Tokyo Institute of Technology, Japan	A filtered cumulant lattice Boltzmann method for violent two-phase flows
Short Talk - 11		16.30 - 16.45	Venu Gopal Agarwal	Indian Institute of Technology Delhi, India	Numerical investigation of droplet formation in a T-junction microchannel using shear thinning fluids
Short Talk - 12		16.45 - 17.00	Tejas Raval	Nirma University, Ahmedabad, India	Coupled dual grid level set and lattice Boltzmann based multi-phase flow solver
Short Talk - 13		17.00 - 17.15	Sravana Chaithanya	Indian Institute of Technology Madras, India	Dynamics of a passive and an active compound particle
Short Talk - 14		17.15 - 17.30	Gonçalo Silva	LAETA, IDMEC, University of Lisbon, Portugal	Reviving the local second-order Boundary Methods in the Two-Relaxation-Time Lattice Boltzmann Modeling
Industry Session -III		17.30 - 18.00	Ajay Krishna Thokala	AMD India Pvt. Ltd., Bangalore, India	EPYC - A New Era in Datacenter

Conference Dinner, At Hotel Ramada (19.00 - 21.30)

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Friday, 26th July 2019

Talk Identifier	Session	Time	Speaker	Affiliation	Title of talk
Invited Talk - 12	Morning Chair: Ronojoy Adhikari	8.30 - 9.15	Anirban Chakraborti	JNU New Delhi, India	Kinetic exchange models in D-dimensions: Theory and applications
Invited Talk - 13		9.15 - 10.00	Ganesh Subramanian	JNCASR, Bangalore, India	Long-ranged correlations in suspensions of micro-swimmers
Long Talk - 17		10.00 - 10.30	SV Raghurama Rao	IISc, Bangalore, India	A stability property for a mono-dimensional three velocities scheme with relative velocity
Tea Break (10.30 - 11.00)					
Short Talk - 15	Pre-lunch Chair: Jonas Latt	11.00 - 11.15	Mahan Raj Banerjee	JNCASR, Bangalore, India	Fluctuation-dissipation-theorem preserving finite difference schemes
Long Talk - 18		11.15 - 11.45	Thomas Astoul	CERFACS, France	Non-hydrodynamic modes contribution in the spurious noise generated at grid refinement interfaces using the lattice Boltzmann method
Long Talk - 19		11.45 - 12.15	Anirudh Jonnalagadda	Indian Institute of Technology Bombay, India	2D Study of single relaxation time lattice Boltzmann methods
Long Talk - 20		12.15 - 12.45	Daniele Simeoni	Università degli Studi di Ferrara, Italy	Accurate calibrations of transport parameters for relativistic lattice-kinetic simulations
Short Talk - 16		12.45 - 13.00	Deepak Nabapure	BITS-Pilani Hyderabad Campus, India	DSMC Simulation of four-sided lid-driven cavity flow problem
Lunch (13.00 - 14.00)					
Invited Talk - 14	Post-lunch Chair: Jeremie Bec	14.00 - 14.45	Samriddhi Ray	International Centre for Theoretical Sciences, Bangalore, India	Elastic chains in turbulence
Long Talk - 21		14.45 - 15.15	Stephan Simonis	Karlsruhe Institute of Technology, Germany	Direct numerical simulation of decaying homogeneous isotropic turbulence – numerical experiments on stability, consistency and accuracy of distinct lattice Boltzmann methods
Short Talk - 17		15.15 - 15.30	Parvez Ahmad	Indian Institute of Technology Delhi, India	A multiblock lattice Boltzmann method for three-dimensional simulations
Short Talk - 18		15.30 - 15.45	Elin Vesper	Delft University of Technology, Netherlands	Coupling Direct Simulation Monte Carlo and kinetic models - Simulation of expanding rarefied metal vapour flow
Short Talk - 19		15.45 - 16.00	Devashish Gokhale	Indian Institute of Technology Madras, India	Fluid flows generated by an array of rotating particles – A dissipative particle dynamics study

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Tea Break (16.00 - 16.15)

Long Talk - 22	<p align="center">Post-tea</p> <p align="center">Chair: Bruce Boghosian</p>	16.15 - 16.45	Mohammad Atif	JNCASR, Bangalore, India	Discrete kinetic modeling of thermohydrodynamics
Short Talk - 20		16.45 - 17.00	Amitkumar Gawas	Indian Institute of Technology Dharwad, India	Axisymmetric thermal-lattice Boltzmann method with MRT collision models to simulate Rayleigh-Benard convection
Short Talk - 21		17.00 - 17.15	Praveen Kumar	JNCASR, Bangalore, India	Study of thermoacoustic phenomena using lattice Boltzmann methods
Short Talk - 22		17.15 - 17.30	Abheeti Goyal	TU Eindhoven, Netherlands	Modelling solvent Evaporation in a multicomponent phase separating System using lattice Boltzmann method
Short Talk - 23		17.30 - 17.45	Juan Antonio	University of Southampton, UK	A lattice Boltzmann method in generalized curvilinear coordinates
Short Talk - 24		17.45 - 18.00	SJ Jaju	SankhyaSutra Labs, Bangalore, India	An efficient MRT LB formulation for simulation of diffusion processes
Closing Ceremony		18.00 - 18.15	Local Organizing Committee	DSFD 2019 and DSFD 2020	Vote of Thanks

Dinner (19.00 - 21.00)