ILASS-Asia 2022, IIT Indore, India				
Friday, 28th October				
18:00	19:30	**Registration** at Kalidas Seminar Hall		
19:30	21:30	Dinner at Carbon Building		
Saturday, 29th October				
9:00	10:00	**Inauguration**	Kalidas Seminar hall	
10:00	10:35	High Tea		
10:35	11:20	**Plenary Talk 1: Prof. Cameron Tropea, Optical Measurement of Drops in Flows**	Kalidas Seminar hall	
		Chair: Prof. R V Ravikrishna		
Parallel Sessions:		**Experimental Atomization-I (Room No. L11)**	**Modelling and Computations-I (Room No. L12)**	**Applications-I (Room No. L13)**
		Chair: Prof. Kirti Chandra Sahu	**Chair: Prof. Ashok De**	**Chair: Prof. Anubhav Sinha**
11:20	11:40	**Dominic Sam Sebastian, Sonu K. Thomas, Yazhini V.I. and T.M. Muruganandam**: Primary breakup of liquid jet in supersonic crossflow	**Nobuyuki Kawahara**: Evaluation of ignition characteristics of diesel spray using large eddy simulation	**Naga Balaji Putireddy, Ashish Kumar Vishwakarma and Srikrishna Sahu**: Characterization of a Turbulent Spray Puff in a Cough Simulator
11:40	12:00	**Ashutosh Jena and Avinash Kumar Agarwal**: Spray characterisation of an evaporating liquid spray in a cross flow using a multi-hole injector	**Utkarsha Sonawane and Avinash Kumar Agarwal**: A Numerical Study on Spray Characteristics, Mixing and Evaporation of diesel and dimethyl ether under Diesel Engine like Conditions	**Vignesh Kumar D, Ondrej Cejpek, Jan Jedelsky and Madan Mohan Avulapati**: Evaluation of Air Assisted Impinging Jet Atomization for CO2 capture
12:00	12:20	**Dhananjay Kumar and Avinash Kumar Agarwal**: Comparative Assessment of Macroscopic Spray Characteristics for the Direct-Injected Spray of Gasoline, Methanol, and Ethanol in SI Engine-Like Conditions	**Ankur Kalwar, Rahul Kumar Singh, Quangkhai Pham, Suhan Park, Sungwook Park and Avinash Kumar Agarwal**: Numerical Study of Direct Injection Spray Behavior of Gasoline and Methanol-Gasoline Blends Under Split-Injection Strategy in Engine-Like Conditions	**Niraj Kumar, Abhay Mane, Supriya Sarkar, Anand T N C and Shamit Bakshi**: Estimation of Mass Flow Rate of Molten Metal through the Melt Delivery Tube in a Gas-atomization System
12:20	12:40	**Medipati Chandrasekhar, Deivandren Sivakumar and Govardhan Raghuraman N**: Spray characterization study in liquid jet into supersonic cross flow using pulsed laser shadowgraphy	**Nilojendu Banerjee and Satyanarayanan Seshadri**: A Mathematical Approach for prediction of Spray Heat Transfer for Various Textured Cylindrical Surfaces	**Mohamed Nour, Zhe Sun, Hongyu Wang, Mingli Cui, Xuesong Li, David Hung and Min Xu**: Influence of Butanol Isomers on Flame Kernel, Late Burn, and PM Emissions of optical SIDI Engine
12:40	13:00	**Surendra Soni, Abhishek Gupta, Noorul Huda and Santanu De**: Understanding the two-phase mixing pattern inside the twin-fluid atomizer using high-speed visualization	**Abhay Mane, Niraj Kumar, Supriya Sarkar, Anand T N C and Shamit Bakshi**: Methodology for the Design of Supersonic Annular Gas Nozzle for a Closed-Coupled Gas-Atomization Application	**Yi-Kai Chih and Wei-Hsin Chen**: Effect of feeding reactants with ultrasonic sprays on hydrogen production in an methanol steam reforming process
13:00	14:00	Lunch	Carbon Building	
14:00	14:45	**Plenary Talk 2: Prof. Mahesh Panchagnula:** Discovering spatiotemporal structure of sprays through applying tools of data science		
		Chair: Prof. Pramod S Mehta		
14:45	15:30	**Plenary Talk 3: Prof. Sungwook Park: Visualization of in-cylinder flow and mixture formation using an optically accessible DISI engine**		
		Chair: Prof. Nobuyuki Kawahara		
15:30	15:50	Tea		
Parallel Sessions:		**Experimental Atomization-II (Room no. L11)**	**Modelling and Computations-II (Room no. L12)**	**Applications-II (Room no. L13)**
		Chair: Prof. Sungwook Park	**Chair: Prof. Ravikrishna R V**	**Chair: Prof. Mahesh V Panchagnula**
15:50	16:10	**Venkatesha, C M Ajay, G Hariseetharam and R Surya Prakash**: Experimental Investigation of the Influence of Propeller Downwash on the Spray Characteristics in UASS	**Eshan Sharma and Santanu De**: Assessment of mixing time-scale models for dilute spray flames using the multiple mapping conditioning approach	**Riddhideep Biswas, Anish Pal, Sourav Sarkar and Achintya Mukhopadhyay**: Investigation on Assessment and Mitigation of Risk due to Transmission of Respiratory Droplets inside a Classroom using OpenFOAM
16:10	16:30	**Abhishek Gupta, Surendra Kumar Soni, Noorul Huda and Santanu De**: Effect of preheated swirling air on the spray structure of flow blurring atomizer	**Balaji S, Ankur Kumar, Aishwary Pratap and Anubhav Sinha**: Surface Breakup of Liquid Jet – Insights from DNS study Surface Breakup of Liquid Jet – Insights from DNS study	**Aranyak Chakravarty, Sourav Sarkar, Achintya Mukhopadhyay and Swarnendu Sen**: Numerical investigation of water-assisted atomization of molten metal jets for additive manufacturing applications
16:30	16:50	**Amitesh Kumar Chaudhary and R. V. Ravikrishna**: Spray Characterization of Non-Newtonian liquid jets using a Rotary Atomizer	**Mingyun Xie, Shengqi Wu, Bin Zhang, Xiabin Huang and Hong Liu**: Numerical investigation of the bifurcating behavior of liquid jet in crossflow	**Bhuwanesh Kumar, Ravi Kumar and Akhilesh Gupta**: Rewetting On Horizontal Tube Surface During Air-Atomized Spray Cooling: An Experimental Investigation
16:50	17:10	**Vivek Sahu, Aman Bakshi and K. P. Shanmugadas**: Characterization of the swirl velocity field and atomization processes of a gas turbine swirl injectors	**Chaoqun Hu, Pengfei Leng, Zhijun Wu, Wenbo Zhao, Chunyu Yang and Liguang Li**: Numerical study of the influence of the ambient density on the GDI nozzle internal flow and spray characteristics	**Yueh-Heng Li Yueh-Heng Li, Vadlakonda Sirisha and Chia-Wei Chang**: The study of coal particle combustion in oblique-impinging methane/air premixed flames
17:10	17:30	**Zhao Lyu, Zhimu Ye, Hucheng Zhang, Xinqi Qiao and Zhiwei Jin**: Experimental Study on Injection and Spay Characteristics of Coal-Derived Liquid Fuel	**Yuanyuan Shen, Chuqiao Wang, Zhixia He and Yanzhi Zhang**: Prediction of thermophysical properties of n-dodecane over a wide range of operating conditions	**Saewoong Park, Giyoung Park, Taewon Hwang and Sungwock Lee**: Investigation of damage type and PM emission characteristics of DPF for disel vehicle
18:30	19:30	Cultural programme	Summit Hall 1, Radisson Blu Hotel, Indore, Vijaynagar, Indore	
19:30	21:00	Dinner	Summit Hall 1, Radisson Blu Hotel, Indore, Vijaynagar, Indore	

Sunday, 30th October				
9:00	9:45	**Plenary Talk 4: Prof. Norihiko Iki, Development of Ammonia Combustion and Hydrogen Energy Technologies for a Decarbonized Society**		
		Chair: Prof. Jan Jedelsky		
9:45	10:30	**Plenary Talk 5: Prof. Kuo-Long Pan: Droplet combustion of multi-component biofuels doped with nanoparticles**		
		Chair: Prof. Cameron Tropea		
10:30	10:50	Tea		
Parallel Sessions:		**Experimental Atomization-III (Room No. L11)**	**Modelling and Computations-III (Room No. L12)**	**Optical Diagnostic Methods (Room No. L13)**
		Chair: Prof. Pramod S Mehta	**Chair: Prof. Anubhav Sinha**	**Chair: Prof. B. N. Raghunandan**
10:50	11:10	**Vivek K, Kundan Kumar Singh, Aditya Saurabh and Lipika Kabiraj**: Liquid-sheet break up characteristics of gel propellant simulant	**Sudipta Saha, Sourav Sarkar and Aranyak Chakravarty**: A computational analysis of hydrodynamic instabilities encountered during co-current flow of air over a thin liquid film	**Anurag Gaur and Kaushik Saha**: Experiments on Nd: YAG Laser Based Imaging Techniques for Non-Flash Boiling and Flash Boiling Sprays Using Single Hole Gasoline Direct Injection (GDI) System
11:10	11:30	**Young Soo Yu and Sungwook Park**: Experimental study on the spray structure and nozzle tip wetting with LPDI injector under flash boiling	**Xinyao Lei, Xiaodong Li, Shuai Zhou and Hongjun Liu**: Numerical study on atomization and combustion characteristics of multi-jet gas-liquid pintle injector	**Siddhivinayak Rampurkar, Shirin Patil and Srikrishna Sahu**: Liquid Jet Breakup Characterization in a Crossflow Airblast Atomizer by Time-Resolved Fluorescence Imaging Technique
11:30	11:50	**Kaixiang Li, Di Xiao, Shangning Wang, Shuyi Qiu, Xuesong Li and Min Xu**: Experimental investigations of nozzle pitch circle impact on tip wetting	**Yaquan Sun, Kaushal Nishad, Yongxiang Li, Louis Dreßler and Amsini Sadiki**: Investigation of Spray in Cross-flow using Automatic Coupled Volume of Fluid and Lagrangian Particle Tracking within Large Eddy Simulation Framework	**Arpit Joglekar, Devendra Deshmukh and Yogeshwar Nath Mishra**: Digital In-line Holography and backlight illumination imaging of sprays using levitated droplets
11:50	12:10	**Yan Lei, Wenbo Jin, Tao Qiu and Chenxi Liu**: Experimental study on spray Impingement characteristics of hydrogen / diesel dual fuel	**Chih-Yung Wu and Tien-Chiu Hsu**: Numerical modelling of fuel spray autoignition using open source code	**Zuhaib Nissar, Steven Begg and Oyuna Rybdylova**: Development of an Algorithm for Structure Identification and Droplet Distribution Re-construction in Liquid Sprays
12:10	12:30	**Vikram Kumar, Shanti Mehra, Hardikk Valera and Avinash Kumar Agarwal**: Comparative Study of Microscopic Spray Characteristics of Dimethyl Ether (DME) with Diesel in Atmospheric Ambient Conditions	**Sandip Dighe, Gautam Khemraj Kshetri, Hrishikesh Gadgil and Kowsik Bodi**: Experimental verification of OpenFoam-based simulations of secondary atomization	**B Surya, Bupesh Kumar R, M S Arun, S N Sridhara and P Nandagopalan**: Evolution of Flow patterns on Laminar Jet Impingements Using Deep Learning Image Processing (DLIP)
12:30	12:50	**Surendra Soni and Pankaj Sharadchandra Kolhe**: Large-scale flow features in swirl airblast atomization	**Kaushal Nishad, Yaquan Sun, Yongxiang Li, Christian Hasse and Amsini Sadiki**: Numerical Investigation of Atomization Characteristics of AdBlue Injection in SCR-DeNOx system using VOF-LES	**Omer Faruk Atac, Hyunsu Lee and Seoksu Moon**: Analyzing Near-nozzle Turbulence Intensity of Fuel Sprays Using X-ray Phase-Contrast Imaging with MHz Frequency
12:50	14:00	Lunch	Carbon Building	
14:00	14:45	**Plenary Talk 6: Prof. Fu Qingfei: Unsteady Spray of Liquid Propellants**		
		Chair: Prof. B N Raghunandan		
Parallel Sessions:		**Cavitation and Flash Boiling-I (Room No. L11)**	**Atomizer Design-I (Room No. L12)**	**Bubbles and Micro-explosions (Room No. L13)**
		Chair: Prof. Madan Mohan A	**Chair: Prof. Harekrishna Yadav**	**Chair: Prof. Shamugadas K P**
14:45	15:05	**Dongping Shen, Takashi Miwa, Akira Sou, Yoshitaka Wada, Yoshiharu Ueki and Hideaki Yokohata**: Single String Cavitation and Swirling Flow in a Nozzle and a Hollow-Cone Spray	**Anjith Kumar and Prof. Thirumalachari Sundararajan**: Influence of swirl number and air flow-rate on the spray characteristics of a micro-channel based rotary atomizer (MCR)	**Jisoo Shin and Sungwook Park**: Ammonia flash break-up modeling based on bubble dynamics with correlating analysis of surface tension and pressure force
15:05	15:25	**Samsu Dlukha Nurcholik, Takashi Miwa, Akira Sou, Mikimasa Kawaguchi, Yuhei Matsumoto, Keiya Nishida and Yoshitaka Wada**: Vortex Flow Patterns with Single or Twin String Cavitation in Multi-Hole Mini-Sac Diesel Fuel Injectors and Sprays	**Ondřej Cejpek, Milan Malý, Miloslav Bělka, Louis Decanay, Madan Avulapati and Jan Jedelsky**: Single Orifice Effervescent Atomizer in simulated Counter–flow Conditions	**Ramajayam D and Vadivukkarasan M**: Study of air bubble entrapped droplet evaporation on oil-coated surfaces
15:25	15:45	**Shangning Wang, Shangze Yang, Yijia Zhang, Xuesong Li, David Hung and Min Xu**: Breakup Mechanism of Flash Boiling Sprays Based on Rim Structures	**Bikash Mahato, Vikram Ramanan, Ganesh Paramasivan and K. P. Shanmugadas**: Characterization of primary atomization of like on unlike impinging injectors	**Abiram Gummala, Himanshu Singh and Madan Mohan Avulapati**: A model for prediction of inflight micro explosion in bicomponent fuel droplets
15:45	16:05	**Shuyi Qiu, Xiao Di, Xuan Zhang, Shangning Wang, Tongyang Wang, David Hung, Xuesong Li and Min Xu**: Experimental investigations of the phase change impacts on flash boiling spray propagations and impingements	**Meng Ji, Zhijun Wu and Alessandro Ferrari**: Study on real time gasoline-water mixture fuel preparation and spray characteristics based on impingement method	**Vivek K, Tikaram Rajput, Aditya Saurabh and Lipika Kabiraj**: Droplet evaporation characteristics of nanobubble-liquid suspensions
16:05	16:25	Tea		
Parallel Sessions:		**Cavitation and Flash Boiling-II, Other topics (Room No. L11)**	**Atomizer Design-II (Room No. L12)**	**Droplets and Impact (Room No. L13)**
		Chair: Prof. Eswara Prasad Korimill	**Chair: Prof. Anand T N C**	**Chair: Prof. Devendra Deshmukh**
16:25	16:45	**Mingli Cui, Zhe Sun, Xuesong Li, Min Xu and David Hung**: Study on Laminar Combustion Characteristics of Flash Boiling Spray under Cold Start Environment	**Donghui Wang and Yong Huang**: Semi-empirical Prediction of SMD Spatial Distribution Downstream of Swirl cups at Different Air Pressures	**Arshdeep Singh, Srikrishna Sahu and Dalton Maurya**: Influence of Adjacent Droplet-plume Interaction on Spray Characteristics in Slinger Atomizers
16:45	17:05	**Chen Li, Zhixia He, Genmiao Guo and Wei Guan**: Investigation of string cavitation and air ingestion during injection duration in the scaled-up diesel injector nozzle	**Tianhao Pu, Shengqi Wu, Mingyun Xie and Yanshuai Pang**: Temperature effect on the breakup characteristics of ultra-high-pressure spray of a single-hole injector	**Vishal Jagadale, Devashish Chorey, Yogeshwarnath Mishra, Mats Andersson, Dag Hanstorp and Devendra Deshmukh**: Laser induced breakdown in Acoustically Levitated Fuel Droplets
17:05	17:25	**Bihe Hu, Jianquan Wang, Zhixia He, Chen Li and Genmiao Guo**: Cavitation flow and spray characteristics of gasoline-diesel hybrid fuels in the nozzle of a high-pressure common-rail injector	**Mohammed Asad Khan Khan, Hrishikesh Gadgil and Sudarshan Kumar**: Development and characterization of self-aspirating liquid fuel spray ejector for microcombustion applications	**Gourav Parmar, Vignesh Kumar D, Jan Jedelsky and Madan Mohan Avulapati**: Experimental studies on effect of neighbouring droplets on evaporation of aqueous ammonia and Monoethanolamine (MEA) droplets
17:25	17:45	**Natsuha Okami, Akira Sou and Toshiyuki Saito**: Prediction of Cavitation Erosion in Diesel Fuel Injector	**Sonu Kumar and Saptarshi Basu**: Geometrical Sensitiveness of a High Shear Injector Over Spray Flow Field: Mean and Dynamical characteristics	**Xiaoyuan Yang, Bingyao Huang, Yi Zhang and Yuyang Li**: Characterizing sputtering behaviors in water/ethanol binary droplet impact on a heated plate
17:45	18:05	**Bingyao Huang, Xiaoyuan Yang, Yi Zhang, Haodong Zhang, Wei Li and Yuyang Li**: Exploring combustion and atomization characteristics of DMMn and DMMn/ethanol binary droplets: Influence of boiling point difference and light component	**Swapnil Soni and Avishek Ranjan**: Electromagnetically driven Jet in Liquid Metal Electrode	**Quangkhai Pham, Mengzhao Chang, Byungchul Choi, Sungwook Park, Avinash Kumar Agarwal and Suhan Park**: Visualization and analysis of CNG wall-impingement spray characteristics under various injection pressures and impingement geometry conditions
18:05	18:25	**Kirti Chandra Sahu**: Fragmentation and size distribution of raindrops in airstreams	**Jacob Koshy Mulamootil, M Manish, Boggavarapu Prasad and R V Ravikrishna**: Insights to the Near-nozzle Flow Characteristics of Pressure Swirl Atomizers used in Aero Engines	**Tinglan Tang, Tai Jin and Gaofeng Wang**: Numerical study on splash of oblique hollow droplet impact on a liquid film
18:25	19:00	**Valedictory session**	Kalidas Seminar Hall	
19:00	21:00	Dinner	Carbon Building	
	Note:	**Registration, Inauguration, Plenary talks, Valedictory Session**	**Kalidas Seminar Hall**	