

14th Asian Microgravity symposium: 1- 6 December 2024

Event Schedule

Sun 01 Dec

Time	Duration		Venue: IC&SR
18:00 - 19:00	1 hr		Registration
19:00 - 20:00	1 hr		Welcome dinner

Mon 02 Dec

Time	Duration		Venue: Auditorium
09:00 - 12:00	3 hr		Registration
09:00 - 09:10	10 min		Inauguration
09:10 - 09:20	10 min		AMS 2024 Welcome address, Amit Kumar
09:20 - 09:30	10 min		ExTeM Introduction, Sathyan Subbiah
09:30 - 10:20	50 min	AMS001	Plenary Talk 1 : Indian space roadmap - opportunities for microgravity research - Dinesh Kumar Singh
10:20 - 10:35	15 min		Morning Tea Break
10:35 - 11:25	50 min	AMS670	Plenary Talk 2 : Study for materials sciences using electrostatic levitation - Geun Woo Lee
11:25 - 12:15	50 min	AMS005	Plenary Talk 3 : Progress and prospect of space science and utilization of China Space Station - Cong Min Lyu
12:15 - 13:05	50 min	AMS999	Plenary Talk 4 : Role of Microgravity Utilization in Combustion Research - Osamu Fujita
13:05 - 14:05	1 hr		Lunch
14:05 - 14:55	50 min	AMS002	Plenary Talk 5 : Research highlights of JAXA Kibo utilization - Izumi Yoshizaki
14:55 - 15:45	50 min	AMS236	Plenary Talk 6 : The scientific vision of the project wgFBCE-CSS - Jian-Fu Zhao
15:45 - 16:00	15 min		Evening Tea Break
16:00 - 16:50	50 min	AMS789	Plenary Talk 7 : High Temperature Materials Racks and Materials Research Progress in Chinese Space Station - Xuechao Liu
16:50 - 17:40	50 min	AMS004	Plenary Talk 8 : The German microgravity science program - Tobias Saltzmann

Tue 03 Dec

Time	Duration		Venue: Auditorium
09:00 - 09:50	50 min	AMS257	Plenary Talk 9 : Mammalian reproduction and embryonic development: from ground to space - Xiaohua Lei
09:50 - 10:05	15 min		Morning Tea Break
Time	Duration		Venue: Auditorium
Session 1A: Life Science and Biotechnology - 1			
10:05 - 10:30	25 min	AMS573	Keynote Talk : Past, Present, and Future of Ground-Based Microgravity Simulation Systems: Focusing on the 3D Random Positioning Machine (RPM) - Han Sung Kim
10:30 - 10:55	20 min	AMS994	Keynote Talk : Protein nanocages promote osteogenesis and prevent cytoskeletal damage from oxidative stress induced under microgravity -Swathi Sudhakar
10:55 - 11:15	20 min	AMS185	Mechanotransduction and gene expression in microgravity: an integrated MechSigFlow pipeline for bio-fluid dynamics and T-cell signaling - Anirudh Murali
11:15 - 11:35	20 min	AMS195	Development of 3D RPM Applicable to Ultrasound Stimulation and Evaluation of the Effects of Microgravity and Ultrasound Stimulation on MC3T3-E1 Cells - Doyong Kim
11:35 - 11:55	20 min	AMS263	Microbial Online Detection Experiment on Chinese Space Station - Fangwu Liu
11:55 - 12:15	20 min	AMS308	Advancing in-Space biomanufacturing of Bacteriorhodopsin in Halobacterium salinarum under microgravity by using oxidative stress-based strategy - Rahul S
12:15 - 12:35	20 min	AMS652	Mechanisms of gravity sensation: Influence of spaceflight and contact stimuli on neuromuscular system and gene expression in C. elegans - Jin Lee
12:35 - 12:55	20 min	AMS962	Responses of Bacterial Pathogens to Microgravity Environments:From Antibiotic Sensitivity to Virulence - Robert Mitchell
12:55 - 13:55	1 hr		Lunch
Session 2A : Heat and Fluid Physics - 1			
13:55 - 14:20	25 min	AMS201	Keynote Talk : Research Progress on Condensation Enhancement Experiment in China's Space Station - Bo Xu
14:20 - 14:45	25 min	AMS948	Keynote Talk : Modelling side wall damping in confined Faraday instability systems - Diwakar S Venkatesan
14:45 - 15:05	20 min	AMS250	Utility of Lubricant Infused Surfaces for Enhancing Droplet Removal in Microgravity Applications - Tonmoy Sharma
15:05 - 15:25	20 min	AMS264	Enhancing Boiling Performance in Adverse Gravity Conditions with Imidazolium-Based Ionic Liquid Additives - Avinash Upadhyay
15:25 - 15:45	20 min	AMS316	Design of thermal passive control system for rotating elements of Micro Dual Gimbal Antenna (DGA) deployed on small LEO satellite - Vinti Bhatia
15:45 - 16:05	20 min	AMS426	Understanding and Optimizing the Surface Activity of Ethanol-Water Mixtures for Microgravity Applications - Rajnish Azad
16:05 - 16:25	20 min		
16:25 - 16:40	15 min		Evening Tea Break
Session 3A: Life Science and Biotechnology - 2			
16:40 - 17:05	25 min	AMS379	Keynote Talk : Life Science Experiment Facilities on the Chinese Space Station - Tao Zhang
17:05 - 17:25	20 min	AMS740	µBioSat: A platform for microbial analysis in space - Shreyaans Jain
17:25 - 17:45	20 min	AMS805	Eggshell Membrane as potential preventive medicine for pulmonary fibrosis - Miho Shimizu
17:45 - 18:05	20 min	AMS921	Exploration of Biomaterials for Preventing Muscle Atrophy with Space Experiment - Siyun Lee
18:05 - 18:25	20 min	AMS934	Impact of seed exposure to simulated microgravity on growth and development in tomato (Solanum Lycopersicon L.) - Ram Ambiya

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09:00 - 09:50	50 min	AMS257	Plenary Talk 9 : Mammalian reproduction and embryonic development: from ground to space - Xiaohua Lei
09:50 - 10:05	15 min		Morning Tea Break
Time	Venue: Hall 3		
Session 1B: Combustion - 1			
10:05 - 10:30	25 min	AMS082	Keynote Talk : Development of Experimental Payload for Studying Turbulent Transition of Non-Premixed Jet Flames under Microgravity - Wenjun Kong
10:30 - 10:50	20 min	AMS092	Extinguishing Gas Jet Flame Experiments Aboard the Chinese Space Station - Yuzhe Wen
10:50 - 11:10	20 min	AMS164	Bayesian MCMC estimation of the limiting oxygen concentrations for B-LDPE tubes across various gravity levels - Yuxuan Ma
11:10 - 11:30	20 min	AMS598	Effect of oxygen concentration, pressure, and opposed flow velocity on the flame spread along thin PMMA sheets: Experiments and Numerical modelling - Arvind Bharath S R
11:30 - 11:50	20 min	AMS290	Effect of insulation thickness on the overload ignition of electrical wires in normal and microgravity - Yan Gu
11:50 - 12:10	20 min	AMS296	A numerical modelling of flame spread over insulated electrical wire - Naresh Kambam
12:10 - 12:30	20 min	AMS125	On Simulating non-premixed flames in microgravity by employing sub-atmospheric pressures - Yuhang Chen
12:30 - 12:50	20 min	AMS390	Numerical Investigation of the Effect of Strain Rate on the Flammability of Hydrofluorocarbons - Yusuke Konno
12:50 - 13:55	1:05 hr		Lunch
Session 2B: Construction & Manufacturing in space - 1			
13:55 - 14:20	25 min	AMS327	Keynote Talk : Cold Atoms in Microgravity - Liang Liu
14:20 - 14:40	20 min	AMS104	Research on the role of microgravity and other extraterrestrial environments in reconstructing worldviews as an artistic activity - Soyoun Moon
14:40 - 15:00	20 min	AMS965	Design, construction, and on-orbit measurement of the power distribution unit for space utilization system of China space station - Liangyu Bai
15:00 - 15:20	20 min	AMS496	Towards sustainable extra-terrestrial construction materials using biopolymers - Nitin Gupta
15:20 - 15:40	20 min	AMS501	Heat Pump for Space Station Active Thermal Control: Merits and Challenges - ARNAB LAHIRI
15:40 - 16:00	20 min	AMS819	Production of SiC from Lunar regolith simulant - Nithyasrimurugan S K
16:00 - 16:20	20 min	AMS508	Test of AC feedback controller for Tianqin mission using a torsion pendulum - Jianbo Yu
16:20 - 16:40	20 min		Evening Tea Break
Session 3B: Material Sciences - 1			
16:40 - 17:05	25 min	AMS380	Keynote Talk : Effect of Oxygen on Surface Tension of Liquid Metals and Alloys - Joonho Lee
17:05 - 17:25	20 min	AMS873	Measurement Of Metal Foam Expansion In A Drop Tower - Neelabh Menaria
17:25 - 17:45	20 min	AMS067	Containerless Processing of High Temperature Materials on the China Space Station - Jianding Yu
17:45 - 18:05	20 min	AMS311	Chemical enrichment of asteroids - Low velocity impacts in microgravity using PRL's short range drop facility - Jaya Krishna Meka
18:05 - 18:25	20 min	AMS348	Multiple crystallization pathways of extremely supersaturated aqueous solution droplets on Electrostatic Levitator - Yong ChanCho

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09:00 - 09:50	50 min	AMS257	Plenary Talk 9 : Mammalian reproduction and embryonic development: from ground to space - Xiaohua Lei
09:50 - 10:05	15 min		Morning Tea Break
Time	Venue: Hall 4		
Session 1C: Poster			
10:05 - 18:05	8 hr	AMS690	Algae in Space: How Microgravity affects edible microalgae - Prachi Nawarkar
		AMS291	Customised hardware for Fruit Fly Experiments onboard Gaganyaan Flights - AKHIL MADHAVAN K
		AMS997	Advancement in Protein Crystallization in Drug Discovery and Development through Microgravity Research - Dhavalkumar Solanki
		AMS673	Design and Realization of Zero-g backup support fixture for Satellite Reflectors RF characterization - Shashank Srivastava
		AMS016	Influence of Simulated Microgravity on the Courtship and Negative Geotaxis Behaviour of Drosophila melanogaster - G Sreejalekshmi
		AMS034	Investigating the oxidative stress response to improve phycoerythrin production in Synechococcus elongatus UTEX 2973 under simulated microgravity conditions - Radhika K
		AMS998	Space manufacturing and space factories - Anvi N. Naphade
		AMS976	Characterization of Ions in Martian Soil Simulants Using an Interdigitated Capacitive Sensor - Hrithik Krishna Raj

Wed 04 Dec			
Time	Venue: Auditorium		
09:00 - 09:50	50 min	AMS981	Plenary Talk 10 : Microgravity Research at ZARM's Drop Tower Facilities - Thorben Koenemann
09:50 - 10:05	15 min		Morning Tea Break
Time	Venue: Auditorium		
Session 4A: Ground-based Microgravity Research-1			
10:05 - 10:30	25 min	AMS617	Keynote Talk : HFE-7100 spray cooling under microgravity: the liquid film dynamics and heat transfer - Xiao Zhao
10:30 - 10:50	20 min	AMS280	Experimental study of flame spread behaviour over planar polymer-metal- polymer composite material in normal gravity and micro-gravity environments - Prema Prescillat
10:50 - 11:10	20 min	AMS987	HUST Drop Tower and Its Performance Test - Liang Wang
11:10 - 11:30	20 min	AMS310	Converting the Gifford Shaft in KGF into a Microgravity Drop Tube - Jaya Krishna Meka
11:30 - 11:50	20 min	AMS986	Investigation of flame behaviour on thin cellulosic fuels across different geometrical configurations and environments - Nikhil V V
11:50 - 12:10	20 min	AMS546	Microgravity-induced alterations in emulsion characteristics: An investigation into its appearance, morphology, and stability - Sibsankar Palit
12:10 - 12:30	20 min	AMS671	Normal gravity to microgravity transition of flame spreading over thin cylindrical fuels in a drop test - Manu B V
12:30 - 12:50	20 min		Lunch
12:50 - 13:50	1 hr		Lunch
Session 5A: Life Science and Biotechnology-3			
13:50 - 14:15	25 min	AMS436	Keynote Talk : Seed-to-seed growth of rice on the Chinese space Station - HuiQiong Zheng
14:15 - 14:35	20 min	AMS975	Immunoprotective Role of the MAPK/PMK-1 Pathway in C. elegans in Response to Spaceflight - Alfredo Jr. Alcantara
14:35 - 14:55	20 min	AMS992	Can Lunar Soil Nurture Plant Growth? - Ravikumar Hosamani
14:55 - 15:15	20 min	AMS541	An investigation into the function of AtLAZY1 in modulating the interplay between gravitropic and phototropic signaling pathways in Arabidopsis - Peipei Xu
15:15 - 15:35	20 min	AMS993	Mathematical Modelling of Bone Disuse under Space Microgravity - Digendranath Swain
15:35 - 15:55	20 min	AMS879	Microbial Regolith Experiment: Passive Recoverable Payload for Microbial Experiments for Space based Applications - Adityan Rajesh
15:55 - 16:15	20 min		Evening Tea Break
16:15 - 16:30	15 min		Evening Tea Break
Session 6A: Industry			
16:30 - 16:50	20 min	AMS051	Agniku's AgniBaan Sorted: Enabling Microgravity Research with Suborbital Launch Vehicles - Vasanth Chandrasekaran
16:50 - 17:10	20 min	AMS052	Microgravity experiments - a potential use case for the eVTOL aircrafts - Sree Raghav
17:10 - 17:30	20 min	AMS852	New Space Industries for 'Untact' Society - Tae-Sung Yoon
17:30 - 17:50	20 min	AMS054	A LEO-based Recoverable Microgravity Platform and Earth Re-entry Logistics Service - Aravind I B
17:50 - 18:10	20 min	AMS056	Ram Gandhiram, Space Foundry
19:30 - 21:30	2 hr		Banquet

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09:00 - 09:50	50 min	AMS981	Plenary Talk 10 : Microgravity Research at ZARM's Drop Tower Facilities - Thorben K�nemann
09:50 - 10:05	15 min		<i>Morning Tea Break</i>
Time		Venue: Hall 3	
Session 4B: Material Sciences-2			
10:05 - 10:30	25 min	AMS989	Keynote Talk : In-Situ Observations of Crystal Growth from Solutions by High-Resolution Optical Interferometry - Katsuo Tsukamoto
10:30 - 10:55	25 min	AMS073	Keynote Talk : Surface Oscillation of Molten Oxide Droplet by Electrostatic Levitation Furnace (ELF) installed in ISS - Masahito Watanabe
10:55 - 11:15	20 min	AMS864	Microgravity crystal growth experiments on board the International Space Station and Recoverable Satellite - Nirmal Kumar Velu
11:15 - 11:35	20 min	AMS231	The effect of magnetic field on solidification process of metal under microgravity condition - Qiang Yu
11:35 - 11:55	20 min	AMS542	Effect of Magnetic Field on the Glass Forming Ability of ZBLAN glass - Yashdeep Yashdeep
11:55 - 12:15	20 min	AMS991	Impact of microgravity on droplet transfer in the GMAW-Based DED-Arc process under low welding currents - Adhithya Plato SidharthArunachalam
12:15 - 12:35	20 min		
12:50 - 13:50	1 hr		<i>Lunch</i>
Session 5B: Combustion-2			
13:50 - 14:10	20 min	AMS138	Effects of low pressure and oxygen on low stretch diffusion flame extinction of a cellulosic material - Tao Shangqing
14:10 - 14:30	20 min	AMS346	Smoke Characterization From Different Spacecraft Materials In Normal Gravity And Microgravity Environment - Aditya Sai Deepak Rachagiri
14:30 - 14:50	20 min	AMS294	Study on flame blowout and turbulent transition characteristics of non- premixed jet flames - Zhenhuan Lv
14:50 - 15:10	20 min	AMS839	Study on flame spread near flame-spread limit considering cool flame in microgravity - Shinsaku Harada
15:10 - 15:30	20 min	AMS826	Numerical study on combustion characteristics of Methyl Methacrylate (MMA) Pool Flames in Microgravity Environment - Shanmugasundaram Dakshnamurthy
15:30 - 15:50	20 min	AMS857	Experimental Study on Small-Scale Low-Intensity Turbulent Combustion under Normal Gravity - Zhiwei Yuan
15:50 - 16:10	20 min	AMS738	Numerical simulation for flow field around a flame spreading over an electric wire placed in a ground-based centrifuge - Nozomu Hashimoto
16:10 - 16:30	12:30		<i>Evening Tea Break</i>

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09:00 - 09:50	50 min	AMS981	Plenary Talk 10 : Microgravity Research at ZARM's Drop Tower Facilities - Thorben K�nemann
09:50 - 10:05	15 min		<i>Morning Tea Break</i>
Time		Venue: Hall 4	
Session 2C: Poster			
10:05 - 18:05	8 hr	AMS465	Microgravity-Induced Alterations in H9C2 Cells: A Comprehensive Study on Cellular Responses, miRNA Expression, and Amelioration by bioactive compound of Ficus religiosa
		AMS542	Effect of Magnetic Field on the Glass Forming Ability of ZBLAN glass - Yashdeep Yashdeep
		AMS819	Production of SiC from Lunar regolith simulant - Nithyasrimurugan S K
		AMS996	Space Medicines: Are They Effective During Human Space Missions? - Nishtha Pathak
		AMS185	Mechanotransduction and gene expression in microgravity: an integrated MechSigFlow pipeline for bio-fluid dynamics and T-cell signaling - Anirudh Murali
		AMS740	�BioSat: A platform for microbial analysis in space - Shreyaans Jain
		AMS995	Microgravity: Novel platform for antibiotic production from streptomycin species - Avani B. Patel
		AMS985	Microgravity as a platform to enhance drug loading efficiency in nanomaterials - Shaik Sameer Basha
		AMS984	Nanotechnology for Space Missions - Anisha Kabir

Thu 05 Dec

Time		Venue: IITRP	
INDUSTRIAL VISIT			
10:00 - 13:00	3 hr		IITM Microgravity Drop Tower & IITM Research Park
13:00 - 14:00	1 hr		<i>Lunch</i>

Fri 06 Dec

Time		LOCAL TOUR	
09:00 - 17:00	8 hr		Mahapallipuram