



# International Conference on Advances in Aerospace and Energy Systems IAES-2024

LPSC Valiamala, Thiruvananthapuram  
April 4-6, 2024



## Programme Grid



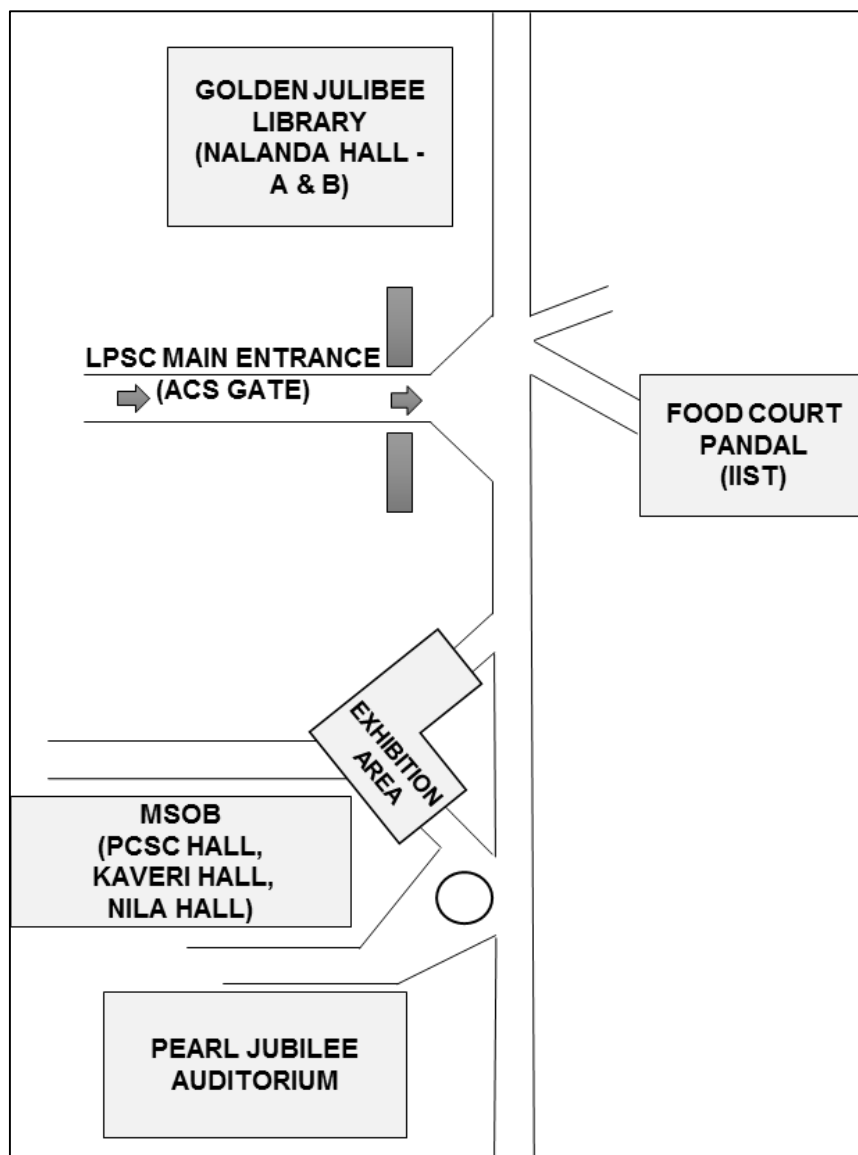
*Jointly Organised by*  
**Indian Society for Heat and Mass Transfer -  
Trivandrum Chapter and  
Liquid Propulsion Systems Centre**

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## LOCATION OF SESSION HALLS

<b>VENUE</b>	<b>LOCATION</b>
PCSC CONFERENCE HALL	LEVEL-5, MSOB
KAVERI HALL	LEVEL-4, MSOB
NILA HALL	LEVEL-2, MSOB
NALANDA-A	GROUND FLOOR, GOLDEN JUBILEE LIBRARY
NALANDA-B	GROUND FLOOR, GOLDEN JUBILEE LIBRARY



## PROGRAMME SUMMARY

<b>DAY 1: 04-04-2024 (Thursday)</b>	
09:30 - 10:45	Inauguration of conference and exhibition
10:45 - 11:00	High Tea
11:00 - 11:45	Plenary Lecture-1 <b>Dr. Vibha Dhawan, Director General, TERI, New Delhi</b>
11:45 - 12:30	Plenary Lecture-2 <b>Dr. Pierre Bousquet, CNES, France</b>
12:30 - 13:30	Lunch Break
13:30 - 17:00	Poster session # 1 (Evaluation time : 15:15 to 16:15)
14:00 - 15:15	Technical parallel session #1
15:15 - 16:15	Evaluation of poster session-1 and interaction with authors
16:15 - 17:30	Technical parallel session #2
17:45	Departure to Premier International Convention Centre & Hotel, Trivandrum
18:30 - 21:00	Cultural events and gala dinner
<b>DAY 2: 05-04-2024 (Friday)</b>	
09:00 - 09:45	Plenary Lecture-3 <b>Prof. Gary Rosengarten, RMIT University, Australia</b>
09:50 - 11:15	Technical parallel sessions #3
11:30 - 13:00	Technical parallel sessions #4
12:30 - 17:00	Poster session #2 (Evaluation time : 15:15 to 16:15)
13:00 - 14:00	Lunch Break
14:15 - 15:45	Technical parallel sessions #5
15:15 - 16:15	Evaluation of poster session-2 and interaction with authors
16:15 - 17:45	Technical parallel sessions #6
<b>DAY 3: 06-04-2024 (Saturday)</b>	
09:00 - 10:30	Technical parallel sessions #7
10:45 - 12:00	Technical parallel sessions # 8
12:00 - 14:30	Poster session # 3
12:00 - 13:00	Lunch Break
13:00 - 14:00	Evaluation of poster session-3 and interaction with authors
14:30 - 15:15	Valedictory function
15:30 - 16:15	Facility visit at LPSC Valiamala
<b>Day 4 : 07-04-2024 (Sunday) – (by prior registration only)</b>	
07:30 - 10:00	Travel to IPRC, Mahendragiri
10:30 - 12:30	Liquid propulsion system integration & testing facility visit at IPRC
14:00 - 17:00	Return travel to Thiruvananthapuram after Lunch

### **LIST OF KEYNOTE LECTURES**

<b>Date (day)</b>	<b>Time</b>	<b>Venue</b>	<b>Speaker</b>
04-APRIL-2024 (DAY-1)	14:00 – 14:30	NALANDA-A	DR. ANIL BHARDWAJ DIRECTOR, PRL, AHMEDABAD
04-APRIL-2024 (DAY-1)	16:15 – 16:45	PCSC CONF. HALL	PROF. STÉPHANIE LIZY-DESTREZ, ISAE-SUPAERO, FRANCE
05-APRIL-2024 (DAY-2)	09:50 – 10:20	PCSC CONF. HALL	PROF. K. RAMAMURTHI, IIT MADRAS
05-APRIL-2024 (DAY-2)	09:50 – 10:20	NALANDA – A	PROF. SANDRA BOETCHER, EMBRY-RIDDLE AERO., UNIVERSITY USA
05-APRIL-2024 (DAY-2)	09:50 – 10:20	NALANDA – B	PROF. C. BALAJI, IIT MADRAS
05-APRIL-2024 (DAY-2)	11:30 – 12:00	PCSC CONF. HALL	SHRI M MOHAN, DIRECTOR, HSFC-ISRO
05-APRIL-2024 (DAY-2)	11:30 – 12:00	NALANDA – B	PROF. MAN YEONG HA PUSAN NATIONAL UNIVERSITY, S. KOREA
05-APRIL-2024 (DAY-2)	14:15 – 14:45	PCSC CONF. HALL	PROF. ANAND VEERARAGAVAN, UNIVERSITY OF QUEENSLAND AUSTRALIA
05-APRIL-2024 (DAY-2)	14:15 – 14:45	NALANDA – A	PROF. JEREMIE LASUE, IRAP, FRANCE
05-APRIL-2024 (DAY-2)	14:15 – 14:45	NALANDA – B	PROF. TANMAY BASAK, IIT MADRAS
05-APRIL-2024 (DAY-2)	16:15 – 16:45	PCSC CONF. HALL	Dr. KALYANA CHAKRAVARTHY, DRDL-DRDO
05-APRIL-2024 (DAY-2)	16:15 – 16:45	NALANDA – A	PROF. VSEVOLOD PEYSAKHOVICH, ISAE- SUPAERO, FRANCE
05-APRIL-2024 (DAY-2)	16:15 – 16:45	NALANDA – B	PROF. JOSEPH MATHEW, IISC, BANGALORE
06-APRIL-2024 (DAY-3)	09:00 – 09:30	NALANDA – A	PROF. VIJAYAN K. ASARI, UNIVERSITY OF DAYTON, USA
06-APRIL-2024 (DAY-3)	09:00 – 09:30	NALANDA – B	PROF. RAMESH NARAYANASWAMY, CURTIN UNIVERSITY, AUSTRALIA
06-APRIL-2024 (DAY-3)	10:45 – 11:15	NALANDA – A	PROF. P.V. ARAVIND, UNIVERSITY OF GRONINGEN, NETHERLANDS

## **PLENARY SPEAKERS**



**Vibha Dhawan**, affiliated with The Energy and Resources Institute (TERI) since 1985, has been its Director-General since 2021. With nearly four decades of experience, she's acknowledged globally for her research and policy development expertise. She's actively engaged in national committees as a Fellow of the National Academy of Sciences, India, and Adjunct Professor at Michigan State University. Dr. Dhawan spearheaded the creation of the National Centre of Excellence in Green Port & Shipping and contributed significantly to establishing the DBT-TERI Centre on Advanced Biofuels. She advised former Assam Chief Minister TarunGogoi, particularly in Bioresources and Biotechnology. Dr. Dhawan's accomplishments include founding the Micropropagation Technology Park at TERI. An esteemed author with six books and over 50 publications, she's been honored with numerous awards, including the Social Impact Leadership Award and Game-Changers from India by H.E. Sheikh Nahayan Bin Mabarak Al Nahayan. Other accolades include the Indian Women Achievers Sammaan 2017, the Women Leadership Agriculture Award 2016, the Kamal Kumari National Award for Science and Technology, and the Agriculture Leadership Award 2023.

Title of the Talk :-***Exploring the Status, challenges, and India's leadership in renewable energy, covering solar, wind, storage, automation, AI, green hydrogen, materials, and integration***



**Pierre Bousquet** serves as the Deputy of the Associate Director for Exploration and Human Spaceflight at CNES (French Space Agency). Additionally, he holds the position of Vice Chair of the Exploration Committee at the International Astronautical Federation (IAF) and is a Full Member of the International Academy of Astronautics (IAA). Dr. Bousquet contributes as a Senior Member of the Association Aéronautique et Astronautique de France and is a Technical Advisor for ESA's Program Board on Human Missions and Exploration. He is an esteemed member of the French delegation for the UN-mandated 'Space Missions Planning Advisory Group' (SMPAG), focusing on international response strategies to near-Earth objects. Formerly heading the Planetology and Microgravity Project Office, Dr. Bousquet has led French contributions to significant planetology missions, including Mars Science Laboratory and Bepi-Colombo. He graduated from SupAéro Engineering School and holds an MSc in Satellite Telecommunication Engineering from the University of Surrey. Additionally, Dr. Bousquet has authored over 70 publications and serves as an occasional lecturer at esteemed French engineering schools.

Title of the Talk :-***APOPHIS close approach in 2029, an historical opportunity for Planetary Defense***

## **PLENARY SPEAKERS**



**Gary Rosengarten** is the director, Sustainable Technologies and Systems Enabling Impact Platform at RMIT University, also leading the Laboratory for Innovative Fluid Thermal Systems in Mechanical Engineering. Previously, he worked at Australia's CSIRO for 3 years and spent 2 years as an engineering consultant in sustainable building design. He holds a double honors degree in Physics and Mechanical Engineering from Monash University and a PhD in Mechanical Engineering from the University of New South Wales. Specializing in thermofluids and energy systems, he addresses various challenges including energy storage, solar energy, thermal control, and energy efficiency. Rosengarten collaborates with interdisciplinary teams on projects such as solar absorbers and thermal batteries, securing over \$20 million in research funding, publishing 200+ journal articles, and holding several patents.

Title of the Talk :- ***Sustainable Thermal Energy: Fuelling the Path to Net Zero***

## **KEYNOTE SPEAKERS**



**Anil Bhardwaj**, an accomplished scientist, is renowned for his significant contributions to planetary and space sciences. With a background in M.Sc. from Lucknow University and a Ph.D. from IIT-BHU, he joined ISRO in 1993 and has held various prestigious positions, including Director of the Space Physics Laboratory at Vikram Sarabhai Space Centre. Dr. Bhardwaj's research focuses on solar system exploration, and he has led several experiments on missions like Chandrayaan-1, Mars Orbiter Mission, and Chandrayaan-2. His work has been widely published in international journals, earning him recognition such as the Shanti SwarupBhatnagar Prize and Infosys Prize. Dr. Bhardwaj is a Fellow of all three National Science Academies in India and holds leadership roles in various scientific committees. He is also actively involved in promoting science education and outreach initiatives.

Title of the Talk:- ***Lunar Exploration Program of India***



**Stephanie LIZY-DESTREZ** is Full Professor in Space Systems Engineering at ISAE-SUPAERO (Institut Supérieur de l'Aéronautique et de l'Espace), a worldwide center of excellence in Engineering research and education in Toulouse (France). She is the head of the Space Advanced Concept research group. She is a graduate of Stuttgart University (Dr-Eng. in 2015) in Germany and ISAE-SUPAERO (PhD in 2015, Msc in 1995). With more than 27 years of experience working for space agencies, industries and universities in space domain, she conducts research and teaching in human and robotic space exploration (Moon, Mars and asteroids) and in astrodynamics. Her researches are oriented along two main axes: first, trajectory optimization for interplanetary missions (Moon, Mars and Asteroid), with a particular focus on rendezvous in cis-lunar space and secondly, Human-Robotic interaction during long-term exploration missions, with a focus on the impact of confinement and isolation on crew performances. As an engineer, she had the opportunity to be on console during the main critical operational phases of the ATV Jules Verne mission in 2008. She is the co-founder of the Spaceflight Institute. She serves as Associate Editor of the Journal of Spacecraft and Rockets and is a former member of the Astrodynamics Committee of the IAF (International Astronautical Federation). She authored and co-authored more than one hundred journal and conference papers.

Title of the Talk:-***Lunar Exploration and Sustainability: Challenges, Opportunities, and Orbital Management Strategies***



## **KEYNOTE SPEAKERS**



**K. Ramamurthi** worked in Propulsion Research and Studies (PRS) at LPSC Valiamala about 20 years ago. During this period and subsequently, he was associated with teaching and research in the department of Mechanical Engineering at IIT Madras. Presently, he is involved in two online courses on Rocket Propulsion and Explosions and Safety under NPTEL at IIT Madras.

Title of the Talk:-***Explosion Safety for Future Hydrogen Economy***



**Sandra Boetcher** is a Professor of Mechanical Engineering and College of Engineering Research Fellow at Embry-Riddle Aeronautical University. She obtained her B.M.E., M.S., and Ph.D. in Mechanical Engineering from the University of Minnesota in 2001, 2003, and 2006, respectively. Prior to her appointment at Embry-Riddle, Professor Boetcher was a founding faculty member in the newly formed Department of Mechanical and Energy Engineering at the University of North Texas and worked for several companies, including Honeywell, 3M, and Donaldson Company. Her recent research interests include realizing latent heat thermal energy storage systems utilizing advanced manufacturing, investigating the fundamental behavior of phase-change materials through numerical simulations and experiments, and characterizing the heat transfer performance of supercritical fluids. She is currently an editor of Carbon Capture Science and Technology, associate editor of International Journal of Heat and Fluid Flow, and associate editor for the ASME Open Engineering Journal. Currently, she serves as the Chair of the ASME Heat Transfer Division Executive Committee and is a Fellow of ASME.

Title of the Talk:-***Shifting the Paradigm of Latent Heat Thermal Energy Storage Systems via Additive Manufacturing***

## **KEYNOTE SPEAKERS**



**C. Balaji**, an Institute Chair Professor at the Indian Institute of Technology Madras, is a renowned expert in thermal sciences. With a Ph.D. from IIT Madras, he has over 30 years of experience in teaching and research. His interests span fundamental heat transfer, cooling of electronics, thermal optimization, and machine learning applications. Prof. Balaji has supervised numerous theses and made significant contributions to surface radiation in heat transfer problems and phase change material-based composite heat sinks. As Editor-in-Chief of the International Journal of Thermal Sciences, he leads in his field. Recognized by Stanford University as one of the World's Top 2% Scientists, he has received prestigious awards including the Alexander Von Humboldt fellowship and the Swarnajayanthi fellowship award. An elected fellow of the Indian National Academy of Engineering, he is also a prolific author with 15 books to his credit.

Title of the Talk:- ***Thermal Science and Engineering: Quo Vadis?***



**M Mohan** currently serves as the Distinguished Scientist and Director of the Human Space Flight Centre at ISRO Bangalore. Previously, he held the position of Associate Director (R&D) at the Vikram Sarabhai Space Centre (VSSC), Trivandrum. His expertise lies in launch vehicle system engineering, aerospace manufacturing, space ordnance systems, vehicle integration, and project management. He has held major roles such as Project Director for GSLV missions and Cryo Upper Stage, as well as leading projects like the Moon Impact Probe of Chandrayaan-1. Recognized for his contributions, he has received awards from ISRO for his performance excellence. A fellow of the Aeronautical Society of India and president of the Society of Aerospace Manufacturing Engineers (SAME) in India, he is actively engaged in various technical forums.

Title of the Talk:- ***India's Human Spaceflight Mission – 'GAGANYAAN'***

## **KEYNOTE SPEAKERS**



**Man Yeong Ha** is a distinguished Professor at the School of Mechanical Engineering, Pusan National University, South Korea, renowned for his expertise in thermo-fluid engineering. With a Ph.D. from Pennsylvania State University, his illustrious career spans various academic and research positions globally, including roles at prestigious institutions such as the University of Illinois at Urbana-Champaign and Xi'an Jiaotong University. He is currently the Director of the Rolls-Royce University Technology Centre in Thermal Management and the Center for Next Generation Heat Exchangers.

A Fellow of the American Society of Mechanical Engineers, he has received numerous awards for his outstanding contributions to mechanical engineering and has supervised several Ph.D. and master's students. His extensive international collaborations and editorship roles reflect his significant impact on the field.

Title of the Talk: ***-Time acceleration methodology for rapid simulation of frost formation.***



**Anand Veeraragavan** is the Co-Director of UQ's Centre for Hypersonics and a professor in the School of Mechanical and Mining Engineering, starting his academic career as a lecturer in 2012. As a Mid-Career Advance Queensland Research Fellow (2017-2020), he conducted research on "Supersonic Combustion of Hydrocarbon Fuels for High-Mach-Number Axisymmetric Scramjets". His current research focuses on experimental high-speed aerodynamics and supersonic combustion in the T4 Stalker tube under his management.

Anand earned a B.Tech in aerospace engineering from IIT-Madras in 2002, followed by MS (2006) and PhD (2009) degrees in aerospace engineering from the University of Maryland. His doctoral research on flame stabilization in microscale combustors received the best thesis award. He pursued postdoctoral research at MIT and worked at GE Energy as a combustion technologist, specializing in gas turbine engine combustor design and completing Lean Six Sigma Greenbelt certification.

Title of the Talk: ***-Heated Model Experiments at the Centre for Hypersonics at UQ***

## **KEYNOTE SPEAKERS**



**Jeremie Lasue** is an Astronomer at the Observatoire Midi-Pyrénées, IRAP CNRS, Toulouse, France. His research activities associate the study of Mars, comets, asteroids and interplanetary dust particles with both in situ and remote instruments and laboratory analysis. He has developed numerical analysis methods to study icy subsurfaces, light scattering properties of dust particles in space and planetary atmospheres and space instruments to study planetary surfaces. He has been involved in 10 space instruments and is currently deputy-PI for the VESUV spectrometer on-board the ESA Envision mission to study Venus. He has published 161 peer-reviewed papers, given more than 100 presentation on international conferences and institutes and has been the editor for the book "Planetary Exploration Horizon 2061: A Long-Term Perspective for Planetary Exploration". He has received many awards including an asteroid to his name: Asteroid (33287) Lasue, from the IAU

Title of the Talk: ***Planetary Exploration Horizon 2061: from representative missions to technology requirements***



**Tanmay Basak**, is a distinguished scholar with a Bachelor's degree in Chemical Engineering from Jadavpur University and a Master's and Ph.D. from the Indian Institute of Science, Bangalore. His research spans finite element modeling, computational transport, and microwave-assisted transport. He held post-doctoral positions at the University of Massachusetts and the University of Houston before joining IIT Madras in 2002. Dr. Basak's accolades include the INAE-Young Engineer Award, IChE-Amar Dye-Chem Award, and NASI-SCOPUS Young Scientist Award. He has also received recognition for teaching excellence and outstanding reviewer awards. Dr. Basak serves on the editorial boards of prestigious international journals such as International Communications in Heat and Mass Transfer, Heat Transfer, and International Journal of Heat and Mass Transfer, contributing significantly to the field of chemical engineering.

Title of the Talk: ***Finite Element Implementation on Invisible Energy Flow: Heatfunctions and Boundary Conditions***

## **KEYNOTE SPEAKERS**



**Kalyana Chakravarthy** obtained his bachelors degree from IITM in Aerospace Engineering. He completed his MS and PhD degrees from Georgia Institute of Technology, Atlanta in the same area specializing in turbulent combustion modeling. Subsequently, he was employed at the Oak Ridge National Laboratory in Tennessee for about a decade where his work primarily involved deNOx technologies, bio-fuels and combustion irreversibilities. He then returned to India and has been working at the Defence Research and Development Laboratory where he has mostly focussed on large eddy simulations of high speed turbulent flows and combustion instabilities in solid rocket motors. He currently works on cooling technologies for SCRAMJET engines.

Title of the Talk:-***Combustion Instabilities and acoustic oscillations in solid rocket motors – Insights from computer simulations***



**Vsevolod Peysakhovich**, currently Associate Professor in Human Factors and Neuroergonomics at ISAE-SUPAERO (French Aerospace Engineering Institute). He obtained Ph.D. in Computer Science from University of Toulouse, after obtaining Master of Science degree in Mathematics from Novosibirsk State University (Russia) and two Engineering degrees from EcolePolytechnique at Paris (in Applied Mathematics) and ISAE-SUPAERO at Toulouse (in Aerospace systems and Automatic Control). Research focus is on eye movements and visual attention of operators such as pilots, to design better human-adapted tools for the industry and provide safer operations. He also co-founded Hinfact, a start-up that provides solutions to improve safety from ab initio training to full-scale operations in the aviation industry and counts as clients such companies as Airbus Training and Dassault Aviation. He is principal investigator of different research grants on human-computer interaction and physiological monitoring funded by French Defense Innovation Agency, European Space Agency and French Space Agency. He has co-signed more than 50 scientific articles including 20 articles in international journals.

Title of the Talk:-***Physiological monitoring to increase operational safety***

## **KEYNOTE SPEAKERS**



**Joseph Mathew** is Chairman and Professor of Aerospace Engineering at the Indian Institute of Science (IISc), Bangalore. He obtained his Bachelor's degree in Mechanical Engineering from the Institute of Technology (IIT) Madras, a Master of Science from the University of Missouri-Rolla, and a Ph.D. in Mechanical Engineering from the prestigious Massachusetts Institute of Technology (MIT). Dr. Mathew served as a Research Associate at NASA's Lewis Research Center in Cleveland and later as a Fellow at the National Aerospace Laboratories in Bangalore. Joining IISc's faculty in 1992, he has made significant contributions to aerospace engineering. Dr. Mathew's research interests encompass fluid mechanics, turbulence, computational methods, aeroacoustics, combustion, and flow design. His pioneering work continues to shape aerospace technology, inspiring future generations to explore new frontiers in the field.

Title of the Talk:-***Reliable turbulent flow computations***



**Vijayan K. Asari** is a Professor in Electrical and Computer Engineering and Ohio Research Scholars Endowed Chair in Wide Area Surveillance at University of Dayton, Ohio, USA. He is the director of the Center of Excellence for Computational Intelligence and Machine Vision at UD. Dr. Asari received his PhD degree in Electrical Engineering from Indian Institute of Technology, Madras in 1994. Prior to joining UD in February 2010, Dr. Asari worked as Assistant Professor at TKM College of Engineering Kollam, as Research Fellow at National University of Singapore and Nanyang Technological University Singapore, and as Professor at Old Dominion University, Virginia, USA. Dr. Asari holds five patents and has published more than 750 research articles including 136 peer-reviewed journal papers in the areas of image processing, computer vision, pattern recognition, machine learning, deep learning and artificial neural networks. He has so far mentored 32 PhD dissertations and 48 MS theses in electrical and computer engineering, and currently 18 graduate students are working with him on different research projects. Dr. Asari received several awards for teaching, research, advising, and technical leadership. He is an elected Fellow of SPIE and a Senior Member of IEEE.

Title of the Talk:-***AI and Machine Vision for Remote Inspection, Surveillance, and Vision-Guided Aerospace Applications***

## **KEYNOTE SPEAKERS**



**Ramesh Narayanaswamy** is currently Professor of Mechanical Engineering and Deputy Head of the School of Civil and Mechanical Engineering at Curtin University in Perth, Western Australia. His teaching and research interests involve Heat Transfer and Fluid Mechanics. Using a combination of computational and experimental methodologies, his research work explores impinging jets, droplet evaporation and condensation, thermal comfort of indoor built environments, and atmospheric fog harvesting. Funding agencies include the Office of Learning and Teaching, Australian Research Council, National Environmental Science Projects, Australian and Indian Governments. Good-quality PhD students under his supervision have enabled research publications, creating significant esteem and impact for the research work at Curtin University. He is recognised as an excellent teacher both at Curtin University and at the Indian Institute of Technology Kanpur through outstanding student feedback as well as nomination for teaching awards. He is the recipient of the Erudite Scholar award from the Government of Kerala for outstanding academic excellence, and recently recognised as a SPARC faculty by the Government of India to engage in research collaboration with the Indian Institute of Technology Kanpur.

Title of the Talk:-***Fluid Play on Heat Transfer from an Impinging Jet***



**PV Aravind**, Chair of Energy Conversion at the University of Groningen, is a leading expert in hydrogen and fuel cell technologies. While he had an early stage focus on biomass gasification and Solid Oxide Fuel Cells (SOFC) systems, his current research advances hydrogen-related technologies for a wide range of applications in the Netherlands and beyond. He also leads TU Delft's Nature Based Negative Emissions Program, advises on energy and environmental technologies e.g. in Kerala, and chairs the KnowHy Foundation. Prof. Aravinds international impact extends to editorial roles and advisory positions, emphasizing his dedication to advancing sustainable solutions.

Title of the Talk:-***Fuel cell systems for aircraft and other applications***

## **DETAILED SESSION PLAN**



<b>1A : AERODYNAMICS AND PROPULSION (AP-1)</b>			<b>VENUE : PCSC CONF. HALL</b>
<b>CHAIR : SHRI., T. RAMESH, DD, IPRC</b>			<b>RAPPORTEUR: SHRI. KIRAN R, LPSC</b>
<b>TIME</b>	<b>PAPER ID – TITLE</b>	<b>FIRST/PRIMARY CONTACT AUTHOR</b>	<b>AFFILIATION</b>
14:00 – 14:10	22 - EFFECT OF SURFACE ROUGHNESS OVER A BLENDED WING BODY.	ANAMIKA N ARYA	MIT ART, DESIGN & TECH. UNIV., PUNE
14:10 – 14:20	25 - ENHANCEMENT OF THE SCRAMJET INLET EFFICIENCY WITH BLEED INTEGRATION USING CFD	DINESH KUMAR BAJAJ	MIT ART, DESIGN & TECH. UNIV., PUNE
14:20 – 14:30	48 - EFFECTS OF FERRIC OXIDE AND MANGANESE DIOXIDE ON PHASE STABILIZATION OF AMMONIUM NITRATE - BASED COMPOSITE SOLID PROPELLANTS	PRABHAT DATTAKUMAR PHONDEKAR	BITS, MESRA
14:30 – 14:40	50 - COMPARATIVE ANALYSIS OF NEUTRALITY PARAMETER USING DIFFERENT SLANT SOLID PROPELLANT GRAIN DESIGNS	PANDI SIDDHARTH	MIT ART, DESIGN & TECH. UNIV., PUNE
14:40 – 14:50	53 - EXPERIMENTAL STUDY ON PERFORMANCE PARAMETERS OF HYBRID ROCKET PROPULSION SYSTEMS	PANDI SIDDHARTH	MIT ART, DESIGN & TECH. UNIV., PUNE
14:50 – 15:00	58 - EFFECT OF DIFFUSER VANE ON THE PERFORMANCE OF A CENTRIFUGAL COMPRESSOR: A NUMERICAL ANALYSIS	SUNDAR MALLAVARAPU RAJA	SVNIT, SURAT
15:00 – 15:10	76 - TESTING FOR HUMAN RATING OF EARTH STORABLE LIQUID ENGINE	SUNNY MITRA	LPSC, ISRO
<b>1B : MATERIALS, MANUFACTURING, MEASUREMENT &amp; INSTRUMENTATION, STR. DESIGN (MM-1)</b>			<b>VENUE : KAVERI HALL</b>
<b>CHAIR : PROF. CHAKRAVARTHY P. , IIST</b>			<b>RAPPORTEUR: SHRI. REMYA K.P., LPSC</b>
<b>TIME</b>	<b>PAPER ID – TITLE</b>	<b>FIRST/PRIMARY CONTACT AUTHOR</b>	<b>AFFILIATION</b>
14:00 – 14:10	79 - MICRO CRACK INITIATION IN HTS ROEBEL STRAND AT CRYOGENIC TEMPERATURE UNDER TENSILE AND TORSION LOADING	S GIJOY	COLLEGE OF ENGINEERING, TRIVANDRUM
14:10 – 14:20	90 - DEVELOPMENT OF SINTERED WIRE MESH FOR PYRO FILTERS APPLICATION THROUGH PM ROUTE	NIPUN NEIL	ISRO
14:20 – 14:30	94 - SURFACE MODIFICATION THROUGH Ti2CN POWDER MIXED ELECTRIC DISCHARGE COATING OF TITANIUM ALLOY IN DEIONIZED WATER	PRAJINA N V	NIT CALICUT
14:30 – 14:40	100 - EXPLORING THE THERMAL CONDUCTIVITY OF GREEN FILAMENTOUS ALGAE NATURAL FIBRE: AN EXPERIMENTAL INVESTIGATION	SAJIN G R	COLLEGE OF ENGINEERING, TRIVANDRUM
14:40 – 14:50	132 - DESIGN, DEVELOPMENT AND TESTING OF AA6061T6 ALLOY LINER FOR COPV APPLICATION	SANDEEP KUMAR	VSSC, ISRO
14:50 – 15:00	182 - EFFECT OF SECONDARY MELTING ROUTE ON THE MECHANICAL PROPERTIES OF AUSTENITIC STAINLESS STEEL 321 AT ROOM TEMPERATURE, 77K & 20K	SANDIPAN DAS	LPSC, ISRO
15:00 – 15:10	202 - DEVELOPMENT AND QUALIFICATION OF FRICTION WELDED BI-METALLIC TRANSITION	SANDIPAN DAS	LPSC, ISRO

JOINTS OF ICSS-1218-321 AND Ti5Al2.5Sn-ELI FOR C25 STAGE FOR GAGANYAAN APPLICATION			
<b>1C :</b>		<b>EXPERIMENTAL FLUID MECHANICS AND HEAT TRANSFER, CRYOGENICS (FM-1)</b>	
		<b>VENUE : NILA HALL</b>	
<b>CHAIR : PROF. M JOSE PRAKASH, TKMCE (RETD.)</b>		<b>RAPPORTEUR: SHRI. UNNI RAVEENDRAN, VSSC</b>	
<b>TIME</b>	<b>PAPER ID – TITLE</b>	<b>FIRST/PRIMARY CONTACT AUTHOR</b>	<b>AFFILIATION</b>
14:00 – 14:10	67 - EVALUATING THE IMPACT OF SPACING BETWEEN VERTICAL WIRES ON THE CONDENSATION HEAT TRANSFER PERFORMANCE OF VERTICAL CONDENSER TUBE COATED WITH SEMI-SOLID LUBRICANT	JYOTHISH ABRAHAM	COLLEGE OF ENGINEERING, TRIVANDRUM
14:10 – 14:20	87 - EXPERIMENTAL ANALYSIS OF HEAT TRANSFER IN ROTATING PACKED BED: CHARACTERIZATION AND OPTIMIZATION BY RESPONSE SURFACE METHODOLOGY (RSM)	D S MURTHY	GB PANT UNIVERSITY OF AGRIC. & TECH, PANTNAGAR
14:20 – 14:30	97 - STUDY OF SPECTRAL RADIATIVE PROPERTIES OF A NANO WOOD-PILE STRUCTURE FOR CRYOGENIC INSULATION	PRADEEP KUMAR	IIT Mandi
14:30 – 14:40	118 - EXPERIMENTAL ASSESSMENT OF PHASE CHANGING MATERIAL ASSISTED ANNEALING IN MICROCHANNEL FOR NUCLEIC ACID AMPLIFICATION	B INDULAKSHMI	COLLEGE OF ENGINEERING, TRIVANDRUM
14:40 – 14:50	138 - EXPERIMENTAL INVESTIGATIONS ON PARAMETERS AFFECTING THE DYNAMIC LEIDENFROST TEMPERATURE OF IMPACTING DROPLET	RENJITH B S	COLLEGE OF ENGINEERING, TRIVANDRUM
14:50 – 15:00	145 - ASPECTS OF HEAT AND MASS TRANSFER IN A SPHERICAL GAS BOTTLE DURING DEPRESSURIZATION	DEVAVRAT KASHYAP	LPSC, ISRO
<b>1D :</b>		<b>SPACE APPLICATION, SPACE ECOSYSTEM AND STARTUPS IN INDIA, AEROSPACE SYSTEMS, HUMAN SPACE PROGRAMME AND SPACE EXPLORATION (SA-1)</b>	
		<b>VENUE : NALANDA-A HALL</b>	
<b>CHAIR : SHRI. CHANDRASEKHARAN C, DD, IPRC</b>		<b>RAPPORTEUR: SHRI. SURESH KUMAR K.P., IPRC</b>	
<b>KEYNOTE LECTURE: DR. ANIL BHARDWAJ, DIRECTOR, PRL, AHMEDABAD</b>			
<b>TIME : 14:00 – 14:30</b>			
<b>TITLE : LUNAR EXPLORATION PROGRAM OF INDIA</b>			
<b>TIME</b>	<b>PAPER ID – TITLE</b>	<b>FIRST/PRIMARY CONTACT AUTHOR</b>	<b>AFFILIATION</b>
14:30 – 14:40	15 -ELECTROMAGNET ASSISTED DOCKING FOR SPACE APPLICATIONS	SREEJITH M R	IISU, ISRO
14:40 – 14:50	42 - INTERPLANETARY MISSION TO VENUS USING BROKEN PLANE TRANSFER	SAI ROHITH JAGARLAPUDI	ISRO
14:50 – 15:00	56 - EFFECTS OF TURBULENCE-CHEMISTRY INTERACTIONS (TCI) ON FLOW-FIELDS OF A MARTIAN SPACE VEHICLE	NAVEEN KUMAR	IIT KANPUR
15:00 – 15:10	68 - DESIGN OF MULTIPLE GRAVITY ASSIST TRAJECTORIES USING HYBRID OPTIMIZATION	SUCHISMITA CHOUDHURY	VSSC, ISRO

1E : COMPUTATIONAL FLUID DYNAMICS (CFD-1)		VENUE : NALANDA-B HALL	
CHAIR : DR. ASHOK V., AD, VSSC		RAPPORTEUR: SHRI. RAHUL GOVIND, IPRC	
TIME	PAPER ID – TITLE	FIRST/PRIMARY CONTACT AUTHOR	AFFILIATION
14:00 – 14:10	12 - DYNAMICS OF THIN LIQUID FILM FLOWING IN A RECTANGULAR MICROCHANNEL	GARIMA JAIN	BITS MESRA
14:10 – 14:20	36 - ESTIMATION OF RADIATIVE HEAT TRANSFER FROM A MIXTURE OF GASES AND AL <sub>2</sub> O <sub>3</sub> PARTICLES	KAPILKUMAR JIJABRAO PATIL	IIT MANDI
14:20 – 14:30	38 - THERMAL PERFORMANCE EVALUATION OF HEAT SINKS INCORPORATING PHASE CHANGE MATERIALS FOR ELECTRONICS COOLING	PRINTU PRAKASH	RAJIV GANDHI INSTITUTE OF TECH., KOTTAYAM
14:30 – 14:40	40 - COMBINED EFFECTS OF COLLISION MODELS AND CHEMISTRY MODEL ON HYPERSONIC FLOWS USING THE DSMC METHOD	ASHIRBAD MALLICK	IIT GUWAHATI
14:40 – 14:50	44 - NUMERICAL INVESTIGATION OF ULLAGE THRUST ON BAFFLED AND UNBAFFLED FUEL TANKS DURING THE COASTING PHASE OF LAUNCH VEHICLES	MANGOLU SUPRIYA	INSTITUTE OF AERONAUTICAL ENGINEERING
14:50 – 15:00	55 - LES OF SUPERCRITICAL NITROGEN JET WITH SWIRL AND COFLOW	SWAPNIL TUPKARI	IIT BOMBAY
15:00 – 15:10	59 - EFFECT OF INLET SUB-COOLING ON HEAT TRANSFER AND FLOW STABILITY IN A HYBRID HEAT SINK	ANIL PRATI HAR	KUMAR GB PANT UNIVERSITY OF AGRI. & TECH, PANTNAGAR

2A : : AERODYNAMICS AND PROPULSION (AP-2)		VENUE : PCSC CONF. HALL	
CHAIR : SHRI. A. NARAYANAN, AD, IPRC		RAPPORTEUR: MS. SHARMISTHA CHAUBEY, LPSC	
<b>KEYNOTE LECTURE: PROF. STÉPHANIE LIZY-DESTREZ, ISAE-SUPAERO, FRANCE</b> <b>TIME : 16:15 – 16:45</b> <b>TITLE :- LUNAR EXPLORATION AND SUSTAINABILITY: CHALLENGES, OPPORTUNITIES, AND ORBITAL MANAGEMENT STRATEGIES</b>			
TIME	PAPER ID – TITLE	FIRST/PRIMARY CONTACT AUTHOR	AFFILIATION
16:45 – 16:55	78 - NUMERICAL INVESTIGATION OF STAR GRAIN LOCATION ON FLOW DYNAMICS IN SOLID ROCKET MOTORS	GAYATHRI R	VSSC, ISRO
16:55 – 17:05	123 - CHARACTERISTICS OF PRESSURE OSCILLATIONS IN LARGE SEGMENTED SOLID ROCKET MOTORS	KALI PRASAD VASN KALLAKUNTA	ISRO
17:05 – 17:15	155 - A NOVEL APPROACH FOR CAPTURING PRESSURISATION SYSTEM START TRANSIENTS AND SENSITIVITY OF ULLAGE VOLUME IN A PROPELLANT TANK	UNNIKRISHNAN V	LPSC, ISRO
17:15 – 17:25	164 - DESIGN OF A HOT GAS GENERATOR MODULE FOR SIMULATING SCRAMJET TEST CONDITIONS	SUJITHKUMAR RAGHAVAN PILLAI	VSSC, ISRO
2B : MATERIALS, MANUFACTURING, MEASUREMENT & INSTRUMENTATION, STR. DESIGN (MM-2)		VENUE : KAVERI HALL	
CHAIR : SHRI. S V S NARAYANAMURTHY, GM, LPSC		RAPPORTEUR: SHRI. SANOJ V. , VSSC	
TIME	PAPER ID – TITLE	FIRST/PRIMARY CONTACT AUTHOR	AFFILIATION
16:15 – 16:25	206 - CLOSED FORM EXPRESSIONS TO ESTIMATE CTES OF FIBER REINFORCED POLYMERS AND METAL MATRIX COMPOSITES DEVELOPED BY INTRODUCING THE VARIATIONAL ASYMPTOTIC METHOD IN THERMO-ELASTIC MICROMECHANICS	MURTHY M V V S	ISRO
16:25 – 16:35	223 - REDESIGNING A RADIATOR COMPONENT FOR AEROSPACE APPLICATIONS USING DFAM APPROACH	DR. SOORAJ V.S.	IIST, TRIVANDRUM
16:35 – 16:45	233 - NANOPARTICLE-ENHANCED PHASE CHANGE MATERIALS FOR IMPROVED THERMAL MANAGEMENT IN AEROSPACE DEVICES	L SWETHA	BITS,, PILANI
16:45 – 16:55	237 - CHALLENGES IN REALIZATION OF HEAVY ALUMINIUM ALLOY FORGINGS FOR APPLICATION IN LIQUID ENGINES FOR INDIAN SPACE PROGRAMME-ABSTRACT	SEBASTIAN PP	LPSC, ISRO
16:55 – 17:05	238 - INVESTIGATION OF FATIGUE CHARACTERISTICS IN WIRE ARC ADDITIVE MANUFACTURING: A FOCUS ON THE WAAM-SUBSTRATE INTERFACE	JIGNESH NAKRANI	IIT, BOMBAY
17:05 – 17:15	269 - EFFECT OF MULTI-WALLED CARBON NANOTUBES ON THE PROPERTIES OF COMPOSITE	CJO MATHEW	NIT, TIRUCHIRAPPALI

	BIPOLAR PLATE FOR POLYMER ELECTROLYTE MEMBRANE FUEL CELLS			
17:15 – 17:25	299 - VARIABLE ENERGY CONSUMPTION OPTIMIZATION FOR CNC MACHINE TOOLS: A MODEL INTEGRATED APPROACH	GIRISH KANT GARG	BITS, PILANI	
<b>2C :</b>	<b>EXPERIMENTAL FLUID MECHANICS AND HEAT TRANSFER, CRYOGENICS (FM-2)</b>			<b>VENUE : NILA HALL</b>
	<b>CHAIR : PROF. SHIBU CLEMENT, BITS-GOA</b>	<b>RAPPORTEUR: SHRI. ABHISHEK SHARMA, LPSC</b>		
<b>TIME</b>	<b>PAPER ID – TITLE</b>	<b>FIRST/PRIMARY CONTACT AUTHOR</b>	<b>AFFILIATION</b>	
16:15 – 16:25	200 -EXPERIMENTAL INVESTIGATION ON TRANSPORT OF SELF-PROPELLED LEIDENFROST DROPLET ON HERRINGBONE AND HELICAL RATCHET SURFACES	NIJITH R	COLLEGE OF ENGINEERING, TRIVANDRUM	
16:25 – 16:35	209 - EXPERIMENTAL INVESTIGATION ON THE LEIDENFROST PROPULSION OF DROPLET USING SURFACE MODIFIED SUBSTRATES	PRAVEEN ARJUNAN	COLLEGE OF ENGINEERING, TRIVANDRUM	
16:35 – 16:45	306- STATISTICAL PROPERTIES OF A CIRCULAR TURBULENT JET AT VARYING REYNOLDS NUMBERS	AMBICA SINGH	IIT, KANPUR	
16:45 – 16:55	310 -IR THERMAL IMAGE ANALYSIS OF CRYOGENIC TANK DURING FOAMING PROCESS	UDAY BHASKAR NEELA	VSSC, ISRO	
16:55 – 17:05	354 - SIMULATING THE EFFECT OF INTERFACE MOTION ON ULLAGE PRESSURE IN A LH2 PROPELLANT TANK USING A REDUCED ORDER MATHEMATICAL MODEL	SOURABH KARMARKAR	LPSC, ISRO	
17:05 – 17:15	398 -DEVELOPMENT OF AN INDIGENOUS CRYOGENIC TEMPERATURE SENSORS CALIBRATION FACILITY FOR CRYOGENIC AND SEMICRYOGENIC ROCKET ENGINES	DEBASHIS PANDA	IISc, BANGALORE	
<b>2D</b>	<b>SPACE APPLICATION, SPACE ECOSYSTEM AND STARTUPS IN INDIA, AEROSPACE SYSTEMS, HUMAN SPACE PROGRAMME AND SPACE EXPLORATION (SA-2)</b>			<b>VENUE : NALANDA -A HALL</b>
	<b>CHAIR : PROF.DEEPAK MISHRA , IIST</b>	<b>RAPPORTEUR: SHRI.DEV ANAND M, VSSC</b>		
<b>TIME</b>	<b>PAPER ID – TITLE</b>	<b>FIRST/PRIMARY CONTACT AUTHOR</b>	<b>PAPER ID – TITLE</b>	
16:15 – 16:25	69 - GEOHAZARD SUSCEPTIBILITY MAPPING ALONG TRANSPORTATION NETWORK: A CASE STUDY ALONG LEH- DAULAT BEG OLDIE	APARNA A L	NRSC, ISRO	
16:25 – 16:35	75 - THERMAL DESIGN AND TEMPERATURE CONTROL OF CASSEGRAIN ANTENNA AND DEPLOYMENT POINTING & TRACKING MECHANISM FOR COMMUNICATION SPACE CRAFTS	SALEEM MULLA	BASHA ISRO	
16:35 – 16:45	110 - EXPLORING THE INFLATION DYNAMICS OF MEMBRANE BASED RECTANGULAR TORUS	PRADEEP SINGH	MNNIT, ALLAHABAD	
16:45 – 16:55	150 - IMPROVEMENT IN THE DESIGN OF THE VALVING UNIT OF A MANUAL VALVE FOR SPACE PROGRAMME	RENJITH JAMES	LPSC, ISRO	

16:55 – 17:05	160 - ANALYSIS OF FLOW INSIDE AIR REVITALISATION SYSTEM CANISTER USING CFD	KRITI RAJ	VSSC, ISRO
17:05 – 17:15	176 - DESIGN OF CREW MODULE (CM) - CREW ESCAPE SYSTEM (CES) LINKS ASSEMBLY FIXTURE	VAIBHAV GOGGELA	SDSC, ISRO
17:15 – 17:25	178 - EFFECT OF ADDED MASS OF AIR ON THE VIBRATION ANALYSIS OF THE INFLATABLE TORUS	AMIY CHANDRAUL	MNNIT, ALLAHABAD
<b>2E : COMPUTATIONAL FLUID DYNAMICS (CFD-2)</b>		<b>VENUE : NALANDA-B Hall;</b>	
<b>CHAIR : DR. DEEPENDRAN B., DD, VSSC,</b>		<b>RAPPORTEUR: SHRI.KIRAN MOHAN, LPSC</b>	
<b>TIME</b>	<b>PAPER ID – TITLE</b>	<b>FIRST/PRIMARY CONTACT AUTHOR</b>	<b>AFFILIATION</b>
16:15 – 16:25	72 - FLOW AND HEAT TRANSFER IN SERPENTINE CHANNELS AT LOW REYNOLDS NUMBERS	MAUSAM SARKAR	BARC
16:25 – 16:35	102 - CFD ANALYSIS OF FLOAT FOR ROCKET PRIMARY STAGE RETRIEVAL	FJIN JOHNY	COLLEGE OF ENGINEERING, TRIVANDRUM
16:35 – 16:45	104 - COMPARATIVE ASSESSMENT OF FSK, SLW, AND WSGG MODELS FOR RADIATIVE TRANSFER	NISHAD MAHAJAN	IIT, MANDI
16:45 – 16:55	133 - SIMPLIFIED METHODOLOGY TO SIMULATE HEAT EXCHANGER IN AIRCRAFT'S OIL COOLING SYSTEM	VINAY C A	NAL
16:55 – 17:05	144 - NUMERICAL SIMULATION AND VALIDATION OF WELDING AS A MOVING BOUNDARY PROBLEM FOR HYBRID ROCKET MOTOR CHAMBER SYSTEMS	JIJY RENJ C F	VSSC, ISRO
17:05 – 17:15	153 - MATHEMATICAL MODELLING AND EXPERIMENTAL ANALYSIS OF CRYOGENIC PRESSURE RELIEF VALVE FOR PERFORMANCE PREDICTION	RISHABH GARG	LPSC, ISRO

**EVALUATION OF POSTER PRESENTATION & INTERACTION WITH AUTHORS BETWEEN 15:15 to 16:15.  
AUTHORS ARE REQUESTED TO BE PRESENT NEAR POSTERS DURING EVALUATION**

PAPER ID	TITLE	FIRST AUTHOR	AFFILIATION
11	MODELING OF CARBON MONOXIDE DEPOSITION FOR CRYOGENIC SOLID PROPELLANT CASTING	VIRAL KAKADIA	BIT, MERSA
13	MODELING OF TRANSIENTS IN A VAPORIZING LIQUID MICROTHRUSTER	HEMANTA MAHANANDA	BIT, MERSA
19	NUMERICAL INVESTIGATION OF PERFORATED STRUTS ON THRUST VECTORING CHARACTERISTICS OF CONVERGENT DIVERGENT (C-D) NOZZLE	PANDI SIDDHARTH	MIT ART DESIGN & TECHNOLOGY, PUNE
20	PHENOMENON OF DYNAMIC CLOSURE AND FAILURE OF LIFT-OFF SEAL DESIGNED FOR A LIQUID ROCKET ENGINE TURBOPUMP	FAHD HASIS	ISRO
23	THE EFFECT OF BACK PRESSURE FLUCTUATIONS ON A SUPERSONIC INLET USING CFD ANALYSIS	S SAI RUTAMBHARA	MIT,ARTS,DESIGNAND TECHNOLOGY, PUNE
26	CONTROL OF VON KARMAN EFFECT BY ROTATING A CYLINDER IN TANDEM ARRANGEMENT OF CIRCULAR CYLINDERS	RUTUJA RAJKUMAR JAIN	MIT ARTS, DESIGN AND TECHNOLOGY, PUNE
27	FLOW ANALYSIS OVER TANDEM ARRANGEMENTS OF CIRCULAR AND SQUARE CYLINDERS	DEVANSHI VINAYAK JAGTAP	MIT, ARTS,DESIGN AND TECHNOLOGY, PUNE
28	CHEMICAL EQUILIBRIUM ANALYSIS OF HYBRID ROCKET ENGINE USING ACRYLONITRILE BUTADIENE STYRENE FUEL AND DIFFERENT OXIDIZERS	PANDI SIDDHARTH	HINDUSTAN UNIVERSITY, TAMILNADU
30	NUMERICAL INVESTIGATION OF MIXING ENHANCEMENT STUDIES IN A CIRCULAR SCRAMJET COMBUSTOR	SANDIP MOTILAL GANGANI	MIT,ARTS DESIGN AND TECHNOLOGY, PUNE
31	EFFECT OF FIRST RAMP ANGLE OF A CAVITY ON THE PERFORMANCE STANDARD DLR BASED SCRAMJET COMBUSTOR	KRISHNA KANDULA REDDY	MIT,ARTS,DESIGN AND TECHNOLOGY, PUNE
32	STEADY FLOW DYNAMICS OVER A LOBED MICRO-PILLAR AT LOW REYNOLDS NUMBER	NAVEEN S PRABHA	COLLEGE OF ENGINEERING TRIVANDRUM
33	DESIGNING AND OPTIMIZATION OF 2D PLANAR MIXED COMPRESSION SUPERSONIC INTAKE	KRISHNA KANDULA REDDY	MIT,ARTS, DESIGN AND TECHNOLOGY, PUNE
34	DESIGN OF A LOW ALTITUDE SOUNDING ROCKET FOR THE DELIVERY OF A CAN SIZED PAYLOAD	PANDI SIDDHARTH	MIT, ARTS,DESIGN AND TECHNOLOGY, PUNE
41	CFD ANALYSIS ON COAXIAL ROTOR DRONE WITH CLOSED COMPARTMENT USING THE PRINCIPLE OF PELTIER EFFECT	PANDI SIDDHARTH	MIT ARTS,DESIGN AND TECHNOLOGY, PUNE

**EVALUATION OF POSTER PRESENTATION & INTERACTION WITH AUTHORS BETWEEN 15:15 to 16:15.  
AUTHORS ARE REQUESTED TO BE PRESENT NEAR POSTERS DURING EVALUATION**

PAPER ID	TITLE	FIRST AUTHOR	AFFILIATION
49	EXPERIMENTAL INVESTIGATION ON SELF-PROPULSION OF LEIDENFROST DROPLETS ON NARROW RATCHET SURFACES	ABHINANTH JAYAKUMAR	ACE COLLEGE OF ENGINEERING
62	EXPERIMENTAL STUDY ON ENHANCING PV/T COLLECTOR PERFORMANCE THROUGH FIN-INTEGRATED HEAT TRANSFER AND PCM THERMAL ENERGY STORAGE	DINU GEORGE	ST JOSEPH'S COLLEGE OF ENGINEERING AND TECHNOLOGY, PALAI
63	LUNAR MISSION DESIGN USING THE THREE-BODY PROBLEM	SOURAV GHOSH	JAIN DEEMED TO BE UNIVERSITY
64	LONG SHORT-TERM MEMORY BASED DEEP LEARNING TECHNIQUE FOR SATELLITE ORBIT PREDICTION	SWATHI R	DCS ,CUSAT
70	DESIGN AND ANALYSIS OF FLOW THROUGH HEX IN A TYPICAL AIRCRAFT	HARSH M KUBADIA	VEERMATA, JIJABAI TECHNOLOGICAL INSTITUTE
73	SCALING EFFECTS OF COMBUSTION LIGHT GAS GUNS USING CFD ANALYSIS	SAPTANSHU S INGALE	MIT,ARTS, DESIGN AND TECHNOLOGY UNIVERSITY, PUNE
74	INVESTIGATING PCM NANOCOMPOSITES WITH AL <sub>2</sub> O <sub>3</sub> : SYNTHESIS AND CHARACTERIZATION	DEVENDRA DANDOTIYA	PRESIDENCY, UNIVERSITY BANGALORE
81	ANALYTICAL STUDY OF STEALTH AIRCRAFT JET ENGINE WITH DIFFERENT NOZZLE AREA RATIO	NIDHI BARANWAL	NIT,CALICUT
83	NUMERICAL SIMULATION OF AN EXPANDING MAGNETIC FIELD PLASMA THRUSTER USING IODINE FUEL	VINOD SAINI	IPR
88	CFD SIMULATION OF SOLAR AIR HEATER HAVING OBTUSE L ROUGHNESS	LOKESH VARSHNEY	GB PANT UNIVERSITY OF AGRI. & TECH, PANTNAGAR
93	THE IMPACT OF AI IN SPACE AND THE ROADBLOCKS AHEAD	PALAK SRIVASTAVA	JSS ACADEMY OF TECHNICAL EDUCATION
98	AERODYNAMIC PERFORMANCE DURING FLAPPING OF A RECTANGULAR PLATE USING DISCRETE VORTEX METHOD	DEVNANJAN SAMANTA	IIT, ROPAR
111	INVESTIGATION ON EFFECTS OF DIFFERENT FINNED GEOMETRIES ON NATURAL CONVECTION HEAT TRANSFER.	MD NASEER	JAMIA,MILLIA, ISLAMIA
115	HYDROGENATION OF HTPB USING COPPER CHROMITE AS CATALYST AND BY NON-CATALYTIC METHOD	PRASAD DEVI VARA CHAPPIDI	SDSC,SHAR ISRO
119	MOVING OBJECT DETECTION & TRACKING USING DEEP LEARNING	ANCHAL YADAV	DRDO



**EVALUATION OF POSTER PRESENTATION & INTERACTION WITH AUTHORS BETWEEN 15:15 to 16:15.  
AUTHORS ARE REQUESTED TO BE PRESENT NEAR POSTERS DURING EVALUATION**

PAPER ID	TITLE	FIRST AUTHOR	AFFILIATION
120	THERMAL PERFORMANCE OF A CHANNEL TYPE HEAT EXCHANGER	AVINASH KUMAR YADAV	LPSC ISRO
121	EXPERIMENTAL AND THEORETICAL INVESTIGATION ON EFFICACY OF PROPELLANT INTAKE DEVICE USED IN LIQUID OXYGEN TANK OF SEMI-CRYO STAGE	DEVAVRAT KASHYAP	LPSC ISRO
127	EFFECT OF BACKWARD STEP GEOMETRY ON 2D FLOW SEPARATION AND REATTACHMENT POINT	VISHWAJEET N PAWAR	MIT, ARTS DESIGN AND TECHNOLOGY UNIVERSITY, PUNE
128	DESIGN OF SEMI-AUTONOMOUS UAV WITH SELF OBSTACLE DETECTION AND COLLISION AVOIDANCE	NAVEEN S YANKANCHI	CSIR-NAL
139	EFFECT OF POROUS MEDIA HEIGHT ON INVERSE DIFFUSION FLAME MORPHOLOGY	RUPESH SHAH	SVNIT, SURAT
141	EXPERIMENTAL STUDY ON THERMAL STORAGE PERFORMANCE OF BINARY SLPCM IN ELECTRONIC COOLING APPLICATION	ANU NAIR NAIR	RSDMECE, CHENGANNUR
143	CRYO PROPELLANT FILLING AUTOMATION AT LAUNCH PAD FOR GAGANYAAN	MURALI KUNDE	ISRO
149	A MACHINE LEARNING MODEL FOR COMBUSTION INSTABILITY BASED ON A GREEN'S FUNCTION PARADIGM	SHUBHAM U DHADHAL	IIT, MADRAS
154	EFFECT OF SLIP LENGTH ON FLOW CHARACTERISTICS IN 2D WAKES	TUBA FATIMA	IIT, MANDI
161	EXPERIMENTAL INVESTIGATIONS OF REDUCED GRAPHENE OXIDE MIXED PHASE CHANGE MATERIALS FOR THERMAL MANAGEMENT OF BATTERIES IN ELECTRIC VEHICLES	RAJESH BABY	ST JOSEPH'S COLLEGE OF ENGINEERING PALAI
163	TEMPERATURE MEASUREMENT IN A STEAM JET USING TUNABLE DIODE LASER ABSORPTION SPECTROSCOPY	SHARON ELSA SHA	CUSAT
166	PERFORMANCE EVALUATION OF SHELL & HELICAL COIL HEAT EXCHANGER FOR LH2 TANK PRESSURIZATION SYSTEM OF CRYOGENIC UPPER STAGE	RAVISHANKAR K C	LPSC ISRO
170	REAL-TIME ACQUIRING AND SYNCHRONIZATION OF PRESSURE DATA DURING PPT OF LAUNCH VEHICLE HARDWARE	VENKATA REDDY P REDDY	ISRO
185	AQUEOUS DROP FORMATION IN TOP-SUBMERGED SHAPED NOZZLES IN QUIESCENT AND ROTATING ORGANIC PHASE	NIRVIK SEN	BARC
186	EUROPA SUBSURFACE EXPLORATION: ROBOTIC PENETRATORS AND ICE-PENETRATING RADAR	KANDIM PAREKH	UPES
188	MARTIAN ICE MINING: IN-SITU RESOURCE UTILIZATION FOR WATER EXTRACTION	KANDIM PAREKH	UPES

**EVALUATION OF POSTER PRESENTATION & INTERACTION WITH AUTHORS BETWEEN 15:15 to 16:15.  
AUTHORS ARE REQUESTED TO BE PRESENT NEAR POSTERS DURING EVALUATION**

PAPER ID	TITLE	FIRST AUTHOR	AFFILIATION
189	VENUSIAN ATMOSPHERE EXPLORATION: AEROBOT TECHNOLOGY AND INSTRUMENTATION	KANDIM PAREKH	UPES
236	DEVELOPMENT OF A BRAZED JOINT FOR APPLICATION IN A LOX KEROSENE ENGINE INJECTOR HEAD	ANJANEESH SHUKLA	ISRO
240	EXPERIMENTAL INVESTIGATIONS ON HEAT PIPES WITH PHASE CHANGE MATERIAL FOR THERMAL MANAGEMENT OF ELECTRONIC DEVICES	JUSTIN JOSE	ST JOSEPH'S COLLEGE OF ENGINEERING AND TECHNOLOGY
248	THERMAL MANAGEMENT OF CYLINDRICAL LITHIUM-ION BATTERY USING PHASE CHANGE MATERIAL-FIN COMPOSITES	ANOOPAL B	ST JOSEPH'S COLLEGE OF ENGINEERING AND TECHNOLOGY

3A : AERODYNAMICS AND PROPULSION (AP-3)		VENUE : PCSC CONF. HALL	
CHAIR : SHRI. M.S. SURESH, AD, LPSC		RAPPORTEUR: SHRI.FAZIL MOHAMMAD, VSSC	
<b>KEYNOTE LECTURE: PROF. K. RAMAMURTHI, IIT-MADRAS</b>			
<b>TIME : 09:50-10:20</b>			
<b>TITLE : EXPLOSION SAFETY FOR FUTURE HYDROGEN ECONOMY</b>			
TIME	PAPER ID – TITLE	FIRST/PRIMARY CONTACT AUTHOR	AFFILIATION
10:20 - 10:30	171-NUMERICAL INVESTIGATION ON SHEAR LAYER DEVELOPMENT IN A DUAL-FUEL MODEL ROCKET NOZZLE	ABHILASH NARAYAN	LPSC, ISRO
10:30 – 10:40	180-NUMERICAL INVESTIGATION OF THRUST VECTOR EFFICIENCY IN A CONVERGENT DIVERGENT NOZZLE WITH JET TABS	JYOTHY V M	KARUNYA INSTITUTE OF TECHNOLOGY & SCIENCE
10:40 – 10:50	204-EVALUATION OF STABILITY TRENDS THROUGH STATIC TESTING IN TACTICAL MOTORS	PANDU RANGA SARMA MALLELA	DRDL, DRDO
10:50 – 11:00	230-PERFORMANCE EVALUATION OF PROPELLANT INHIBITION THROUGH SUBSCALE SOLID MOTOR TEST	SANTHOSHKUMAR C	VSSC, ISRO
11:00 – 11:10	244-AERODYNAMIC DESIGN OF PYLONS FOR FIGHTER AIRCRAFT	MRUNALINI B	ADA-DRDO
3B : MATERIALS, MANUFACTURING, MEASUREMENT & INSTRUMENTATION, STR. DESIGN (MM-3)		VENUE : KAVERI HALL	
CHAIR : ASSO. PROF. SOORAJ V.S., IIST		RAPPORTEUR: SHRI.DEEPAK V M, LPSC	
TIME	PAPER ID – TITLE	FIRST/PRIMARY CONTACT AUTHOR	AFFILIATION
09:50 – 10:00	346-FEASIBILITY STUDY OF COLD METAL TRANSFER WELDING FOR AA2219 ALLOYS	PRAVIN ROY	LPSC, ISRO
10:00 – 10:10	347-WELD ANALYSIS USING SCANNING ACOUSTIC MICROSCOPE (SAM) TO ACHIEVE QUALITY WELD	RUPALI SAHU	ISRO
10:10 – 10:20	360-FRACTURE TOUGHNESS STUDIES OF PROCESSED METAL MATRIX COMPOSITES FOR SPACE APPLICATION	SHAHUR RAHMAN	LPSC, ISRO
10:20 – 10:30	371-EFFECT OF PROCESS PARAMETER OF CHEMICAL VAPOUR INFILTRATION (CVI) PROCESS ON THE RATE OF PYROCARBON (PYC) DEPOSITION	DIPOO KUMAR	VSSC, ISRO
10:30 – 10:40	385-REALISATION OF SUBSCALE MIXING HEAD ASSEMBLIES AND VALIDATION OF BRAZING REQUIREMENTS	ANUDEEP KORANGI	LPSC, ISRO
10:40 – 10:50	389-DEVELOPMENT OF A TOOL FOR DOCKING SIMULATION USING NUMERICAL METHOD	SHIVA M S	CUSAT
10:50 – 11:00	390-MECHANOCHEMICAL MACHINING OF METALS	ANIRUDH UDUPA	IIT, MADRAS
11:00 – 11:10	540-INVESTIGATIONS INTO THE ROLE OF LASER TEXTURED CARBIDE INSERTS DURING DRY MACHINING OF KhN67VMTy <sub>u</sub> SUPER ALLOY	ALLAN GEORGE	NIT, CALICUT

3C : COMPUTATIONAL FLUID DYNAMICS (CFD-3)			VENUE : NILA HALL	
CHAIR: ASSO. PROF. PRADEEPKUMAR P. , IIST			RAPPORTEUR : SMT.SANAND T.V., LPSC	
TIME	PAPER ID – TITLE	FIRST/PRIMARY CONTACT AUTHOR	AFFILIATION	
09:50 – 10:00	235-WAKE CHARACTERISTICS OF SUB-CRITICALLY SPACED TANDEM CYLINDERS	GOURISARAN BS	COLLEGE OF ENGINEERING, TRIVANDRUM	OF
10:00 – 10:10	239-NUMERICAL STUDY ON LAMINAR FLOW HYDRODYNAMICS OF A BACK-TO-BACK SEMI-CIRCULAR TANDEM CYLINDER ARRANGEMENT	MAHESH G KRISHNAN	COLLEGE OF ENGINEERING, TRIANDRUM	OF
10:10 – 10:20	253-ASPECT RATIO AND CURVATURE EFFECTS OF REGENERATIVE CHANNELS ON HEAT TRANSFER IN SUPERCRITICAL METHANE	RUJIN KV	IIST, TRIVANDRUM	
10:20 – 10:30	265- CFD MODELLING TO PREDICT SHAPE AND TERMINAL SETTING VELOCITY OF A DEFORMING DROP IN LIQUID-LIQUID FLOW	SOURAV SARKAR	BARC, MUMBAI	
10:30 – 10:40	305-NUMERICAL EVALUATION OF CHEMICAL VAPOUR DEPOSITION USING OPENFOAM	ANILA ANIL	INNOFLOW RESEARCH PVT.LTD.	LABS
10:40 – 10:50	334-THERMAL AND FLOW ANALYSIS OF LH2 TANK ACTIVE PRESSURIZATION SYSTEM: A SYSTEM DESIGN APPROACH	VISHNU VISWANATH	LPSC, ISRO	
3D : AEROSPACE SYSTEMS, HUMAN SPACE PROGRAMME AND SPACE EXPLORATION (SA-3)			VENUE : NALANDA-A HALL	
CHAIR : DR. A K ASHRAFF, DD, LPSC			RAPPORTEUR: SHRI. SHREEJITH T V, LPSC	
<b>KEYNOTE LECTURE : PROF. SANDRA BOETCHER, EMBRY-RIDDLE AERONAUTICAL UNIVERSITY, USA</b>				
<b>TIME : 09:50-10:20</b>				
<b>TITLE : SHIFTING THE PARADIGM OF LATENT HEAT THERMAL ENERGY STORAGE SYSTEMS VIA ADDITIVE MANUFACTURING</b>				
TIME	PAPER ID – TITLE	FIRST/PRIMARY CONTACT AUTHOR	AFFILIATION	
10:20 - 10:30	179-REFINING AIRCRAFT PITOT STATIC CALIBRATION METHODS WITH TRUE ALTITUDE MODELLING	KHADEEJA NUSRATH TK	CSIR-NAL	
10:30 – 10:40	194-IDENTIFICATION OF CRITICAL FACTORS INFLUENCING HUMAN ERROR IN SPACECRAFT MISSION OPERATION BASED ON HFACS FRAMEWORK	SAVITHA A	URSC, ISRO	
10:40 – 10:50	195-COMPARATIVE EVALUATION OF SEPARATE AND INTEGRATED THERMAL MANAGEMENT OF CREW AND SERVICE MODULES FOR HUMAN SPACE MISSION	SAMRIDHI SHARMA	URSC, ISRO	
10:50 – 11:00	199-CHANDRAYAAN3 LANDER- MECHANICAL ASPECTS IN CONFIGURATION AND LAYOUT DESIGN	HARISANKAR A V	URSC, ISRO	

11:00 – 11:10	210-COMPUTATION OF STATIC PRESSURE FROM THE MEASURED FLOW ANGLE PRESSURES: A NOVEL METHODOLOGY TO VIRTUALLY MAINTAIN THE SIGNAL REDUNDANCY	AMBALAL V PATEL	ADA, DRDO
<b>3E :</b>	<b>EXPERIMENTAL FLUID MECHANICS AND HEAT TRANSFER, CRYOGENICS (FM-3)</b>		<b>VENUE NALANDA-B HALL</b>
<b>CHAIR : ASSO. PROF. RAJESH BABY , ST. JOSEPHS, PALA</b>		<b>RAPPORTEUR: DR. SUSHEEL KUMAR, LPSC</b>	
<b>KEYNOTE LECTURE: PROF. C. BALAJI, IIT MADRAS</b>			
<b>TIME : 09:50-10:20</b>			
<b>TITLE : THERMAL SCIENCE AND ENGINEERING: QUO VADIS?</b>			
<b>TIME</b>	<b>PAPER ID – TITLE</b>	<b>FIRST/PRIMARY CONTACT AUTHOR</b>	<b>AFFILIATION</b>
10:20 - 10:30	444-MAGNETOSTATIC ANALYSIS AND OPTIMIZATION OF THE MAGNETIC CIRCUIT OF A MOVING COIL LINEAR MOTOR COMPRESSOR FOR MICRO PULSE TUBE CRYOCOOLER FOR FUTURE SPACE MISSION	DEBASHIS PANDA	IISc, BANGALORE
10:30 – 10:40	498-IN HOUSE DEVELOPMENT OF FULL RANGE VACUUM GAUGE	RAHUL KUMAR	IIT, KHARAGPUR
10:40 – 10:50	516-INFLUENCE OF EXTENT OF INSULATION ON MOUNTINGS ATTACHED TO CRYOGENIC TANKS- AN EXPERIMENTAL INVESTIGATION	REJI JOSEPH	LPSC, ISRO
10:50 – 11:00	528-EFFECT OF VARIABLE RADIAL AIR GAP AND CORRESPONDING ELECTROMAGNETIC FORCE IN A LINEAR MOTOR PRESSURE WAVE GENERATOR OF A PULSE TUBE CRYOCOOLER	ARIJEET CHOWDHURY	ROY IIT, KHARAGPUR
11:00 – 11:10	573-PERFORMANCE OF A PULSATING HEAT PIPE SUBJECTED TO EXTERNAL OSCILLATION	SHYAMA PRASAD DAS	IIT, MADRAS

<b>4A : AERODYNAMICS AND PROPULSION (AP-4)</b>			<b>VENUE : PCSC HALL</b>
<b>CHAIR: SHRI. G NAGESWARAN, DD(RETD), LPSC</b>		<b>RAPPORTEUR: SMT. LEBONAH B, IPRC</b>	
<b>KEYNOTE LECTURE: SHRI. M. MOHAN, DIRECTOR, HSFC</b>			
<b>TIME : 11:30 - 12:00</b>			
<b>TITLE : INDIA'S MANNED SPACEFLIGHT MISSION – 'GAGANYAAN'</b>			
<b>TIME</b>	<b>PAPER ID – TITLE</b>	<b>FIRST/PRIMARY CONTACT AUTHOR</b>	<b>AFFILIATION</b>
12:00 – 12:10	256 - DESIGN AND NUMERICAL ANALYSIS OF COUNTER-ROTATING AXIAL TURBINE FOR LIQUID ROCKET ENGINE TURBOPUMP APPLICATION	NITIN RATHEE	LPSC, ISRO
12:10- 12:20	261 - EXPERIMENTAL STUDIES ON THE PERFORMANCE OF CENTRIFUGAL SEALS UNDER CRYOGENIC CONDITIONS	NITIN RATHEE	LPSC, ISRO
12:20 – 12:30	264 - OFF-DESIGN TESTING OF BI-PROPELLANT ROCKET THRUSTER AND DEVELOPMENT OF NUMERICAL METHOD TO PREDICT COMBUSTION PARAMETERS	DHAVAL MR. PAGHDAR	LPSC, ISRO
12:30 – 12:40	268 - FLUID DYNAMIC ASPECTS AND EXPERIMENTAL INVESTIGATIONS ON MIXING FOR CONTROLLING CRYSTAL PROPERTIES OF AMMONIUM PERCHLORATE (AP)	RAMACHANDRA RAO	ISRO
12:40 – 12:50	283 -FLAME SPREAD OVER CHARRING AND NON-CHARRING THIN CYLINDRICAL FUELS IN OXYGEN ENRICHED NORMAL AND MICROGRAVITY ENVIRONMENTS	MANU B V	IIT, MADRAS
<b>4B : MATERIALS, MANUFACTURING, MEASUREMENT &amp; INSTRUMENTATION, STR. DESIGN (MM-4)</b>			<b>VENUE : KAVERI HALL</b>
<b>CHAIR : SHRI. S. JAGANNATHAN, DD, LPSC</b>		<b>RAPPORTEUR: SMT. CROSS SAPNA, IPRC</b>	
<b>TIME</b>	<b>PAPER ID – TITLE</b>	<b>FIRST/PRIMARY CONTACT AUTHOR</b>	<b>AFFILIATION</b>
11:30 – 11:40	544 -COMPUTATION OF EQUIVALENT QUASI-STATIC LOADS FOR RANDOM INPUT EXCITATION	SHIVAM SINGH	ISRO
11:40 – 11:50	545 -PARAMETRIC STUDY AND FREQUENCY OPTIMIZATION OF CONICAL HEAD EXPANDER TYPE VIBRATION FIXTURE	SHIVAM SINGH	ISRO
11:50 – 12:00	552 -DESIGN MODIFICATION TO AVOID LOCALIZED CRACKING OF METALLIC ISOGRID PANELS FOR PAYLOAD FAIRINGS IN LAUNCH VEHICLES	DR. SOORAJ V.S.	IIST, TRIVANDRUM
12:00 – 12:10	555 - EXPERIMENTAL AND NUMERICAL ANALYSIS OF FORMABILITY OF PH STAINLESS STEEL SHEETS	RAVI KUMAR DIGAVALLI	IIT, DELHI
12:10 – 12:20	558 - THERMO-REGULATION IN MACHINING OF CARBON FIBRE REINFORCED POLYMER (CFRP) COMPOSITES USING SPECIALLY DESIGNED GRINDING WHEEL VIA ADDITIVE MANUFACTURING	DR. SOORAJ V.S.	IIST, TRIVANDRUM

12:20 – 12:30	568 - INVESTIGATION OF CRYOGENIC ENGINE THRUST CHAMBER FORMING	UTKARSH	ISRO
12:30 – 12:40	574 -VACUUM COMPRESSION BRAZING OF MARTENSITIC STAINLESS STEEL TO COPPER ALLOY USING ELECTROPLATED INTERLAYERS OF CU AND AG	SAI TEJA DASARI	LPSC, ISRO
12:40 – 12:50	595 - NUMERICAL INVESTIGATION OF THE INFLUENCE OF SURFACE TOPOGRAPHIC PARAMETERS ON FLUID LEAKAGE THROUGH STATIC SEALS	ASIF ALI SHEREEF	NIT, CALICUT

**4C : COMPUTATIONAL FLUID DYNAMICS (CFD-4) VENUE NILLA HALL**

**CHAIR : PROF.DEEPU M, IIST**

**RAPPORTEUR: SHRI.SANDEEP P, VSSC**

TIME	PAPER ID – TITLE	FIRST/PRIMARY CONTACT AUTHOR	AFFILIATION
11:30 – 11:40	336 - CFD VALIDATION OF AIR INTAKE BUZZ WITH WIND TUNNEL MEASUREMENTS ON SUPERSONIC AIR VEHICLE	PRADEEP R	ADA, DRDO
11:40 – 11:50	350 - THERMAL ANALYSIS OF TITANIUM AND COMPOSITE PRESSURE VESSELS DURING HIGH PRESSURE EXPULSION	PRAJITH KUMAR KP	LPSC, ISRO
11:50 – 12:00	402 - NUMERICAL ANALYSIS OF A HORIZONTALLY MOUNTED ANNULAR FINNED ELECTRONIC ENCLOSURE	BALAJI R S	DRDO NPOL, KOCHI
12:00 – 12:10	410 -INVESTIGATION OF MELTING DYNAMICS OF PCM IN A SQUARE CAVITY WITH VARIOUS SEQUENTIAL ARRANGEMENTS OF HOT AND COLD SURFACES	PRINCE NALLATHAMBI K	IIST, TRIVANDRUM
12:10 – 12:20	427 -DYNAMICS OF A SINGLE WATER DROPLET ON SMOOTH AND ROUGH SURFACES	ANIRUDH R	BMS COLLEGE OF ENGINEERING, BANGALORE
12:20 – 12:30	430 -CFD MODELLING OF MULTI-PHASE FLUID MIXING USING RESONANT VIBRATION MIXER	ASHIK MOHAMMED ARIF	COLLEGE OF ENGINEERING, TRIVANDRUM
12:30 – 12:40	437 -ENHANCEMENT OF HEAT SINK PERFORMANCE IN COMPACT ELECTRONIC DEVICES THROUGH GEOMETRY MODIFICATION AND CFD ANALYSIS	AMEGH S	COLLEGE OF ENGINEERING, TRIVANDRUM

**4D : SPACE APPLICATION, SPACE ECOSYSTEM AND STARTUPS IN INDIA, AEROSPACE SYSTEMS, HUMAN SPACE PROGRAMME AND SPACE EXPLORATION (SA-4) VENUE : NALANDA-A HALL**

**CHAIR: SHRI. K PRADEEP , GD, IISU, ISRO**

**RAPPORTEUR: SHRI. ROBIN ALEXANDER, LPSC**

TIME	PAPER ID – TITLE	FIRST/PRIMARY CONTACT AUTHOR	AFFILIATION
11:30 – 11:40	220 - ENHANCEMENT OF THERMAL CONTACT CONDUCTANCE USING MECHANICAL LOAD CYCLING	SIDDAPPA P G	IIT, ROORKEE
11:40 – 11:50	221 -DESIGN & STIFFNESS ANALYSIS OF A DEPLOYABLE TRUSS BASED SPACE TELESCOPE	ARUNTHATHY A R	COLLEGE OF ENGINEERING, TRIVANDRUM

11:50 – 12:00	227 - EVALUATION AND ESTABLISHMENT OF NAVIC BASED GNSS RECEIVER VELOCITY ACCURACY AT HIGH DYNAMIC CONDITION FOR AEROSPACE VEHICLES	MOHAMMED BASIM A	ISRO
12:00 – 12:10	251 ASSEMBLY INTEGRATION AND TESTING OF CHANDRAYAAN-3	PRIYANKA MISHRA	URSC, ISRO
12:10 – 12:20	280 - DEVELOPMENT AND CHARACTERIZATION OF HIGH ENERGY DENSITY LITHIUM PRIMARY CELLS FOR INTERPLANETARY & DEEP SPACE MISSIONS	PRABHU VARATHARAJAN	VSSC, ISRO
<b>4E :</b>	<b>EXPERIMENTAL FLUID MECHANICS AND HEAT TRANSFER, CRYOGENICS (FM-4)</b>		<b>VENUE NALANDA-B HALL</b>
<b>CHAIR : SHRI. S.S. VINOD, VSSC</b>		<b>RAPPORTEUR: DR. MUTHUKUMARAN C.K., LPSC</b>	
<b>KEYNOTE LECTURE: PROF. MAN YEONG HA , PUSAN NATIONAL UNIVERSITY, S. KOREA</b>			
<b>TIME : 11:30 - 12:00</b>			
<b>TITLE : TIME ACCELERATION METHODOLOGY FOR RAPID SIMULATION OF FROST FORMATION.</b>			
<b>TIME</b>	<b>PAPER ID – TITLE</b>	<b>FIRST/PRIMARY CONTACT AUTHOR</b>	<b>AFFILIATION</b>
12:00 – 12:10	586 - EXPERIMENTAL EVALUATION OF CRYOGENIC PRESSURE VESSEL FLANGED JOINTS WITH DISSIMILAR MATERIALS IN LAUNCH VEHICLES	REMYA NAIR	LPSC, ISRO
12:10- 12:20	590 - EFFECTS OF UNSTEADY MANIFOLD PRESSURE ON A LIQUID JET	KAMAL KUMAR YADAV	IIT, KANPUR
12:20 – 12:30	594 - NETWORK FLOW ANALYSIS OF SUDDEN VALVE CLOSURE-INDUCED TWO-PHASE FLUID TRANSIENTS IN CRYOGENIC ENVIRONMENT	ARJUN GARVA	IIT, KHARAGPUR
12:30 – 12:40	623 - THEORETICAL AND NUMERICAL APPROACHES TO INVESTIGATE THE INFLUENCE OF GEOMETRIC PARAMETERS ON A NOVEL CRYOGENIC TWO-PHASE FLOW METER	ARCHANA MOHAN	TKM COLLEGE OF ENGINEERING, KOLLAM
12:40 – 12:50	300 - INSTABILITY IN THE PROPAGATION OF THE QUENCH FRONT DURING REWETTING BY BOTTOM FLOODING DUE TO EXTERNAL EXIT OBSTRUCTIONS	GAYATRI PAUL	BIT, MERSA



5A : COMBUSTION (CC-1)		VENUE : PCSC CONF. HALL	
CHAIR : PROF. ARAVIND VAIDYANATHAN, IIST		RAPPORTEUR: SHRI. ROHIT G, LPSC	
KEYNOTE LECTURE: PROF. ANAND VEERARAGAVAN, UNIVERSITY OF QUEENSLAND, AUSTRALIA			
TIME : 14:15 – 14:45			
TITLE : HEATED MODEL EXPERIMENTS AT THE CENTRE FOR HYPERSONICS AT UQ			
TIME	PAPER ID – TITLE	FIRST/PRIMARY CONTACT AUTHOR	AFFILIATION
14:45 – 14:55	508 - LES OF DEFLAGRATION IN A SEMI-CONFINED EXPLOSION CHAMBER: INFLUENCE OF SGS COMBUSTION MODELS	MAHESH SOMASANI	IIT, MADRAS
14:55 – 15:05	562 - ADVANCED MODELLING APPROACHES FOR PYRO SYSTEM DESIGN -AN OVERVIEW	SHEEJU CHANDRAN	VSSC, ISRO
15:05 – 15:15	563 - EXPERIMENTAL INVESTIGATION ON PERFORMANCE AND EMISSION OF CNG-DIESEL DUAL FUEL ENGINE	PARAG K RAJPARA	MARWADI UNIVERSITY
15:15 – 15:25	566 - EXPERIMENTAL INVESTIGATION ON THE SPRAY CHARACTERISTICS OF AN EFFERVESCENT RAMP INJECTOR	SARAN S DHARAN	IIST, TRIVANDRUM
15:25 – 15:35	607 - INVESTIGATING FLAME STREAK BEHAVIOR IN TURBULENT WIND-DRIVEN FIRES	ALANKRIT SRIVASTAVA	IIT, KANPUR
5B : MATERIALS, MANUFACTURING, MEASUREMENT & INSTRUMENTATION, STR.DESIGN (MM-5)		VENUE : KAVERI HALL	
CHAIR : DR. ARUMUGHAM M., DD, LPSC		RAPPORTEUR: SHRI. AVINASH CHANDRA, LPSC	
TIME	PAPER ID – TITLE	FIRST/PRIMARY CONTACT AUTHOR	AFFILIATION
14:15 – 14:25	613 - NUMERICAL INVESTIGATION OF GLASS LAMINATE ALUMINIUM REINFORCED EPOXY (GLARE) COMPOSITE TO IMPACT LOADING	KANUPRIYA SHRIVASTAVA	UPES
14:25 – 14:35	614 - NUMERICAL INVESTIGATION OF WHIPPLE SHIELD RESISTANCE AGAINST HYPERVELOCITY IMPACT	ABHAY KAUSHIK NUDURUPATI	UPES
14:35 – 14:45	644 - DYNAMIC RESPONSE OF A HYBRID COMPOSITE METALLIC FOAM MATERIAL SUBJECTED TO IMPULSE GAS LOADING IN A SHOCK TUBE	AMIT KUMAR	IIT, GUWAHATI
14:45 – 14:55	694 - DESIGN OF ALUMINIUM CROSS FRAME SUSPENSION SYSTEM FOR SATELLITE TRANSPORTATION	RAJEEV CHATURVEDI	URSC, ISRO
14:55 – 15:05	703 - ADVANCED LIGHT WEIGHT CERAMIC FOAMS FOR HYPERSONIC VEHICLES	SREEJA R	VSSC, ISRO
15:05 – 15:15	INDUSTRY PRESENTATION : MICROSTRUCTURAL EVOLUTION AND NANOMECHANICAL PROPERTIES OF ELECTRIC ARC FUSED CALCIA, MAGNESIA AND YTTRIA STABILISED ZIRCONIA FOR AEROSPACE APPLICATIONS	DR.. N.S KARTHISELVA	CARBORUNDUM UNIVERSAL LIMITED (CUMI), ERNAKULAM
15:15 – 15:25	384 - STUDY ON THE FLOW RATE ANOMALY OBSERVED IN THE BRAZED INJECTOR ELEMENTS OF LOX/KEROSENE BASED SEMICRYOGENIC ENGINE	ANUDEEP KORANGI	LPSC, ISRO

15:25 – 15:35	272 - EFFECT OF SOLUTION ANNEALING & COLD ROLLING ON MECHANICAL PROPERTIES OF INDIGENOUSLY DEVELOPED 12CR21 DUPLEX STAINLESS STEEL	SANTHOSHKUMAR R.	LPSC, ISRO
<b>5C : AERODYNAMICS AND PROPULSION (AP-5);</b>		<b>VENUE : NILA HALL</b>	
<b>CHAIR :DR. P ARUNKUMAR, DD, LPSC</b>		<b>RAPPORTEUR: SHRI. UNNI RAVEENDRAN , VSSC</b>	
<b>TIME</b>	<b>PAPER ID – TITLE</b>	<b>FIRST/PRIMARY CONTACT AUTHOR</b>	<b>AFFILIATION</b>
14:15 – 14:25	447 - UTILIZING BYPASS INJECTION FOR MICRONOZZLE THRUST VECTORING : A COMPUTATIONAL STUDY	KISHORE S	IIST
14:25 – 14:35	449 - COMPUTATIONAL STUDIES AND DESIGN OPTIMIZATION OF A FLOW BIFURCATION ADAPTER IN HIGH PRESSURE HOT GAS INTERNAL FLOW	KARTIK S. BILOLIKAR	LPSC, ISRO
14:35 – 14:45	450 - MATHEMATICAL MODELING OF ROCKET ENGINE GIMBALING AND SPATIAL KINEMATIC ANALYSIS OF FLEXIBLE LINES CARRYING HIGH PRESSURE HOT OXYGEN GAS	KARTIK S. BILOLIKAR	LPSC, ISRO
14:45 – 14:55	468 - PERFORMANCE ANALYSIS OF FIXED PINTLE INJECTOR AND VARIABLE AREA INJECTOR FOR LIQUID PROPELLANT ROCKET ENGINES (LRE)	HARSHIT SHUKLA	UPES
14:55 – 15:05	473 - THE EFFECT OF INDUCER TIP GAP ON REDUCING THE CAVITATION IN LIQUID OXYGEN PUMP: A NUMERICAL STUDY	SASHANT KAPOOR	SVNIT
15:05 – 15:15	484 - MATHEMATICAL MODELLING OF A STEADY STATE COMBUSTION CHAMBER	SETHURAMAN VEERASEKAR	IIST
15:15 – 15:25	496 - DESIGN, DEVELOPMENT AND TESTING OF PERMANENT MAGNET BASED APPLIED FIELD MAGNETO PLASMA DYNAMIC THRUSTER (AF-MPDT)	VIVEK SHARMA	IIT, KHARAGPUR
15:25 – 15:35	499 - DESIGN, DEVELOPMENT AND TESTING OF HYDROGEN (H <sub>2</sub> ) AND OXYGEN (O <sub>2</sub> ) BASED MICROTHRUSTER	ABHISHEK KUMAR	IIT, KHARAGPUR
15:35 – 15:45	531 -EXPERIMENTAL INVESTIGATION OF COKING CHARACTERISTICS OF ISROSENE	VIKASH KUMAR	LPSC, ISRO
<b>5D : SPACE APPLICATION, SPACE ECOSYSTEM AND STARTUPS IN INDIA, AEROSPACE SYSTEMS, HUMAN SPACE PROGRAMME AND SPACE EXPLORATION (SA-5)</b>		<b>VENUE : NALANDA-A HALL</b>	
<b>CHAIR : ASSO. PROF.RAMIYA A.M., IIST</b>		<b>RAPPORTEUR: SHRI. SANDEEP KUMAR, LPSC</b>	
<b>KEYNOTE LECTURE: PROF. JEREMIE LASUE, IRAP, FRANCE</b>			
<b>TIME : 14:15 – 14:45</b>			
<b>TITLE : PLANETARY EXPLORATION HORIZON 2061: FROM REPRESENTATIVE MISSIONS TO TECHNOLOGY REQUIREMENTS</b>			
<b>TIME</b>	<b>PAPER ID – TITLE</b>	<b>FIRST/PRIMARY CONTACT AUTHOR</b>	<b>AFFILIATION</b>
14:45 – 14:55	296 - NUMERICAL SIMULATIONS TO PREDICT ONSET VOLTAGE IN MICROFABRICATED ELECTROSPRAY THRUSTERS	NISHANT SHUKLA	SCL, ISRO

14:55 – 15:05	356 - UNLOCKING THE WEALTH OF THE COSMOS: A COMPREHENSIVE STUDY OF ASTEROID MINING AND RESOURCE UTILIZATION IN SPACE EXPLORATION	SHREYANSH DUBEY	UPES
15:05 – 15:15	366 - ANALYSING THE IMPACT OF CHARGE RATE AND VOLUME ON STABILISATION TIME IN ENERGY STORAGE SYSTEMS	KESAVA VISHNU G	LPSC, ISRO
15:15 – 15:25	397 - ON-CHIP CULTIVATION OF SPIRULINA MICROALGAE IN MICROFLUIDIC SYSTEMS FOR SPACE APPLICATIONS.	RAHUL RAVEENDRAN	COLLEGE OF ENGINEERING TRIVANDRUM
15:25 – 15:35	431 - MODELLING PROPELLANT TEMPERATURE EVOLUTION AND NPSH MARGIN ESTIMATION FOR TEST VEHICLE	ARUN G S	LPSC, ISRO
15:35 – 15:45	438 - EXPLORING SPACE-BASED ACTIVE VIBRATION CONTROL (AVC) TECHNIQUES WITH AVC SIMULATION STUDY ON SMART FLEXIBLE BEAM	PRASHANT A R	URSC, ISRO
<b>5E : COMPUTATIONAL FLUID DYNAMICS (CFD-5)</b>		<b>VENUE : NALANDA-B HALL</b>	
<b>CHAIR : PROF SRHINE S.R. , IIST</b>		<b>RAPPORTEUR: SHRI. FAHD BIN ABDUL HASIS, LPSC</b>	
<b>KEYNOTE LECTURE: PROF. TANMAY BASAK, IIT MADRAS</b>			
<b>TIME : 14:15 – 14:45</b>			
<b>TITLE : FINITE ELEMENT IMPLEMENTATION ON INVISIBLE ENERGY FLOW: HEATFUNCTIONS AND BOUNDARY CONDITIONS</b>			
<b>TIME</b>	<b>PAPER ID – TITLE</b>	<b>FIRST/PRIMARY CONTACT AUTHOR</b>	<b>AFFILIATION</b>
14:45 – 14:55	448 - TRANSIENT SIMULATION OF CAVITATION IN PLANAR CAVITATING VENTURI USING TWO-FLUID MODEL	NUTALAPATI VENKATA NAGA SIVASAI ARAVIND	IIST, TRIVANDRUM
14:55 – 15:05	457 - EFFECT OF METAL FOAM PORE DENSITY GRADIENT FILLING ON HYDRODYNAMIC AND THERMAL PERFORMANCE – A NUMERICAL STUDY	BANJARA KOTRESHA	GOVT ENGINEERING COLLEGE ,HAVERI
15:05 – 15:15	487 - ANALYTICAL AND COMPUTATIONAL INVESTIGATION OF VIBROTHERMOACOUSTIC BEHAVIOUR OF CRACKS IN AEROSTRUCTURES	VARUN MANOJ RAWAT	NIT, TIRUCHIRAPPALLI
15:15 – 15:25	507 - NUMERICAL STUDY ON CRATER DEPTH EVALUATION DURING WATER DROP IMPACT ON IMMISCIBLE FLUID	SIDHARTH MAHESH	COLLEGE OF ENGINEERING TRIVANDRUM
15:25 – 15:35	525 - EXPERIMENTAL AND NUMERICAL STUDY ON JET IMPINGEMENT COOLING ON A ROTATING DISC WITH LOCALISED HEATING	DINESH D	IIST
15:35 – 15:45	530 - IMPROVING THE PERFORMANCE OF EGR IN I.C. ENGINE BY ADDING COOLANT CHANNEL	TARUN KOCHAR	TIET,PATIALA

6A : COMBUSTION (CC-2)		VENUE : PCSC CONF. HALL	
CHAIR : DR. K S BIJUKUMAR , PD, LPSC,		RAPPORTEUR: SHRI. SANAND T V, LPSC	
<b>KEYNOTE LECTURE: DR.. KALYANA CHAKRAVARTHY DRDL - DRDO</b> <b>TIME : 16:15 – 16:45</b> <b>TITLE : COMBUSTION INSTABILITIES AND ACOUSTIC OSCILLATIONS IN SOLID ROCKET MOTORS – INSIGHTS FROM COMPUTER SIMULATIONS</b>			
TIME	PAPER ID – TITLE	FIRST/PRIMARY CONTACT AUTHOR	AFFILIATION
16:45 – 16:55	624 - HIGH TEMPERATURE EVAPORATION AND COMBUSTION CHARACTERISTICS OF GELLED JET-A1 DROPLETS	VIVEK KURUMANGHAT	IIT, ROPAR
16:55 – 17:05	627 - EFFECT OF HYDROGEN ENRICHMENT ON LEAN BLOW OUT LIMIT IN NOVEL MULTI-SWIRL LDI BURNER	SHREESWARAJ V PANCHAL	IIT, MADRAS
17:05 – 17:15	657 -EFFECT OF FLAME TEMPERATURE AND PARTICLE RESIDENCE TIME ON SOOT CHARACTERISTICS IN NUMERICALLY SIMULATED LAMINAR PREMIXED ETHYLENE STAGNATION FLAMES	SAI ROHITH THAVITI	IIT, KANPUR
6B : AUTOMATION AI, ROBOTICS (AI-1)		VENUE : KAVERI HALL	
CHAIR : PROF. SAM ZACHARIAH, IIST		RAPPORTEUR: SHRI.KIRAN MOHAN, LPSC	
TIME	PAPER ID – TITLE	FIRST/PRIMARY CONTACT AUTHOR	AFFILIATION
16:15 – 16:25	523 - REAL TIME PREDICTION AND INTELLIGENT AUTOMATION SYSTEM FOR SUSTAINED REGULATION OF COMPRESSIBLE FLUID FLOW IN A DE-LAVAL NOZZLE	CHRYPELLE JACOB	IPRC, ISRO
16:25 – 16:35	526 - TEXT ANALYTICS BASED NON-CONFORMANCE MANAGEMENT SYSTEM FOR IMPROVING RELIABILITY IN ROCKET ENGINE ASSEMBLY	DEBANJAN DAS	IPRC, ISRO
16:35 – 16:45	549 - EQUIVALENT CIRCUIT MODELING OF HIGH POWER LI-ION CELLS	MD JAMAL NAWAZ ANSARI	VSSC, ISRO
16:45 – 16:55	615 - ALGORITHM FOR AUTOMATION OF CAPACITY PLANNING FOR PRODUCTION OF SATELLITE LAUNCH VEHICLE USING SPREAD SHEET	VIJAY SIMHA KATTA	LPSC, ISRO
16:55 – 17:05	618 - ACCURATE PATH TRACING OF A TRACKED ROBOT: A MODIFIED PID APPROACH WITH SLIP COMPENSATION	DEEPAK DESHMUKH	IIT, KHARAGPUR

<b>6C : AERODYNAMICS AND PROPULSION (AP-6)</b>			<b>VENUE : NILA HALL</b>
<b>CHAIR : SHRI. SRIKANTH N.S. , GD, VSSC</b>		<b>RAPPORTEUR: SHRI. SANJOJ V, VSSC</b>	
<b>TIME</b>	<b>PAPER ID – TITLE</b>	<b>FIRST/PRIMARY CONTACT AUTHOR</b>	<b>AFFILIATION</b>
16:15 – 16:25	542 - DYNAMICS OF PRESSURE PERTURBATIONS INSIDE SOLID ROCKET MOTOR COMBUSTION CHAMBERS – ANALYTICAL AND EXPERIMENTAL APPROACH	DHRISHIT MP	VSSC, ISRO
16:25 – 16:35	570 - DESIGN AND TESTING OF AN UMBILICAL SYSTEM FOR HIGH-PRESSURE PNEUMATIC SERVICING OF A LAUNCH VEHICLE BOOSTER STAGE	ELDHOSE T YACOB	LPSC, ISRO
16:35 – 16:45	604 - EXPERIMENTAL STUDIES ON SPRAY CHARACTERISTICS OF AN EFFERVESCENT INJECTOR	ASWATHY R V	IIST, TRIVANDRUM
16:45 – 16:55	625 - TRANSIENT THERMAL PROBES FOR HEAT FLUX MEASUREMENT IN HYPERSONIC FLOWS	PROF. NIRANJAN SAHOO	IIT, GUWAHATI
16:55 – 17:05	648 - CFD SIMULATIONS ON CRYOGENIC FEED LINE WITH DIFFERENT ORIENTATIONS	VENKATESH NARAYANAN	LPSC, ISRO
17:05 – 17:15	652 - ADVANCEMENTS IN GEL PROPELLANT TECHNOLOGY: SYNTHESIS, CHARACTERIZATION, AND SUSTAINABLE SOLUTIONS FOR VERSATILE SPACE EXPLORATION	SHREYANSH DUBEY	UPES
17:15 – 17:25	656 - PHOTO LUMINESCENCE BASED SURFACE FLOW VISUALIZATION STUDY OF AN AIRFOIL WITH LEADING EDGE SINUSOIDAL TUBERCLES	MEENAKSHI BASAVARAJ AILI	BMS COLLEGE OF ENGINEERING, BANGALORE
17:25 – 17:35	658 - DEVELOPMENT OF ELECTROSPRAY MICRO THRUSTER FOR ISRO SMALL SPACECRAFT	VIJAY KUMAR	LPSC, ISRO
17:35 – 17:45	664 - COMPUTATIONAL FLOW ANALYSIS OF BEVELED NOZZLE	MUGUNDHAN D	SASTRA DEEMED UNIVERSITY
<b>6D : SPACE APPLICATION, SPACE ECOSYSTEM AND STARTUPS IN INDIA, AEROSPACE SYSTEMS, HUMAN SPACE PROGRAMME AND SPACE EXPLORATION (SA-6)</b>			<b>VENUE : NALANDA-A HALL</b>
<b>CHAIR : DR. D.P. SUDHAKAR, DD, IPRC</b>		<b>RAPPORTEUR: SHRI.FAZIL MOHAMMAD, VSSC</b>	
<b>KEYNOTE LECTURE: PROF. VSEVOLOD PEYSAKHOVICH, ISAE-SUPAERO, FRANCE</b>			
<b>TIME : 16:15 – 16:45</b>			
<b>TITLE : PHYSIOLOGICAL MONITORING TO INCREASE OPERATIONAL SAFETY</b>			
<b>TIME</b>	<b>PAPER ID – TITLE</b>	<b>FIRST/PRIMARY CONTACT AUTHOR</b>	<b>AFFILIATION</b>
16:45 – 16:55	465 - APPLICATION OF KANE'S METHOD TO A MULTIBODY PARACHUTE SYSTEM	SANJAY JOSEPH CHACKO	VSSC, ISRO
16:55 – 17:05	483 - DEVELOPMENT OF AN EARTH STORABLE LAUNCH VEHICLE UMBILICAL- A SYSTEM ENGINEERING APPROACH	JISHNU T R	LPSC, ISRO
17:05 – 17:15	505 - THERMAL CHARACTERIZATION OF A COPPER-WATER HEAT PIPE FOR DIFFERENT OPERATING CONDITIONS	ULLEKH PANDEY	VSSC, ISRO

17:15 – 17:25	522 - DESIGN, DEVELOPMENT AND QUALIFICATION OF AN ACTIVE NOZZLE EXIT CLOSURE SEPARATION SYSTEM FOR A LAUNCH VEHICLE	SIDDHARTH JITENDRA GANTAWAR	VSSC, ISRO
17:25 – 17:35	602 - STRATEGIES FOR GROWTH: INDIAN SPACE STARTUPS NAVIGATING THE GLOBAL MARKET	RAJESH NATARAJAN	COSMICPORT SPACE TECHNOLOGY PVT.LTD.
17:35 – 17:45	649 - ESTIMATION OF LAUNCH PAD HEATING ON BASE REGION OF LAUNCH VEHICLES WITH LIQUID STAGE	ARNAB MAHANTI	VSSC, ISRO
<b>6E : COMPUTATIONAL FLUID DYNAMICS (CFD-6)</b>		<b>VENUE : NALANDA-B HALL</b>	
<b>CHAIR : PROF.PARTHASARATHI GHOSH, IIT - KHARAGPUR</b>		<b>RAPPORTEUR: SHRI. SHREEJITH T.V., LPSC</b>	
<b>KEYNOTE LECTURE: PROF. JOSEPH MATHEW, IISC, BANGALORE</b>			
<b>TIME : 16:15 – 16:45</b>			
<b>TITLE : RELIABLE TURBULENT FLOW COMPUTATIONS</b>			
<b>TIME</b>	<b>PAPER ID – TITLE</b>	<b>FIRST/PRIMARY CONTACT AUTHOR</b>	<b>AFFILIATION</b>
16:45 – 16:55	151 - DEVELOPMENT OF 3D MATHEMATICAL HUMAN THERMOREGULATION MODEL FOR REFERENCE INDIAN SUBJECT	CHITHRAMOL M K	IIST, TRIVANDRUM
16:55 – 17:05	548 - NUMERICAL STUDY OF THE NON-NEWTONIAN EFFECTS OF DROPLET SPREADING ON A SUPERHYDROPHOBIC SURFACE.	ATHUL KRISHNA H	COLLEGE OF ENGINEERING TRIVANDRUM
17:05 – 17:15	557 - NUMERICAL INVESTIGATION OF TRANSPORT PHENOMENA IN PYROLYSING ABLATORS: A FINITE ELEMENT PERSPECTIVE FOR HIGH-TEMPERATURE APPLICATIONS	GOUTHAM GIRISH	IIST, TRIVANDRUM
17:15 – 17:25	559 - NUMERICAL MODELING OF CAVITATION-INDUCED WATER HAMMER	RAJAT KUMAR KALLA	IIT, KHARAGPUR
17:25 – 17:35	578 - NUMERICAL SIMULATION TO STUDY THE EFFECT OF WIRE-MESH FILTER ON CRITICAL HEIGHT OF TANK DRAINING	SOURABH KARMARKAR	LPSC, ISRO
17:35 – 17:45	693 - HEMODYNAMIC ANALYSIS OF CIRCULATORY CONSTRICTIONS IN THE ACA-A1 SEGMENT OF CIRCLE OF WILLIS	HARIKRISHNA M M MENON	IIST, TRIVANDRUM

**EVALUATION OF POSTER PRESENTATION & INTERACTION WITH AUTHORS BETWEEN 15:15 to 16:15.  
AUTHORS ARE REQUESTED TO BE PRESENT NEAR POSTERS DURING EVALUATION**

PAPER ID	TITLE	FIRST/PRIMARY CONTACT AUTHOR	AFFILIATION
190	TRENDS IN RADAR ABSORPTION MATERIALS: A COMPREHENSIVE SURVEY	BIJULIN GREETY D J	KARUNYA INSTITUTE OF TECHNOLOGY & SCIENCE
192	AN EXPERIMENTAL INSIGHT INTO LASER SMOLDERING INTERACTIONS OF SOLID FUELS	SARASCHANDRIKA BHAVANI VAJJALA	RM, ISAT
203	TRIPLE INPUT SMART POWER SUPPLY- TRISP* (PATENTED), A SUSTAINABLE ALTERNATIVE TO EXISTING POWER TRANSMISSION AND DISTRIBUTION SYSTEM	PRATHAP VS	VSSC ISRO
205	JOINT EFFICIENCY ENHANCEMENT OF ROTARY FRICTION WELDED Ti6Al4V AND SS321 WITH INTERLAYERS AND GEOMETRY MODIFICATION	NEERAJ KUMAR MISHRA	IIT, BOMBAY
207	COMPARATIVE STUDY OF AIRFOILS FOR WIND TURBINE BLADES IN LOW WIND SITES USING CFD	JAGADEESAN A K	COLLEGE OF ENGINEERING TRIVANDRUM
208	DROP FORMATION AT TOP-SUBMERGED NOZZLE IMMERSSED IN AN IMMISCIBLE LIQUID HAVING ROTATIONAL FLOW	SWATI AGARWAL	BARC
213	NUMERICAL MODELLING OF A QUARTET INJECTOR USING HYBRID VOF-DPM MODEL	CHILLARA GOUTHAM	VSSC ISRO
214	ENERGY EFFICIENCY-BASED MULTITHREADED STATE FEEDBACK SPEED CONTROL OF PMDC MOTORS	HARIKRISHNAN S	IIT, PALAKKAD
217	THERMO-STRUCTURAL ANALYSIS OF COMPOSITE MATERIAL USING FINITE ELEMENT CODE	MOHAMMAD MEHREEN SANA	VSSC, ISRO
222	NUMERICAL INVESTIGATION ON VORTEX INDUCED VIBRATION RESULTING FROM AN OBSTRUCTION INSIDE A TUBE CONVEYING FLUID	HARIKRISHNAN P U	COLLEGE OF ENGINEERING, TRIVANDRUM
226	ENHANCING PRECISION IN AEROSPACE FASTENER ASSEMBLY: A HYBRID DL AND IMAGE PROCESSING APPROACH FOR WIRE LOCK IDENTIFICATION	KAKI RAMESH	BITS, PILANI
231	DESIGN AND DEVELOPMENT OF A LIGHTWEIGHT REACTION WHEEL FOR 3U CUBESAT	MAYUR VIJAY PAWAR	MIT, ARTS DESIGN AND TECHNOLOGY, PUNE
232	OPTIMIZATION OF MATERIAL PROPERTY AVERAGING METHOD FOR FUNCTIONALLY GRADED MATERIALS	GAYATHRI D S	COLLEGE OF ENGINEERING TRIVANDRUM
234	EXPERIMENTAL INVESTIGATION ON THE INFLUENCE OF TWISTING ON THE MODAL CHARACTERISTICS OF A FLEXIBLE TUBE CONVEYING FLUID	ABDUL RAHMAN T M	COLLEGE OF ENGINEERING, TRIVANDRUM
243	SCAVENGING ENERGY FROM WASTE HEAT PRODUCED BY POWER ELECTRONIC SYSTEM	VIVEK R S	CDAC

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PAPER ID	TITLE	FIRST/PRIMARY CONTACT AUTHOR	AFFILIATION
259	DESIGN IMPROVEMENTS TO SUPPRESS PRESSURE OSCILLATIONS OBSERVED DURING PERFORMANCE TESTING OF A LOW SPECIFIC SPEED FUEL PUMP FOR A LIQUID ROCKET ENGINE	NITIN RATHEE	ISRO
260	AN EXPERIMENTAL STUDY ON AIRFOIL SELF-NOISE REDUCTION USING THREE-DIMENSIONAL TRAILING EDGE SERRATIONS	FAYIS SABU	SCCE, TRIVANDRUM
262	AN ANALYSIS OF HYDROGEN LEAKAGE AND DISPERSION IN ENCLOSED SPACES USING CFD	LEKSHMIPRIYA J	COLLEGE OF ENGINEERING, TRIVANDRUM
274	OPTIMIZATION OF HEAT TREATMENT FOR FE-36NI-12CR-3TI-1ALS PRING ALLOY USED IN LOX-KEROSENE ROCKET ENGINES	SANTHOSHKUMAR R.	LPSC, ISRO
284	TRIBOELECTRIC GENERATORS FOR POWERING MICRO SENSORS OF MARTIAN PAYLOADS	DR ANJITHA VISWANATH	ISRO
292	MANIPULATION OF SUPERSONIC JETS IMPLEMENTING THE RECTANGULAR VORTEX GENERATORS	TAMAL JANA	GLOBAL ACADEMY OF TECHNOLOGY
293	AN INITIATIVE TOWARDS ZERO FALL FROM HEIGHT INCIDENTS AT WORKPLACE	PRAVEEN DUBEY	BARC
297	CHANDRAYAAN-3 ROVER: NOVEL HARNESS DESIGN AND GROUNDING FEATURES	RAJESH MUNTHA	URSC, ISRO
298	EMPIRICAL STUDY ON AN OPEN ECU PETROL ENGINES PERFORMANCE FOR BIO-GASOLINE BLENDS	KIRAN BABU UPPULURI	SASTRA DEEMED UNIVERSITY
307	MIXING NATURE OF A CIRCULAR JET WITH CO-FLOW AT SUPERCRITICAL CHAMBER CONDITIONS	DHANESH AYYAPPAN	ISRO
312	COMPUTATIONAL INVESTIGATION OF THE HYDROPHOBICITY OF ROUGH SURFACES USING THE 2D LATTICE BOLTZMANN METHOD	GANESH SAHADEO MESHAM	IIT, KHARAGPUR
313	EXPERIMENTAL AND CFD ANALYSIS OF A VCR ENGINE PERFORMANCE CHARACTERISTICS FOR BIOFUEL PREPARED FROM COCONUT OIL	ASHWIN R	SASTRA DEEMED UNIVERSITY
315	SIMULATION OF PROPELLANT FEED SOURCE SWITCH OVER DURING FIRING OF A LIQUID ROCKET ENGINE	AADITYA VIJAYAKUMAR	LPSC ISRO
316	NUMERICAL EVALUATION OF DRAG ON A FLAT-FINNED MISSILE	FENEETA P C	ACE COLLEGE OF ENGINEERING TRIVANDRUM
318	CHANDRAYAAN-3 LANDER: ELECTRICAL DISTRIBUTION SYSTEM DESIGN OPTIMIZATION, REALIZATION & QUALITY ASPECTS	SAI KIRAN REDDY DWARAMPUDI	URSC ISRO



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PAPER ID	TITLE	FIRST/PRIMARY CONTACT AUTHOR	AFFILIATION
321	LINEAR STABILITY ANALYSIS OF SUB-SCALE ROCKET COMBUSTOR USING CFD-CAA APPROACH	DEEPAK E KUMAR	ISRO
325	EXPERIMENTAL STUDY OF DROPLET IMPACT DYNAMICS ON MIXED WETTABILITY SURFACE	JISHNU JAYAKUMAR	COLLEGE OF ENGINEERING TRIVANDRUM
326	STATIC ANALYSIS OF IEC 61131-3 PROGRAMS FOR LIQUID STAGE PROPELLANT FILLING APPLICATION SOFTWARE	SUNKARI VS SURYAKALA	ISRO
327	COMPUTATIONAL FLUID DYNAMICS MODELLING AND VALIDATION OF ROTATING DETONATION ENGINE	SUNIL BASSI	IPR
329	QUALIFICATION OF CORIOLIS MASS FLOW METERS AND ITS RELATED INSTRUMENTATION SYSTEMS FOR L110 STAGE SERVICING OF LVM3-M4 / CHANDRAYAN-3 MISSION	BALAJI SUVVARI	ISRO
330	CFD ANALYSIS OF AN ARCHIMEDEAN SPIRAL - INSPIRED HYDRO TURBINE	HARISH JAYARAJ P	RAJALEKSHMI ENGINEERING COLLEGE
340	STUDY THE CHARACTERISTICS OF RICE HUSK, COAL AND BLENDS FOR THERMAL POWER	KISHORE KUMAR GULIPILLI	CPRI BANGALORE
353	PLUME INDUCED FLOW SEPARATION (PIFS) OVER LAUNCH VEHICLES AT HIGH ALTITUDES	SUSHEEL KUMAR SEKHAR	IIT,KHARAGPUR
368	EXPERIMENTAL AERODYNAMIC STUDY ON MODIFIED AIRFOIL WITH DIFFERENT LEADING EDGE GEOMETRIES	PANNAG BHASKAR KINI	BMS ,COLLEGE OF ENGINEERING, BANGALORE
373	EFFECT OF PLATE INCLINATION ON EXHAUST PLUME IMPINGEMENT UNDER LOW PRESSURE ENVIRONMENT	ANANT SINGHAL	LPSC ISRO
376	MODIFIED HEAT FLOW METER TECHNIQUE FOR THERMO-PHYSICAL PROPERTIES MEASUREMENT OF INSULATING MATERIALS	FAZIL MOHAMMAD	ISRO
394	SPACE OBJECTS CONJUNCTION ANALYSIS AND COLLISION AVOIDANCE MANEUVER OPTIMIZATION	MUHAMMED ANAZ	IIST, TRIVANDRUM
399	NUMERICAL INVESTIGATION ON THE EFFECT OF COWL LIP RADIUS ON THE FLOW FIELD OF A SCRAMJET INLET AT MACH 7	LAKKA SUNEETHA	HITAS
401	OPTIMIZATION OF PARAMETERS DURING STRETCH FORMING PROCESS OF AA 2219 T87 DOME PETALS OF PROPELLANT TANK OF LAUNCH VEHICLES	SHAHUR RAHMAN	LPSC ISRO
403	NUMERICAL ANALYSIS OF DROPLET GENERATION IN A T-JUNCTION MICRO-CHANNEL USING NEGATIVE PRESSURE	NIKHIL PRASAD	COLLEGE OF ENGINEERING TRIVANDRUM

**EVALUATION OF POSTER PRESENTATION & INTERACTION WITH AUTHORS BETWEEN 15:15 to 16:15.  
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PAPER ID	TITLE	FIRST/PRIMARY CONTACT AUTHOR	AFFILIATION
407	REVIEW ON THE HEAT AND MASS TRANSFER COEFFICIENTS TO ESTIMATE RATE OF BOIL-OFF GAS (BOG) GENERATION DURING THE STORAGE AND TRANSPORTATION OF LIQUID CRYOGENS	PAVITRA SANDILYA	IIT, KHARAGPUR
421	NUMERICAL INVESTIGATION ON THE EFFECT OF STRUT AND RAMP INJECTION TECHNIQUE IN A SCRAMJET COMBUSTOR	LAKKA SUNEETHA	HINDUSTANT INSTITUTE OF TECH. & SCI.
533	FORMULATION OF ACCEPTANCE TESTS AND VALIDATION FOR MEDIUM AND LOW VISCOUS THREAD SEALANTS EXPOSED TO HIGH AND LOW TEMPERATURE IN AEROSPACE APPLICATIONS	ABU FAISAL	LPSC, ISRO
565	DEVELOPMENT OF ZRB <sub>2</sub> -ZRSI <sub>2</sub> BASED ULTRA-HIGH TEMPERATURE CERAMIC COMPOSITES FOR HYPERSONIC VEHICLE APPLICATION	MANAB MALLIK	NIT, DURGAPUR

<b>7A : AERODYNAMICS AND PROPULSION (AP-7)</b>		<b>VENUE : PCSC CONF. HALL</b>	
<b>CHAIR : SHRI. J C PISHARADY, GH (RETD), LPSC</b>		<b>RAPPORTEUR: SHRI.PANUGANTI SHEKHAR K, LPSC</b>	
<b>TIME</b>	<b>PAPER ID – TITLE</b>	<b>FIRST/PRIMARY CONTACT AUTHOR</b>	<b>AFFILIATION</b>
09:00 – 09:10	287 - QUICK ESTIMATION TOOL FOR FREE-MOLECULAR AERODYNAMIC COEFFICIENTS	PRIYESH KUMAR JAIN	HSFC, ISRO
09:10 – 09:20	291 - EFFICIENT SUPERSONIC JET CONTROL USING V-NOTCH TYPE OF VORTEX GENERATORS	TAMAL JANA	BMS COLLEGE OF ENGINEERING, BANGALORE
09:20 – 09:30	301 - DESIGN AND DYNAMIC RESPONSE OF SWIRL CO-AXIAL INJECTORS FOR LOX-METHANE ROCKET ENGINE	ABHISHEK SHARMA	LPSC, ISRO
09:30 – 09:40	302 - HOT TESTING OF 3D PRINTED CRYOGENIC ENGINE INJECTORS FOR COMBUSTION PERFORMANCE EVALUATION	ABHISHEK SHARMA	LPSC, ISRO
09:40 – 09:50	308 - FLOW ANALYSIS TO STUDY THE EFFECT OF ROUNDING OFF THE PAYLOAD FAIRING (PLF) CYLINDER-BOAT-TAIL (C-B) JUNCTION FOR A TYPICAL LAUNCH VEHICLE	UDAY BHASKAR NEELA	VSSC, ISRO
09:50 – 10:00	332 - STUDIES ON THE EFFECT OF FILM COOLING FLOW RATE ON THERMAL PARAMETERS OF REGENERATIVELY COOLED THRUST CHAMBER	ADARSH A N	ISRO
10:00 – 10:10	344 - ARTIFICIAL INTELLIGENCE CONTROL OF TURBULENT JET MIXING WITH LOCAL SEARCH OPTIMIZATION	JINU CHANDRAN	BITS, PILANI
10:10 – 10:20	349 - DESIGN OF A SINGLE STAGE VEHICLE FOR TESTING CREW ESCAPE SYSTEM FOR GAGANYAAN MISSION	KESAVA VISHNU G	LPSC, ISRO
<b>7B : COMBUSTION (CC-3)</b>		<b>VENUE : KAVERI HALL</b>	
<b>CHAIR : SMT. REVATHY H, LPSC</b>		<b>RAPPORTEUR: KU. SHARMISTHA CHAUBEY, LPSC</b>	
<b>TIME</b>	<b>PAPER ID – TITLE</b>	<b>FIRST/PRIMARY CONTACT AUTHOR</b>	<b>AFFILIATION</b>
09:00 – 09:10	18 - MODELING OF HYDROGEN-SUBCRITICAL LOX JET COMBUSTION IN TRANSVERSE FLOW	AAYUSHI BOHREY	BIT, MERSA
09:10 – 09:20	52 - IMPACT OF ZIRCONIUM NANOPARTICLES ON BORON-PARAFFIN WAX-BASED HYBRID PROPELLANT IN DUCTED ROCKET APPLICATIONS	PRIT P ANGHAN	ALLIANCE UNIVERSITY
09:20 – 09:30	112 - INVESTIGATION OF RADIATION EFFECT ON AXISYMMETRIC NON-PREMIXED TURBULENT METHANE-AIR JET FLAME	NISHAD MAHAJAN	IIT, MANDI
09:30 – 09:40	212 - EXPERIMENTAL AND COMPUTATIONAL ANALYSIS ON EFFECT OF AIRFLOW DISTRIBUTION ON COMBUSTION PERFORMANCE OF MODEL COMBUSTOR	MUTHUSELVAN G DR.	CSIR, NAL
09:40 – 09:50	281 - INVESTIGATION OF FIRE BEHAVIOUR OVER VARIOUS CONFIGURATIONS OF SOLID SURFACES	NIKHIL V V	IIT, MADRAS

	USING GROUND-BASED MICROGRAVITY DROP TOWER EXPERIMENTS		
09:50 – 10:00	442 - DEVELOPMENT AND PERFORMANCE STUDY OF GASOLINE DIRECT INJECTION (GDI) USING PORT FUEL INJECTOR	VINTI BHATIA	URSC, ISRO
10:00 – 10:10	479 - NUMERICAL INVESTIGATION OF EFFECT OF OXYGEN CONCENTRATION IN MECHANISMS OF FIRE SPREAD OVER FLAMMABLE SOLID MATERIALS IN NORMAL GRAVITY AND MICROGRAVITY	ARVIND BHARATH S R	IIT, MADRAS
10:10 – 10:20	482 - SOOT EMISSION PREDICTION OF HYDROCARBON FUELS USING MACHINE LEARNING AND DEEP LEARNING ALGORITHMS	SAI ROHITH THAVITI	IIT, KANPUR
10:20 – 10:30	495 - FLAME MORPHOLOGY DURING SELF-EXCITED COMBUSTION INSTABILITY USING SWIRL COAXIAL INJECTOR	MITHUNA LINGARAJ	IIST, TRIVANDRUM
<b>7C : AERODYNAMICS AND PROPULSION (AP-9)</b>		<b>VENUE : NILA HALL</b>	
<b>CHAIR : SHRI. P UNNIKRISHNAN NAIR , GH, LPSC</b>		<b>RAPPORTEUR: SHRI. VISHNU VISWANATH, LPSC</b>	
<b>TIME</b>	<b>PAPER ID – TITLE</b>	<b>FIRST/PRIMARY CONTACT AUTHOR</b>	<b>AFFILIATION</b>
09:00 – 09:10	672 - PERFORMANCE ANALYSIS OF FUEL INJECTOR LOCATION IN SUPERSONIC FLOW OVER A SLANTED FORE-WALL AND AFT-WALL CAVITY	ASWIN ANIL PANICKER	IIST, TRIVANDRUM
09:10 – 09:20	678 - EXPLORATION OF BIO-INSPIRED WINGTIP DEVICES FOR LOW ASPECT RATIO WING	ANAND VERMA	IIT, GUWAHATI
09:20 – 09:30	691 - EXPERIMENTAL ANALYSIS IN THE WAKE OF A FLAT PLATE AT LOW REYNOLDS NUMBER	BASTAV BORAH	IIT, GUWAHATI
09:30 – 09:40	695 - SURFACE EFFECTS OF UNDERWATER BLAST EXPERIMENT AT SHALLOW WATER DEPTH USING A SHOCK TUBE	PROF. NIRANJAN SAHOO	IIT, GUWAHATI
09:40 – 09:50	698 - EXPERIMENTAL INVESTIGATION OF LIQUID INJECTION IN A SUPERSONIC CROSSFLOW	ARUN KUMAR R	IIT, JODHPUR
09:50 – 10:00	439 - EFFECTS OF DIFFERENT WALL DIVERGENCE ON SUPERSONIC COMBUSTION IN PYLON-CAVITY CONFIGURATION	ANBARASAN SEKAR	IIST, TRIVANDRUM
10:00 – 10:10	446 - EFFECT OF NEEDLE VALVE POSITION IN 2D PLANAR MICRO NOZZLE FLOW	PULKIT PANDEY	IIST, TRIVANDRUM
10:10 – 10:20	547 - EFFECT OF DRAG AND LIFT-BASED BLADE ON AERODYNAMIC PERFORMANCE AND STARTING TORQUE OF SMALL SCALE DARRIEUS-TYPE STRAIGHT-BLADED VERTICAL AXIS WIND TURBINE	KABITA NAIK	IIT, GUWAHATI
<b>7D : AUTOMATION AI, ROBOTICS (AI-2)</b>		<b>VENUE : NALANDA-A HALL</b>	
<b>CHAIR : ASST. PROF.SAM NOBLE , IIST</b>		<b>RAPPORTEUR: SHRI. SOURABH KARMARKAR, LPSC</b>	
<b>KEYNOTE LECTURE : PROF. VIJAYAN K. ASARI UNIVERSITY OF DAYTON, USA</b>			
<b>TIME : 09:00 – 09:30</b>			
<b>TITLE : AI AND MACHINE VISION FOR REMOTE INSPECTION, SURVEILLANCE, AND VISION-GUIDED AEROSPACE APPLICATIONS</b>			

TIME	PAPER ID – TITLE	FIRST/PRIMARY CONTACT AUTHOR	AFFILIATION
09:30 – 09:40	103 - AUTOMATION OF PAYLOAD OPERATIONS ONBOARD SPACECRAFT USING THE CONCEPT OF FICTITIOUS STATIONS & EVENT BASED COMMANDING	RETHIKA T	ISRO
09:40 – 09:50	147 - EFFICIENT MICROSCOPIC IMAGE MOSAICING FOR DEFECT CHARACTERIZATION IN NUCLEAR AND AEROSPACE MATERIALS USING AI & WAVELET	RATNESH S SENGAR	BARC
09:50 – 10:00	158 - SOFTWARE IMPLEMENTED FAULT TOLERANCE FOR COMPUTATION OF PRESSURE IN CRYO STAGE SERVICING FOR HUMAN RATED MISSIONS	SREEDHAR RALLABHANDI	SDSC-SHAR, ISRO
10:00 – 10:10	211 - AUTOMATION OF MIL-STD-1553B RT PROTOCOL TESTING FOR AVIONICS SYSTEMS	PHILIP C JACOB	VSSC, ISRO
10:10 – 10:20	224 - REVOLUTIONIZING DESALINATION: A NOVEL HUMIDIFICATION AND DEHUMIDIFICATION APPROACH WITH MACHINE LEARNING OPTIMIZATION	KOLANU SAI SANDEP	BITS, PILANI
<b>7E :</b>	<b>EXPERIMENTAL FLUID MECHANICS AND HEAT TRANSFER, CRYOGENICS (FM-5)</b>		<b>VENUE : NALANDA-B HALL</b>
<b>CHAIR : SHRI. K.N. DILEEP</b>		<b>RAPPORTEUR: SHRI. RENJITH S, MSA</b>	
<b>KEYNOTE LECTURE: PROF. RAMESH NARAYANASWAMY, CURTIN UNIVERSITY, AUSTRALIA</b>			
<b>TIME : 09:00 – 09:30</b>			
<b>TITLE : FLUID PLAY ON HEAT TRANSFER FROM AN IMPINGING JET</b>			
TIME	PAPER ID – TITLE	FIRST/PRIMARY CONTACT AUTHOR	AFFILIATION
09:30 – 09:40	643 - MATHEMATICAL MODELLING OF ON-BOARD PRESSURISATION MODULE FOR CRYOGENIC PROPELLANT TANK	HARISH VARMA PAKALAPATI	LPSC, ISRO
09:40 – 09:50	661 - INVESTIGATION ON FLOW INDUCED VIBRATIONS OF BRANCHED TUBES CONVEYING PULSATILE FLUID	SAYOOJ K	COLLEGE OF ENGINEERING, TRIVANDRUM
09:50 – 10:00	699 - PLUG PROFILE'S IMPACT ON THE CRYOGENIC CONTROL VALVE'S PERFORMANCE	PRATIK MILIND CHAKRADHARE	IIT, KHARAGPUR
10:00 – 10:10	162 - EXPERIMENTAL INVESTIGATION ON PLANAR MICRONOZZLE PLUME USING INTERFEROMETRIC SCATTERING, PIV AND SCHLIEREN METHOD	MANU K SUKESAN	IIST, TRIVANDRUM
10:10 – 10:20	377 - FLOW CHARACTERISTICS OF ROBOTIC SWALLOWTAIL BUTTERFLY	DEBAJYOTI KUMAR	IIT, KHARAGPUR

<b>8A : AERODYNAMICS AND PROPULSION (AP-8)</b>		<b>VENUE : PCSC CONF. HALL</b>	
<b>CHAIR : DR. C SURESHKUMAR , DD, LPSC</b>		<b>RAPPORTEUR: SHRI. DEEPAK V M, LPSC</b>	
<b>TIME</b>	<b>PAPER ID – TITLE</b>	<b>FIRST/PRIMARY CONTACT AUTHOR</b>	<b>AFFILIATION</b>
10:45 – 10:55	363 - COMPARATIVE STUDY FOR DIFFERENT TURBOPUMPS CONFIGURATIONS FOR 100T CLASS LOX-METHANE ENGINE	M VISWAJITH	LPSC, ISRO
10:55 – 11:05	364 - NUMERICAL STUDIES ON NOVEL PZT BASED DEICING ON AN AIRCRAFT LEADING EDGE SEGMENT	VENKAT S IYENGAR	CSIR-NAL
11:05 – 11:15	381 - DESIGN AND DEVELOPMENT OF A HELIUM BASED 1N COLD GAS THRUSTER FOR ORBITAL PLATFORM	ANANT SINGHAL	LPSC, ISRO
11:15 – 11:25	387 - ENGINE CYCLE ANALYSIS AND CONFIGURATION STUDIES FOR A NUCLEAR THERMAL ROCKET ENGINE	AVINASH CHANDRA	LPSC, ISRO
11:25 – 11:35	393 - HAZARD ANALYSIS USING STPA AND COVERAGE ASSESSMENT WITH FORMALIZATION FOR CREW MODULE PROPULSION SYSTEM AUTONOMY SOFTWARE IN GAGANYAAN MISSION	DEEPIKA JINDAL	ISRO
11:35 – 11:45	408 - METHODOLOGY FOR DESIGN AND ANALYSIS OF A SUB-SCALE LOX-METHANE THRUST CHAMBER	E HARSHAVARDHAN	LPSC, ISRO
11:45 – 11:55	413 - INVESTIGATION ON SUPERSONIC VACUUM EJECTORS WITH VARYING JET VELOCITY	MIDHUN U S	COLLEGE OF ENGINEERING, TRIVANDRUM
<b>8B : SPACE APPLICATION, SPACE ECOSYSTEM AND STARTUPS IN INDIA, AEROSPACE SYSTEMS, HUMAN SPACE PROGRAMME AND SPACE EXPLORATION (SA-7)</b>		<b>VENUE : KAVERI HALL</b>	
<b>CHAIR : PROF. PRATHAP C., IIST</b>		<b>RAPPORTEUR: SHRI. RENJITH S, VSSC</b>	
<b>TIME</b>	<b>PAPER ID – TITLE</b>	<b>FIRST/PRIMARY CONTACT AUTHOR</b>	<b>AFFILIATION</b>
10:45 – 10:55	304 - NUMERICAL SIMULATION OF HOT GAS FLOW FIELD OF A CRYOGENIC ENGINE COMBUSTION CHAMBER DURING SEPARATION OF NOZZLE CLOSURE	SIJU K MATHEW	LPSC, ISRO
10:55 – 11:05	345 - STUDY OF PERFORMANCE PARAMETERS OF SCRAMJET NOZZLES UNDER VARIABLE EXPANSION RATIOS	ARINA THAKUR	MIT ART DESIGN & TECHNOLOGY
11:05 – 11:15	663 - DESIGN, DEVELOPMENT AND TESTING OF RETARDER MECHANISM FOR VELC PAYLOAD OF ADITYA-L1 MISSION	HARIKRISHNAN A	IISU, ISRO
11:15 – 11:25	697 - THERMAL BALANCE TEST FOR ATOMIC CLOCK PANEL OF NAVIC SPACECRAFT	VINOD KUMAR GUPTA	URSC, ISRO

<b>8C : RENEWABLE ENERGY, CLEAN ENERGY FUELS (RE-2)</b>			<b>VENUE : NILA HALL</b>
<b>CHAIR : PROF. RAJKUMAR M.R., RIT, KOLLAM</b>		<b>RAPPORTEUR: SHRI. ROBIN ALEXANDER, LPSC</b>	
<b>TIME</b>	<b>PAPER ID – TITLE</b>	<b>FIRST/PRIMARY CONTACT AUTHOR</b>	<b>AFFILIATION</b>
10:45 – 10:55	201 - A NUMERICAL STUDY ON THE EFFECT OF WALL SLIPPAGE ON THE UNSTEADY HYDRODYNAMICS OF AN INCLINED ELLIPTICAL CYLINDER	HARIGOVIND S	COLLEGE OF ENGINEERING, TRIVANDRUM
10:55 – 11:05	582 - ANALYSIS ON THE EFFECT OF HEAT RELEASE ON SUPERSONIC SHEAR LAYER	DR. DEEPU M	IIST, TRIVANDRUM
11:05 – 11:15	620 - INFLUENCE OF VISCOPLASTIC NATURE OF LIQUIDS ON THE CONJUGATE FORCED CONVECTIVE HEAT TRANSFER CHARACTERISTICS IN WAVY CHANNEL WITH RIBS	SUMIT KUMAR MEHTA	IIT, GUWAHATI
11:15 – 11:25	646 - LUMPED-PARAMETER MODELLING OF LAMINAR DEVELOPING FLOW IN A MICROCHANNEL	ADVAITH R NAIR	COLLEGE OF ENGINEERING, TRIVANDRUM
11:25 – 11:35	500 - LOCALIZATION OF LOOSE PART IMPACTS IN CRITICAL PROCESS EQUIPMENT USING ACOUSTIC EMISSION SENSORS	CH SANTOSH SUBUDHI	BARC, MUMBAI
11:35 – 11:45	596 - NUMERICAL EVALUATION OF TEMPORAL TEMPERATURE HISTORY DURING HUMAN TOUCH INTERACTION	ARNAB LAHIRI	ISRO
11:45 – 11:55	462 - HYDROGEN PEROXIDE DISSOCIATION USING LI-MN COMPLEX EXTRACTED FROM SPENT LITHIUM-ION BATTERIES	AMALA J	NIT, WARANGAL
11:55 – 12:05	538 - AMPLIFIED SALINITY-GRADIENT INDUCED POWER GENERATION EXTRACTED FROM THE WAVY-WALLED NANOFLUIDIC CHANNEL	PRASENJEET PADHI	IIT, GUWAHATI
<b>8D : RENEWABLE ENERGY, CLEAN ENERGY FUELS (RE-1)</b>			<b>VENUE : NALANDA-A HALL</b>
<b>CHAIR : SHRI. M. GANESH PILLAI, DD, LPSC</b>		<b>RAPPORTEUR: SHRI. ABHISHEK SHARMA, LPSC</b>	
<b>KEYNOTE LECTURE : PROF. P.V. ARAVIND, UNIVERSITY OF GRONINGEN, NETHERLANDS</b>			
<b>TIME : 10:45 – 11:15</b>			
<b>TITLE : FUEL CELL SYSTEMS FOR AIRCRAFT AND OTHER APPLICATIONS</b>			
<b>TIME</b>	<b>PAPER ID – TITLE</b>	<b>FIRST/PRIMARY CONTACT AUTHOR</b>	<b>AFFILIATION</b>
11:15 – 11:25	174 - GREENING OF ISRO FACILITY BY RE TECHNOLOGY: A CASE STUDY	HARI BHASKARAN ANANGAPAL	NATIONAL INSTITUTE OF WIND ENERGY
11:25 – 11:35	311 - ANALYSIS OF DIESEL ENGINE CHARACTERISTICS OPERATED WITH AL <sub>2</sub> O <sub>3</sub> DOPED NAHAR VEGETABLE OIL-DIESEL BLEND	MD S MUJAHEED KHAN	NE-RIST, NIRJULI
11:35 – 11:45	319 - CLEAN HYDROGEN PRODUCTION THROUGH WATER-SPLITTING BY COPPER-CHLORINE THERMOCHEMICAL CYCLE: INSIGHTS INTO TECHNOLOGY DEVELOPMENT	DEEPA THOMAS	BARC, MUMBAI

11:45 – 11:55	348 - NUMERICAL INVESTIGATION OF COMBUSTION, PERFORMANCE AND EMISSION STUDIES OF HCCI ENGINE OPERATED WITH CARBON FREE FUELS (AMMONIA HYDROGEN BLENDS)	VENKATESH T LAMANI	BMS COLLEGE OF ENGINEERING, BANGALORE
11:55 – 12:05	435 - INTEGRATION OF HYDROGEN WITH LPG IN DOMESTIC BURNER: AN EXPERIMENTAL STUDY	SIDHARTH K PILLAI	IIT, HYDERABAD
<b>8E : NUCLEAR ENERGY, NUCLEAR SYSTEM, OCCUPATIONAL HEALTH AND SAFETY, AUTOMOTIVE TECHNOLOGY (NE-1);</b>			<b>VENUE : NALANDA-B HALL</b>
<b>CHAIR : DR. JOHN THARAKAN , GD, LPSC</b>		<b>RAPPORTEUR: DR. MUTHUKUMARAN C.K., LPSC</b>	
<b>TIME</b>	<b>PAPER ID – TITLE</b>	<b>FIRST/PRIMARY CONTACT AUTHOR</b>	<b>AFFILIATION</b>
10:45 – 10:55	54 - OCCUPATIONAL HEALTH AND SAFETY CHALLENGES FACED BY THE WORKING PERSONNEL DURING THE GROUND STATION OPERATIONS AT ANTARCTICA	CHINMAY KUMAR PATRA	ISRO
10:55 – 11:05	196 - INTER-DOMAIN SOFTWARE QUALIFICATION PROCESS FOR SAFETY CRITICAL APPLICATIONS	AMOL WAKANKAR	BARC, MUMBAI
11:05 – 11:15	370 - A TECHNIQUE TO DEDUCE A GENERALISED EXPRESSION FOR USEFUL LENGTH OF THE GROUNDING ELECTRODE FOR LIGHTNING PROTECTION	SENTHIL KUMAR A	LEOS, ISRO
11:15 – 11:25	320 - SIMULATION OF ENERGY EFFICIENT PRESSURE SWING DISTILLATION PROCESS FOR CLEAN HYDROGEN PRODUCTION THROUGH THERMOCHEMICAL WATER SPLITTING	GAURAV KUMAR	BARC, MUMBAI
11:25 – 11:35	405 - POWER BALANCE IN TOKAMAK FUSION REACTOR	ARITRA CHAKRABORTY	INSTITUTE OF PLASMA RESEARCH
11:35 – 11:45	409 - SECURING SERVERS AND WORKSTATIONS WITH ANU NISHTA	ARINDAM KHAN	BARC, MUMBAI
11:45 – 11:55	433 - EXPERIMENTAL STUDY OF POOL BOILING CRITICAL HEAT FLUX ON THIN WIRES AND TUBES	MOORTHY ANNAMALAI	BARC, MUMBAI
11:55 – 12:05	434 - NUMERICAL SIMULATION OF CONTROL ROD EJECTION FORCE OF REACTIVITY CONTROL MECHANISM DURING VENTING	MOORTHY ANNAMALAI	BARC, MUMBAI



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276	UNDERSTANDING AND RESOLVING THE CRACKING ISSUES DURING METAL FORMING IN FE-14CR-5.5NI-1MO-1W-0.20V-0.10NB STAINLESS STEEL SHEET USED IN LOX-KEROSENE THRUST CHAMBER	SANTHOSHKUMAR R.	LPSC, ISRO
289	AUTOMATED AND SYNCHRONISED PULSE GENERATION SYSTEM FOR COLD ATOM INTERFEROMETRY	RAGHUNATH K.P.	IISU, ISRO
417	EFFECT OF PRESSURANT GAS ON SLOSHING IN LN2 TANK	NIKHIL PAPETLA	IIT MADRAS
418	NUMERICAL ANALYSIS OF NANOFLUID FLOW THROUGH METAL FOAM FILLED CHANNEL ON HYDROTHERMAL PERFORMANCE	BANJARA KOTRESHA	GOVT. ENGINEERING COLLEGE, HAVERI
419	EXERGY ANALYSIS OF NANOFLUID FLOWING THROUGH METAL FOAM FILLED CHANNEL	BANJARA KOTRESHA	GOVT. ENGINEERING COLLEGE, HAVERI
436	INVESTIGATION OF CAVITY WITH FORWARD AND BACKWARD FACING STEPS IN SUPERSONIC FLOW	VINIL KUMAR R R	IIST
445	HYBRID COMBUSTION MODELLING OF NON-LIQUEFYING AND LIQUEFYING FUEL	YASH RAJESH NITNAWARE	IIST
466	ANALYSIS OF C-D NOZZLE WITH LOW-PRESSURE FILM LAYER TO DELAY DETACHMENT OF FLOW.	NANDAN HEGDE	BMS COLLEGE OF ENGINEERING
469	FROM CHAOS TO CLARITY: LEVERAGING SATELLITE IMAGERY AND DEEP LEARNING FOR EMERGENCY RESPONSE IN WAR TORN & DISASTER-STRICKEN AREAS	GOVIND A	SCT COLLEGE OF ENGINEERING
472	TRAJECTORY ANALYSIS OF RECENT LUNAR MISSIONS FOLLOWING ENERGY EFFICIENCY METHODS	HARSHIT SHUKLA	UPES
477	ACCURATE PROPELLANT LOADING ESTIMATION OF A LAUNCH VEHICLE CRYOGENIC TANK HAVING PROFILE DEVIATIONS	DEEPAK K	LPSC, ISRO
481	DEVELOPMENT AND QUALIFICATION OF ICSS-1218-321 CLOSED DIE FORGINGS FOR CE-20 ENGINE FOR GAGANYAAN APPLICATION	SANDIPAN DAS	LPSC, ISRO
497	DESIGN AND DEVELOPMENT OF GM CRYOCOOLER BASED HYDROGEN LIQUEFACTION SYSTEM	RAHUL KUMAR	IIT KHARAGPUR
511	OPTIMIZATION OF UNDERDECK STRUCTURE FOR PLACEMENT OF TOWING WINCHES AND STAPLE ONBOARD TUGS USING NUMERICAL METHOD	ALTHAF K K	CUSAT
512	PERSPECTIVE OF SYSTEM ENGINEERING IN MACHINE LEARNING	EZHILRAJAN ELAYAPERUMAL	IPRC, ISRO
513	COMPUTATIONAL ANALYSIS OF TRUNCATED AEROSPIKE NOZZLE WITH REGENERATIVE COOLING SYSTEM	PADMASHREE K	RAJALAKSHMI ENGINEER COLLEGE

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515	DESIGN AND DEVELOPMENTAL CHALLENGES OF A PYROTHRUSTER FOR GRID FIN DEPLOYMENT IN CREW ESCAPE SYSTEM OF HUMAN SPACE FLIGHT MISSION	CHRISTOPHER M	VSSC, ISRO
534	CFD ANALYSIS OF SURFACE HEAT FLUX OVER A CONICAL BODY SUBJECTED TO A HIGH- SPEED FLOW ENVIRONMENT	BODDEPALLI VIKAS	NIT CALICUT
536	THERMAL IMAGING SYSTEM FOR STATIONARY PLASMA THRUSTERS TEMPERATURE MEASUREMENT	VARA PRASAD KELLA	LPSC, ISRO
537	AUTOMATED INSTRUMENTATION SYSTEM FOR THE CALIBRATION OF POTENTIOMETERS USED AS FEEDBACK SENSORS IN CLOSED LOOP CONTROL SYSTEM OF LAUNCH VEHICLE	VINOD KUMAR P	ISRO
541	A STUDY OF MICROWAVE ATTENUATION IN C BAND DUE TO SUBSCALE SOLID MOTOR PLUME	ARJUN SANKAR R	VSSC, ISRO
551	WEAR RATE PREDICTION OF ALCOCRFENI HEA COATING ON STAINLESS STEEL USING MACHINE LEARNING TECHNIQUES	DR. SUJA A. ALEX	S.T XAVIER'S CATHOLIC COLLEGE OF ENGINEERING
554	PERFORMANCE OF RAMJET ENGINES WITH DUAL BELL NOZZLES	AYSHWARYA MAHADEVAN	RAJALAKSHMI COLLEGE OF ENGINEERING
561	STUDIES ON MEASUREMENT LOCALIZATION OF PLANAR INDUCTIVE EDDY CURRENT SENSORS	PANKAJ SAGAR	CUSAT
571	FABRICATION AND CHARACTERIZATION OF COMPOSITE AA 6061 METAL FOAM FOR STRUCTURAL APPLICATIONS	DIVAKAR BOMMANA	GITAM
583	EXPERIMENTAL STUDY OF PINTLE INJECTOR WITH CIRCULAR SLOTS	NAVEEN REPALLE	IIST TRIVANDRUM
584	MODULAR DESIGN OF AIR-BREATHING AND ROCKET MODE COMBINED CYCLE SYSTEM WITH CRYOGENIC PROPELLANTS	SANJAY H	NIT,CALICUT
585	LOW-TEMPERATURE THERMAL CONDUCTIVITY EVALUATION OF COPPER-IMPREGNATED ACTIVATED CARBON ADSORBENTS FOR CRYO-ADSORPTION VACUUM PUMP APPLICATIONS	PANKAJ SAGAR	CUSAT
588	PARAMETRIC STUDIES OF NACA 2412 AIRFOIL PERFORMANCE WITH ACTIVE FLOW CONTROL	PARAMESH THIMMIREDDIGARI	GAT
592	DESIGN AND ANALYSIS OF A MOVING MAGNETIC TYPE LINEAR DRIVE FOR A SPLIT TYPE FREE PISTON STIRLING CRYOCOOLER.	ARCHANA B SURESH	NIT, CALICUT
597	SIGNIFICANCE OF PRESERVATION PRESSURE IN THIN SHELL PROPELLANT TANKS FOR LAUNCH VEHICLE	MANOJ T K	LPSC, ISRO
599	DESIGN METHODOLOGY AND NUMERICAL INVESTIGATION OF COANDA EFFECT-BASED UAV	SARAVANAN DHARMALINGAM	BMS COLLEGE OF ENGINEERING, BANGALORE

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616	NUMERICAL INVESTIGATION OF A SINGLE-LOOP CRYOGENIC PULSATING HEAT PIPE	ABHINAV SINGH	IIT,KHARAGPUR
628	INFLUENCE OF NH <sub>3</sub> /H <sub>2</sub> DOPING RATIO (CARBON FREE FUELS) ON LAMINAR FLAME SPEED AND NO EMISSION	VENKATESH T LAMANI	B.M.S COLLEGE OF ENGINEERING BENGALURU
634	DEVELOPMENT, CHARACTERIZATION AND DECOMPOSITION STUDY OF CERAMIC FOAM CATALYST FOR HAN	SAVITRY KUMARI	LPSC,ISRO
640	AN IOT BASED SYSTEM FOR ENVIRONMENT MONITORING IN AVIONICS FABRICATION LINE	ABEL THOMAS TITUS	VSSC, ISRO
645	DESIGN AND OPTICAL ANALYSIS OF A NOVEL SECONDARY REFLECTOR FOR SOLAR PARABOLIC TROUGH COLLECTOR SYSTEM	RAMAKRISHNAN P V	IIST, TRIVANDRUM
665	EFFECT OF ELECTROLYTE ELECTRIC CONDUCTIVITY ON LITHIUM PEROXIDE DEPOSITION IN LI-O <sub>2</sub> BATTERY	JITHIN M	NIT, CALICUT
673	NUMERICAL INVESTIGATION OF EFFECT OF OBSTRUCTION GEOMETRY ON OSCILLATING FLOW ACROSS RECTANGULAR CHANNEL	RAMESH M	ISRO
675	AN AEROACOUSTIC STUDY ON MODIFIED AIRFOILS	SOHAN SHREYAS C	B.M.S COLLEGE OF ENGINEERING
682	NICKEL COATING ON INJECTOR ELEMENTS FOR SEMI-CYRO BRAZING APPLICATION	MAHALAKSHMI SHANMUGAM	ISRO
686	THERMAL MANAGEMENT OF AVIONIC PACKAGES OF CREW MODULE FOR ISRO'S TEST VEHICLE MISSION	DIVYANSH PRAKASH	VSSC, ISRO
702	EFFECT OF ASPECT RATIO ON METHANE-AIR PREMIXED FLAME PROPAGATION IN A HORIZONTAL CIRCULAR MICRO-COMBUSTOR	SABIR C M	NITC
704	PEM FUEL CELL CATALYST: COBALT DOPED, ACETYLENE BLACK SUPPORTED, PT CATALYST WITH HIGHER ACTIVITY FOR ORR	SHEEN MERS S V	VSSC, ISRO

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