

ICRESH-2024: Pre-Conference Tutorial
21st February 2024

9:00 AM – 9:30 AM: Registration

9:30 AM – 10:00 AM: Inauguration

Time	Parallel Session-1 RBI	Parallel Session-2 RAMS	Parallel Session-3 AI/ML
10:00 – 11:30	Introduction to RBI Dr. Ing. Daniel Balos University of Stuttgart, Germany	Introduction to RAMS Prof. Pierre Dersin Lulea University of Technology Sweden	Introduction to AI/ML (Retd.) Prof. P.S.V. Nataraj IIT Bombay
11:30 – 11:45 Hrs (Tea Break)			
11:45 – 13:15	RBI Applications Dr. Ing. Daniel Balos University of Stuttgart, Germany	RAMS Management and its Industrial Applications Dr. Durga Rao Karanki Swiss Federal Railways, Switzerland	AI/ML Application in Nuclear: Benefits, Challenges, and Opportunities Dr. Vivek Agarwal, INL, USA
13:15 – 14:15 Hrs (Lunch Break)			

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Time	Parallel Session-1 RBI	Parallel Session-2 RAMS	Parallel Session-3 AI/ML
14:15 – 15:45	RBI Applications (Contd.) Dr. Ing. Daniel Balos University of Stuttgart, Germany	RAMS Management and its Industrial Applications (Contd.) Dr. Durga Rao Karanki Swiss Federal Railways, Switzerland	AI/ML Application in Nuclear: Benefits, Challenges, and Opportunities (Contd.) Dr. Vivek Agarwal, INL, USA
			AI/ML Application-Remaining Useful Life Prediction (14:45-15:45) Prof. Debabrata Datta, HIT, Kolkata
15:45 – 16:00 Hrs (Tea Break)			
16:00 – 17:00	RBI Applications in Indian Industries Dr. M. Hari Prasad, BARC, Mumbai Ms. Vibha Hari, NPCIL, Mumbai	RAMS Applications in Indian Industries Mr. P. A. Punekar BARC, Mumbai	AI/ML Applications in Indian Industries Dr. Lalit Singh NPCIL, Mumbai

Conference - Day 1: 22nd February 2024

8:30 AM – 9:30 AM: Registration

9:30 AM - 10:30 AM: Inaugural Session

Keynote Sessions (KN 1 to 2)

Chairman	Mr. C. G. Karhadkar, BARC, India		
Co-Chair	Dr. S. Mukhopadhyay, BARC, India		
Time	ID	Speaker	Topic
10:30-11:10	KN1	Prof. Uday Kumar Luleå University of Technology, Sweden	Trends in Engineering Asset Management: The Impact of Transformative Technologies on Risk and Reliability Management
11:10-11:30	High Tea		
11:30-12:10	KN2	Prof. Pierre Dersin Operation & Maint. Engg Division, Luleå University of Technology, Sweden	Harnessing AI for Reliability and Maintenance
12:10-13:10	Oral Presentation Session (PS-1) AI ST PSA HZ		
13:10-14:00	Lunch Break		

Conference - Day 1: 22nd February 2024

Keynote Sessions (KN 3 to 4)

Chairman	Prof. Uday Kumar, Sweden		
Co-Chair	Dr. J. Chattopadhyay, BARC, India		
Time	ID	Speaker	Topic
14:00-14:40	KN3	Prof. Enrico Zio Scientific Director of Research and Development of Datrix AI Solutions group, Italy.	Advances in risk assessment for enhanced safety of critical assets
14:40-15:20	KN4	Prof. Michael Pecht University of Maryland, USA	The Reliability and Safety-related Challenges of using Lithium-ion batteries.
15:20-16:20	Oral Presentation Session (PS-2) ER EE RM RAMS		
16:20-16:30	Tea Break		
16:30-17:45	Oral Presentation Session (PS-3) SR RI FA HRA		
20:00	Banquet Dinner		

**Conference - Day 1: 22nd February 2024: Parallel Sessions
PS-1**

Time	HALL 1	HALL 2	HALL 3	HALL 4
	Artificial Intelligence	Structural Reliability	Hazard	Probabilistic Safety Assessment
Chairman Co-Chair	Prof. P. S. V. Natraj, IIT Bombay Mr. U. W. Vaidya, BARC	Dr. Kapilesh Bhargava, BARC Dr. Ajai Pisharody, AERB	Mr. Clement Verghese, BARC Ms. A. K. Vijaya, NPCIL	Dr. Deb Mukhopadhyay, BARC Mr. Utkarsh S C, AERB
12:10 – 12:25	AI-01: Reliability Based Design Optimizaton for Predictive Model of Heart Disease Using Ensemble Stacking and Votng Machine Learning Technique. (Debabrata Datta)	ST-01: Development of Partial Safety Factors for Fitness-For-Service Assessment of Pressure Vessels using First Order Reliability Methods (P. A. Jadhav)	HZ-01: A case study of a molecular sieve vessel damage in a Gas Processing Plant (Pilić Vladimir)	PSA-01: Identification of Plant Operating States and Quantification of Initiating Event Frequency for Shutdown Probabilistic Assessment of KKNPP-1&2 (Rimpi Ganguly)
12:25 – 12:40	AI-02: A Support Vector Machine model for detection of transients in nuclear reactor (Arunprasath V)	ST-02: Study of the heat transfer and simulation through a nanotube for Distribution Function D2Q9 using the Lattice Boltzmann Method (Shanky Garg)	HZ-02: Hazard Operability evaluation study for high capacity mixers used in solid propellant processing (VVSHRC Raju)	PSA-02: Estimation of Source Term for Postulated Accidental scenario & Large Early Release Frequency for PSA Level-2 Study of 700 MWe PHWR (Amit Kumar)

<p>12:40 – 12:55</p>	<p>AI-03: An artificial intelligence and machine learning model to estimate the cleaning frequency for dirty solar photovoltaic (PV) modules in a composite environment</p> <p>(Rita Pimpalkarab)</p>	<p>ST-03: Reliability Analysis of the Site Predictor Equation of Rock-Blasting</p> <p>(Yogesh Naik)</p>	<p>HZ-03: Applications of Root Cause Analysis method in the Domain of Industrial Safety</p> <p>(Smt. G. L. N. Padmavathi)</p>	<p>PSA-03: Indian Operating Experience in Level-1 PSA of VVER-1000 Type Reactors, (KKNPP-1&2)</p> <p>(Devish Kumar Singh)</p>
<p>12:55 – 13:10</p>	<p>AI-04: Reinforcement Learning for Mission Reliability based Selective Maintenance Optimization</p> <p>(Ram S. Mohril)</p>	<p>ST-04: Effect of Xanthan Gum Biopolymer on Laterite Soil in Settlement analysis using Plaxis-2D</p> <p>(Shailendra Pandurang Banne)</p>	<p>HZ-04: Review of Adequacy of Safeguards and Mitigation of Hazards through Hazard and Operability (HAZOP) Study</p> <p>(Smt. Garima Singh)</p>	<p>PSA-04: Level-2 PSA study at full power internal event for 700MWe IPHWR Design</p> <p>(Pratima Singh)</p>

PS-2

Time	HALL 1	HALL 2	HALL 3	HALL 4
	Electronics Reliability	External Event Risk Analysis	Reliability Methods	RAMS
Chairman Co-Chair	Mr. P. K. Awale, BARC Dr. Anita Topkar, BARC	Dr. John Arul, IGCAR Dr. A. D. Roshan, AERB	Dr. D. Datta, BARC Prof. JayaPrakash Vemuri	Dr. Alok Mishra, Westinghouse, India Dr. S. K. Dash, ISRO
15:20 – 15:35	ER-05: Performance evaluation of Silicon Carbide (SiC) power MOSFETs under gamma radiation (Pradeep Rautela)	EE-01: Evaluation of Internal Fire Hazards in Indian Nuclear Power Plants (Pankaj Wani)	RM-01: Reliability Estimation – A More Practical Method (R. Muthukumar)	RAMS-01: A Comprehensive Review of Technical Defects, Degradation Issues, and Performance Modeling of Solar Photovoltaic Systems using Reliability, Availability, and Maintainability (RAM) Analysis. (Arun Khalkar)
15:35 – 15:50	ER-02: Reliability and Cost-Effectiveness Trade-offs in Hierarchical Industrial Networks (Bharat Jeswani)	EE-02: A novel implementation of tableau software for visualisation of seismic data from Himalayan region (Hema Sritha Yarlagadda)	RM-02: Maximizing Network Reliability subjected to budget constraint: A Paradigm for Seamless Connectivity (Partha Chakrabarti)	RAMS-02: Enhancing Reliability and System Safety of Chiller Compressors in Radiological Plants: A Comprehensive Protection Approach (ManisankarDhabal)

<p>15:50 – 16:05</p>	<p>ER-03: Investigation of primary radiation damage in nanocrystalline Tantalum using machine-learning interatomic potential: An atomistic simulation study</p> <p>(Mouparna Manna)</p>	<p>EE-03: Time-frequency analysis of strong ground motions from the 1989 Iomapieta earthquake</p> <p>(Chaitanya Bhargav Nerella)</p>	<p>RM-03: Mission Reliability Oriented Selective Maintenance Optimization: A Reinforcement Learning Approach</p> <p>(Ram S. Mohril)</p>	<p>RAMS-03: Re-imagining Military Logistics – Reliability, Availability, Maintainability and Safety (ML-RAMS) with Intelligent, Interconnected, Digital and Distributed (I2D2) Technological Framework</p> <p>(Joydeep Majumdar)</p>
<p>16:05 – 16:20</p>	<p>ER-04: RUL estimation of IGBT modules under Power cycling stress</p> <p>(Himanshu Agrahari)</p>	<p>EE-04: Prediction of Effective Duration of Vertical Ground Motions Based on Machine Learning Algorithms</p> <p>(Hanvitha Saraswathi Mukkamala)</p>	<p>RM-05: Reliability Modeling Based on Rough Set Theory: A Comprehensive Approach for Complex Systems</p> <p>(K. Anitha)</p>	<p>RAMS-04: Application Of Reliability Centered Maintenance for Electric Locomotive Right from Design Phase</p> <p>(Deep Chakravorty)</p>

PS-3

Time	HALL 1	HALL 2	HALL 3	HALL 4
	Software Reliability	Risk Informed	Failure Analysis	Human Reliability Analysis
Chairman Co-Chair	Mr. Gigi Joseph, BARC Dr. Anup Bhattacharjee, BARC	Mr. N. S. Joshi, BARC Dr. R. B. Solanki, AERB	Dr. R. Muthukumar, STQC Dr. Durga Rao. K, Switzerland	Ms. Vibha Hari, NPCIL Mr. S. K. Sinha, BARC
16:30-16:45	SR-01: Formal Verification of Conventionally Qualified Safety Critical Systems (Prateek Saxena)	RI-01: Integrating Barrier Concepts in Risk-Based Inspection: Enhancing Risk-Based Inspection Analysis with Modified Methodology - A Case Study in a Petrochemical Facility (Pilić Vladimir)	FA-01: Improvement in understanding of ESD induced Failures using Photon Emission Microscope: Few Case Studies (S. K. Dash)	HRA-01: Aviation Accidents in India: 1970-2020 (Abhijeet V. Pandit)
16:45 – 17:00	SR-02: Effect of Fault Correction Delay on Software Reliability Modelling in Agile Software Development (Shikha Dwivedi)	RI-02: Environmental Effects and Risk assessment of Cooling Water Systems in Petrochemical Industry (Višnja Mihajlović)	FA-02: Assessing Reliability and Risk of Solar Photovoltaic Panels: A Case Study using Failure Modes and Effects Analysis (FMEA) Approach (Sonali Kale)	HRA-02: Existing situation of HRA in complex systems sectors and its future scope in India (Vipul Garg)

17:00 – 17:15	SR-03: Secure data sharing using an elliptic curve cryptography Method in cloud computing (Dr.P.Vaishnavi)	RI-03: Identification of significant scenarios for accident management based on PSA studies of PHWR (Jyoti Kumari)	FA-03: Experimental Investigation of Sequential and Synergistic Ageing Effect in I&C Cables of NPP (T.V. Santhosh)	HRA-03: Missed-Learnings from Accidents: Comparative Analysis of the Mangalore (2010) and Kozhikode (2020) civil aviation accidents (Vipin Kumar Sharma)
17:15 – 17:30	SR-04: Semantic analysis of application programs developed using graphical PLC language (Yogesh Nirgude)	RI-04: Plant Specific Risk Informed Decision Making for Light Water Reactors (VVER-1000, KKNPP-1&2 in India) (Vineeta)	FA-04: Reliability Analysis of a Large-Scale Solar Photovoltaic System Using Fuzzy Fault Tree Analysis Approach through subjective data processing (Pramod R. Sonawane)	HRA-04: Human Reliability Analysis during preparation of Space Transportation Systems (B S Sharat Chandra)
17:30 – 17:45	SR 05: Cross domain Software Certification Process for Safety Critical Applications (Prateek Saxena)	HZ06: Preliminary Risk Assessment for Storage and Handling of Highly Toxic Chemical in Rocket Industry (Srinivas Palla)	FA-05: Experience of Condition Based On-line Vibration Monitoring System for Rotodynamic equipment of Nuclear Research Reactor (Sushil B Wankhede)	HRA-05: Human Reliability Study of LOCA Event on Dhruva Simulator (Mahendra Prasad)

Conference - Day 2: 23rd February 2024

Keynote Sessions (KN 5 to 7)

Chairman Co-Chair	Prof. Pradip Kumar Ray, IIT Kharagpur, India Prof. Pierre Dersin, Sweden		
Time	ID	Speaker	Topic
09:30-10:10	KN5	Dr. Gopi Chattopadhyay Federation University, Australia	Asset Management can be an umbrella to business for reducing cost and risks and enhancing performance
10:10-10:50	KN6	Prof. K. B. Misra RAMS Consultant / Dr. K. Durga Rao, Switzerland	Design Criteria of Products, Systems and Services in 21 st Century
10:50-11:30	KN7	Prof. Anirudh Gautam Research Designs & Standards Organisation (RDSO), Lucknow, India	Implementation of a structured RAMS and PHM framework for assets of Indian Railways
11:30-12:00	Tea Break		
12:00-13:00	Oral Presentation Session (PS-4) AI ST RAMS PSA		
13:00-14:00	Lunch Break		

Conference - Day 2: 23rd February 2024

Keynote Sessions (KN 8 to 10)

Chairman Co-Chair	Dr. Gopi Chattopadhyay, India Prof. Anirudh Gautam, India		
Time	ID	Speaker	Topic
14:00-14:40	KN8	Prof. Aleksandar Jovanović Chief Executive Officer Steinbeis European Risk & Resilience Institute, Stuttgart, Germany	Increasing the resilience of critical infrastructures to emerging extreme threats
14:40-15:20	KN9	Prof. Pradip Kumar Ray Emeritus Professor, Dept. of Industrial and Systems Engineering (ISE), IIT Kharagpur, India	Human Factors Engineering, Product Development and Sustainable Performance in Organizations: Issues and Challenges from an International Perspective
15:20-16:00	KN10	Prof. Bhupesh K Lad Professor, Mechanical Engg. IIT Indore, India	Digital Twin for RAMS
16:00-16:15	Tea Break		
16:15-17:45	Oral Presentation Session (PS-5) ER FA RS HRA		

**Conference - Day 2: 23rd February 2024: Parallel Sessions
PS-4**

Time	HALL 1	HALL 2	HALL 3	HALL 4
	Artificial Intelligence	Structural Reliability	RAMS	Probabilistic Safety Assessment
Chairman Co-Chair	Mr. Probal Chaudhury, BARC Dr. Vivek Agarwal, USA	Dr. Daniel Balos, Germany Mr. Rohit Rastogi, BARC	Mr. A. J. Gaikwad, AERB Prof. R. P. Gaonkar, IIT Goa	Mr. Kunal Chakrabarthy, BARC Prof. Mangey Ram, India
12:00 – 12:15	AI-07: Internal leakage diagnosis of a hydraulic cylinder using C-LSTM Neural Network (JatinPrakasha , P. K. Kankar)	ST-05: Probabilistic Analysis of blast induced ground vibration equations (RANJAN KUMAR)	RAMS-05: Performance enhancement and improved Availability in Primary Coolant Pumps after modification of seal cooling flow instrumentation. (Jigar V Patel)	PSA-05: Risk Analysis of Hydrogen Gas from Battery System of Underwater Vehicles (Sharath S. Nair)
12:15 – 12:30	AI-06: Transient Identification in Nuclear Power Plants by PCA based Neural Networks (G. Meghana)	ST-06: variability of health assessment data of reinforced concrete buildings from detailed field investigations (SahaDauji)	RAMS-06: Online Data Acquisition System for Heavy Water Leak Detection in Dhruva Research Reactor (Nishtha Shreya)	PSA-06: Development of an Integrated PSA Software Tool for use in Nuclear and Non-Nuclear industries (M. Hari Prasad)

<p>12:30 – 12:45</p>	<p>AI-05: Artificial Intelligence & Machine Learning approach in improving Reliability and Reducing Risk of Complex Engineering Systems – A focus on Prognostics and Health Management and Human Factor Aspects.</p> <p>(Prabhakar V. Varde)</p>	<p>ST-07: Eco-friendly brittle matrix composite in direct tension - determination of upper and lower bounds for ultimate loads</p> <p>(K. Balaji Rao)</p>	<p>RAMS-07: Upgradation of Emergency Cooling System (ECS) Logic of Dhruva</p> <p>(Patel N. V)</p>	<p>PSA-07: Risk reduction in 700 MWe Indian PHWR - A case study with Passive Decay Heat Removal System using Level-1 PSA</p> <p>(Dr. Manish Tripathi)</p>
<p>12:45 – 13:00</p>	<p>AI-08: Role of AI in Anti-Drone Systems: A Review</p> <p>(Ami Pandat)</p>	<p>ST-08: Designing of New Structures to be Corrosion free and Major-repair free: Experience from Mauritius Metro Project</p> <p>(Dr. Sharvil Alex Faroz)</p>	<p>RAMS-08: Upgradation of testing facility for electrical system of Research Reactor</p> <p>(Mishra Nishant)</p>	<p>PSA-08: Level-1 Internal Fire PSA Study for Standard 220 MWe IPHWR (KGS-3&4)</p> <p>(Ashish Wadhvani)</p>

PS-5

Time	HALL 1	HALL 2	HALL 3	HALL 4
	Electronics Reliability	Failure Analysis	Reactor Safety	Human Reliability Analysis
Chairman Co-Chair	Mr. Manoj Tilara, BARC Dr. Mahendra Prasad, BARC	Mr. Shibu Thomas, BARC Prof. P. K. Kankar IIT Indore	Mr. Vishnu Verma, BARC Dr. R. S. Rao, AERB	Prof. Vivek Kant, IIT Kanpur Mr. D. Chatterjee, NPCIL
16:15 – 16:30	ER-01: Degradation Assessment and Reliability Prediction of I&C Cable Insulation Materials (Santhosh)	FA-06: A Failure Mode Assessment Model using Evidential Reasoning in Neutrosophic Environment (Sunay P. Pai)	RS-01: Modeling & Validation of Hydrogen Deflagration in Computer Code for Severe Accident Analysis (Sanjeev Kr. Sharma)	HRA-06: Estimation of Operator Instability Probability during Flood Event (Mahendra Prasad)
16:30 – 16:45	ER-06: Defect-based Semiconductor Yield Model approach accommodating for Design and Process based factors. (Karthik Sankaran)	FA-07: FRACAS: An overview and practices in NPCIL (Anirban Roy)	RS-02: Safety assessment for development of severe accident management guidelines using in-house code 'corves' for kknpp vver-1000 reactors. (Aviral Chauhan)	HRA-07: Human factor assessment for ensuring core catcher performance during severe accident scenerios for vver-1000 reactors (Kumar Gaurav)

16:45 – 17:00	ER-07: Analysis and Performance Implications of Open Switch Fault on a Switched Reluctance Motor Utilizing Controller Topologies (Hiteshree Suresh Sakhare)	FA-08: Ageing studies for Electrical Motor Operated Ball Valves (MOVs) (A. K. Ahirwar)	RS-03: Experiences with KKNPP Hydrogen Recombiners (PreetiSaha Roy)	HRA-08: A Comparative Study Of Human Reliability Analysis using Technique for Human-Error Rate Predication And Accident Sequence Evaluation Program (K. J. Meenal)
17:00-17:15	ER-08: Availability estimation of 325 MHz, 20 kW solid state amplifier power system for accelerator (Shyam Sunder Jena)	FA-09: Failure Mode and Effect Analysis (FMEA) of Solar PV System (Rita Pimpalkara)	RS-04: Containment Safety Analysis for KKNPP Reactors (Vivek Singla)	HRA-09: Application of SPAR-H Based Bayesian Network Methodology to a Typical FBR Control Room Human Action (V. Bhuvana)
17:15-17:30	ER-09: Modeling and Performance Analysis of 175 KW Solar Photovoltaic Power Plant at Pimpri Chinchwad College of Engineering, Pune, India (Prמוד R. Sonawane)	FA-10: Reliability and Failure Analysis of HVAC Systems in Passenger Vehicles: Enhancing Design and Maintenance for Improved Performance (Anil Katte)	RS-05: Optimisation of turbulent time scale of surface boundary layer and analysis of impact on short-term mapping of airborne radionuclides for complex terrain using Ar-41 as tracer (R Jana)	HRA-10: Human Factors Analysis in Occupational Accident Prevention (Vyom Saxena)
17:30-17:45	ER10: A Gaussian Process-based approach for Remaining Useful Life Prediction of Aluminum Electrolytic Capacitors under combined voltage and temperature stress (Anindya Bhattacharyya)	FA-11: Performance Assessment on Thermally Aged EPDM Cable (Anurendra Singha)	RS-06: Safety assessment of severe accident management strategies for prevention of high pressure melt ejection scenarios in vver-1000 reactors (Manish Mehta)	HZ05: Job Hazard Identification and Risk Assessment of foundry processes for occupational safety using Risk matrix & Z-number based risk hybrid model (Sachin George)

Conference - Day 3: 24th February 2024

Keynote Sessions (KN 11 to 13)

Chairman	Dr. P. V. Varde, BARC, India		
Co-Chair	Mr. S. B. Chafle, AERB, India		
Time	ID	Speaker	Topic
9:30-10:10	KN11	Ms. Janaki Devi Kompella Managing Director of RELSAFE PRA Consulting, Thane, India	Advancements In Safety Assessment Methods And Techniques For Analysis Of Internal And External Hazards
10:10-10:50	KN12	Prof. Carol Smidts Professor, Mechanical and Aerospace Engineering, Scott Laboratory, Ohio, USA	The Development Of The Integrated System Failure Analysis And Its Applications
10:50-11:30	KN 13	Dr. Jezdimir Knezevic MIRCE Academy, UK	MIRCE Science: Solar Storm as a Mechanism of Motion of Autonomous Systems through MIRCE Space
11:30-12:00	Tea Break		
12:00-13:00	Oral Presentation Session (PS-6) SR RS RM HRA		
13:00-14:00	Lunch Break		

Conference - Day 3: 24th February 2024

Keynote Sessions (KN 14 to 15)

Chairman Co-Chair	Dr. Archana Sharma, BARC, India Ms. Janaki Devi Kompella, India		
Time	ID	Speaker	Topic
14:00-14:40	KN 14	Shri S. B. Chafle Executive Director Atomic Energy Regulatory Board	Regulation & Safety
14:40-15:20	KN 15	Shri. Sameer Hajela Executive Director (Reactor Safety & Analysis), Nuclear Power Corporation of India Limited, Mumbai	Integrated Approach to Nuclear Safety at NPCIL
15:20-16:20	Oral Presentation Session (PS-7) RS MISC MISC		
16:20-16:30	Tea Break		
16:30-17:30	Valedictory Function		
DISPERSE			

**Conference - Day 3: 24th February 2024: Parallel Sessions
PS-6**

Time	HALL 1	HALL 2	HALL 3	HALL 4
Chairman Co-Chair	Mr. P. Punekar, BARC Dr. L. K. Singh, NPCIL	Dr. Tej Singh, BARC Mr. Shantanu Pahari, NPCIL	Mr. P. Krishna Kumar, NPCIL Dr. Manojkumar, BARC	Dr. M. Hari Prasad, BARC Mr. VVReddy, NPCIL
12:00 – 12:15	ER 11: Design, and Development of In-core Neutron Proportional Counters (P.M. Dighe)	RS-07: Validation of System Thermal Hydraulics Neutronics Computer Code ATMIKA LWR for KKNPP Reactors (Hemant Kalra)	ST-09: Remaining Life Analysis (R.L.A.) of an RC chimney for an Uninterrupted Structural Performance (Dr. Sharvil Alex Faroz)	RM-04: Enhancement of Emergency Cooling water System Reliability of Research Reactor by Avoiding Common Cause Failure & Providing Redundancy (Mayank Agrawal)
12:15 – 12:30	SR-06: FiNDER: An Automatic Control System Without the Support of man to detect the Two Wheeler's Traffic Violation due to Helmet (Dr.P.Vaishnavi)	RS-08: Development of Perturbation Theory based model for Sensitivity and Uncertainty Analysis (Suhail Ahmad Khan)	ST-10: Assessment of Wind Forecasts from a Numerical Weather Prediction Model for Indian NPP Sites (Anup Yadav)	RM-06: Equipment Qualification Program under Accident Conditions for KAPP-3&4 Indian Pressurized Heavy Water Reactors (Nrependra Kumar)

12:30 – 12:45	SR-07: C2 and Phishing Domain Detection using DNS analysis (Neelam Singh)	RS-09: Sub-Channel Analysis of Fuel Assembly of KKNPP Reactor (R. K. Thakur)	RAMS-09: Identification of most important group of three components in a repairable multistate system (Chacko V M)	RM-07: Reliability analysis of HVAC system in passenger cars: a framework for component evaluation and durability (Siddharth D. Bandawane)
12:45 – 13:00	SR -08: Vague Set Based FTA and FMECA of Safety Instrumented System (Mahadev V. Verlekara)	RS-10: Linear Stability Analysis of IPWR (900 MWe) Equilibrium Core (Gopal Mapdar)	RAMS-10: Development of an Innovative Tool for Sensitivity Analysis of Water Quality using Multi-Criteria Decision Making Method TOPSIS. (Dr. Sangeeta Mishra)	RM-08: Reliability Analysis of Components of Heating, Ventilation and Air Conditioning System using various Probability Distributions. (Shreyas Kiran Upadhye)

PS-7

Time	HALL 1	HALL 2	HALL 3
	Artificial Intelligence	Reactor Safety	Reliability Methods
Chairman Co-Chair	Dr. S. R. Shimjith, BARC Dr. Santhosh, BARC	Mr. N. S. Bhamra, BARC Dr. S. Pradhan, AERB	Mr. Sachin Kumar, BARC
15:20 – 15:35	AI 09: Explainability of Artificial Intelligence in Digital Twin (Amit Patwardhan)	RS-11: Thermal hydraulic analysis of sub-channel blockage accident using RELAP5/MOD3.2 in a pool type Research Reactor (Amitanshu Mishra)	RM-09: Strategy for developing prior and likelihood functions to estimate the reliability of space systems using a Bayesian approach (Sagnik Dutta)
15:35 – 15:50	AI 10: Context-aware dynamic maintenance support planning using AI (Jaya Kumari)	RS-12: Implementation of Automatic Trip of Recirculation Pumps during ATWS Scenario to Strengthen the TAPS-1&2 Reactor Safety (Ritesh Raj)	RM-10: Failure Mode & Effect Analysis of Natural Circulation Valve for Nuclear Research Reactor (Nikhil Pandey)
15:50 – 16:05	AI 11: Development of Kalman Filter based Source Term Estimation Model (STEM) (R. Shrivastava)	RS-13: Thermal Analysis of Irradiated Reactor Components Storage Vault (Lokesh Lohani)	RM-11: Development of an Efficient Algorithms for Minimal Cut Set Generation in Risk Analysis (P. Deepak Raj)

16:05-16:20		RS-10: CFD studies for flow distribution inside reactor pressure vessel of PWR (Prabh S. Singh)	RM-12: Review and Case Study of Shutdown System of FBTR (Sthitapragyan Pattanayak)
16:20-16:30	Tea Break		
16:30-17:30	Valedictory Function		
DISPERSE			