



SCHEDULE

5th July, 2023

Time	08:00 AM - 09:00 AM	09:00 AM - 1:00 PM	01:00 PM - 02:00 PM	02:00 PM - 03:00 PM	03:00 PM - 04:30 PM	04:30 PM - 04:45 PM	04:45 PM - 06:15 PM	07:00 PM - 12:00 AM	
Venue	Auditorium	Senate Hall						Auditorium	
Sessions	Registration	Workshop – 2			Doctoral Symposium – 1	Tea Break	Doctoral Symposium – 2		
		Seminar Hall (Satish Dhawan Block)							
		Workshop – 1		Lunch		Workshop – 3			ADDVERB Hackathon
Workshop – 1	Design of Reconfigurable Robot using Smorphi (Dr. Prabakaran Veerajagadheswar, SUTD, Singapore)								
Workshop – 2	Rehabilitation Robotics and Assistive Technologies (Prof. Ashish Dutta, IIT Kanpur and Dr. Vineet Vashista, IIT Gandhinagar)								
Workshop – 3	Development of Robotic System using ROS and MATLAB (MATHWORKS)								

6th July, 2023

Time	08:00 AM - 09:00 AM	09:00 AM - 10:15 AM	10:15 AM - 11:00 AM	11:00 AM - 11:45 AM	11:45 AM - 1:00 PM	01:00 PM - 02:00 PM	02:00 PM - 02:45 PM	02:45 PM - 04:15 PM	04:15 PM - 04:30 PM	04:30 PM - 06:00 PM	07:00 PM - 12:00 AM
Venue	Auditorium										Auditorium
Sessions	Registration	Inauguration	Plenary Talk 1	High Tea	Technical Session – 1	Lunch	Keynote Address 1	Technical Session – 2	Tea Break	Technical Session – 3	ADDVERB Hackathon
Plenary Speaker	Prof. G.Chirikjian, NUS, Singapore										
Keynote Speaker	Prof. Dinesh Manocha, UMD, USA										

7th July, 2023

Time	08:00 AM - 09:00 AM	09:00 AM - 09:45 AM	09:45 AM - 11:00 AM	11:00 AM - 11:45 AM	11:45 AM - 1:00 PM	01:00 PM - 02:00 PM	02:00 PM - 02:45 PM	02:45 PM - 03:45 PM	03:45 PM - 04:00 PM	04:00 PM - 05:00 PM	05:00 PM - 06:00 PM	06:00 PM - 10:00 PM
Venue	Auditorium									Senate Hall		Hotel Grand Orchard
Sessions	Registration	Plenary Talk 2	Technical Session – 4	Tea Break Poster Session – 1	Technical Session – 5	Lunch	Keynote Address 2	Technical Session – 6	Tea Break	Panel Discussion	TRS GBM	Cultural Programme and Banquet Dinner
Plenary Speaker	Prof. Pietro Valdastrì, University of Leeds UK											
Keynote Speaker	Dr. N.C. Murmu, Director, CMERI, Durgapur											

8th July, 2023

Time	08:00 AM - 09:00 AM	09:00 AM - 09:45 AM	09:45 AM - 11:15 AM	11:15 AM - 12:15 AM	12:15 AM - 01:00 PM	01:00 PM - 02:00 PM	02:00 PM - 03:15 PM	03:15 PM - 04:00 PM	04:00 PM - 04:30 PM			
Venue	Session 7 & 9: Auditorium , Session 8(H) & 10(H): Senate Hall											
Sessions	Registration	Plenary Talk 3	Technical Session – 7	Technical Session – 8 (H)	Tea Break Poster Session – 2	Keynote Address 3	Lunch	Technical Session – 9	Technical Session – 10 (H)	Tea Break Poster Session – 3	Valedictory	
Plenary Speaker	Prof. Gursel Alici, UOW, Australia											
Keynote Speaker	Mr. Sangeet Kumar, Co-Founder and CEO, ADDVERB Technologies											

Sessions	Paper ID	Title	Authors
Poster Session – 1 (July 7, 11:00 – 11:45)	30	Joint Space Trajectory Controller for Modular Reconfigurable Manipulator	Shreyas M Patel, Ekta Singla, Ashish Singla
	55	Development of IoT-enabled Mobile Robotic System for Monitoring	Dr. Ravi Kant Jain
	58	Vibration suppression during trajectory tracking of a PRR manipulator	Sandeep Kumar, Subir Kumar Saha, Ashish Singla, Satinder Paul Singh, Tarun Kumar Bera
	62	Performance Characteristics of EMG Controlled Prosthetic Hand	Amlan Jyoti Kalita, Maibam Pooya Chanu, Nayan M. Kakoty Satyajit Borah, Ramana Vinjamuri
	85	Scientific Python (SciPy) Based Simulation and Control of Underactuated Robotic Systems	Harsimran Singh Mavi, Rajnish Dr Mallick, Ashish Singla
	115	Evaluation of deviations due to robot configuration for robot-based incremental sheet metal forming	Eldho Paul, Sahil Bharti, Anandu U, Riby Abraham Boby, Hariharan K, Alexandr Klimchik
	124	Redundantly Actuated Hybrid Kinematic setup for high Manipulability	Harsh Ajay Rana, Sajan Kapil
	128	Manoeuvring control of the snake robot using multi-variable super twisting sliding mode control in the uncertain underwater environment	Bhavik M. Patel, Santosha K Dwivedy
	129	Intermittent Control: Stability and performance analysis of intermittent threshold functions for unstable systems	Aishwarya V Rao, Harish Palanthandalam-Madapusi
	130	Deep-Feature-Based Visual Odometry for Autonomous Emergency Parking	Shrutheesh Raman Iyer, Varghese P Kuruvilla, Raghu Krishnapuram, Panini Bhamidipati
	137	Vibration Model of Slender Single Link Flexible Robotic Manipulator based on Timoshenko Beam Theory with Interval Uncertainty	Priya Rao
	142	A Novel Approach for Combining Feedback and Feedforward Control in DC Motor Control: A Smooth Switching Strategy for Time-Varying Systems with Noisy Feedback	Shubhankar Riswadkar, SHAIL V JADAV, Harish Palanthandalam-Madapusi
	147	Robotic tool-path generation for complex and overhang-angled parts through offline programming	Sumitkumar Rathor, Shiva Kumar, Ekta Singla, Ravi Kant, Chandrakant K Nirala
	154	A Study on Reinforcement Learning based Control of Quadcopter with a Cable-suspended Payload	Pratik Prajapati, Atul Patidar, Vineet Vashista
165	Trajectory Tracking by Quadcopter using MPC in Presence of Obstacles and External Disturbances	Abhinav Kumar, Shreyash Gupta, Somil Maheshwari, Suril V Shah, Niladri Sekhar Tripathy	

Sessions	Paper ID	Title	Authors
Poster Session – 2 (July 8, 11:15 – 12:15)	16	A privacy-preserved blockchain for vehicles in smart societies	NARENDRA K DEWANGAN, Preeti Chandrakar
	23	Soft Soil Gait Planning and Control for Biped Robot using Deep Deterministic Policy Gradient Approach	Gaurav Bhardwaj ,Soham Dasgupta, Nagarajan Sukavanam, Balasubramanian Raman
	50	Fabrication and characterization of wearable sensing system using mechanical micromachining process.	Akshay Saxena, Partha Sarathi Mallick, Karali Patra
	69	Optimum Design of a Compliant Foot for a Quadruped	Pramod Pal, Anubhab Dasgupta, Shishir N Y Kolathaya, Ashitava Ghosal
	92	Dynamic Modeling and Locomotion Control of Reconfigurable Robot Smorphi	Ashish Prakash, Gagan Deep Meena, Abdullah Dr. Hayat
	99	Markerless Gait Characterization Using Single Video Camera Setup	Arushi Khokhar, Yogesh Singh, Vineet Vashista
	101	Spatio -Temporal Feature Extraction: An Approach to Recognize Natural Human Activities in Assistive Robotic Applications.	Mukil Saravanan, Darren Alton Dsouza, Abhra Roy Chowdhury
	122	Development of Smart Tongue using Ionic Polymer Metal Composite for Robotic Applications	Suman Das
	135	Upper Limb Musculoskeletal Stiffness Analysis during Planar Motions as a Cable-Driven Serial Chain Manipulator	Randheer Singh, Nakka Surya Satya Sanjeevi, Vineet Vashista
	145	Modal analysis of the Stewart platform manipulator: experimentation and Finite element modelling	Ashwath Ram Suryanarayanan, ANIRBAN NAG, Subir Kumar Saha, Sandeep Kumar
	160	Object Stiffness Discrimination from Fingertip Forces	Abhijit Dey, Shyamanta Hazarika
161	Real-Time Surface EMG-based Recognition of Finger Movements	Nilavjyoti Sarmah, Prapti Bordoloi, Shyamanta Hazarika	

Sessions	Paper ID	Title	Authors
Poster Session – 3 (July 8, 15:15 – 16:00)	14	Motion Planning using Reinforcement Learning for Serial Manipulators	Vedant V Chakravadhanula, Tejal Agarwal, Shyamanta Hazarika
	34	Swarm-based exploration in unknown environments: A case study	Siddhant Panigrahi, Sivasankar Ganesan, Poongavanam Palani, Pramod Jadhav, Aditya Kuncolienkar, Asokan Thondiyath
	42	Trajectory planning and simulation of a custom mobile manipulator for door opening tasks using ROS	Shifa Sulaiman, Amarnath H, Artem Apurin, Edgar Martinez-Garcia, Dr.Evgeni Magid
	46	Real-Time Serviceable Path Planning using UAVs for Waterborne Vehicle Navigation during Floods	Armaan Garg, Dr. Shashi Shekhar Jha
	64	A Distributed Algorithmic Approach for Simultaneous Localization and Mapping With Acoustic Sensors	Yuvaraj George, Abhishek Sarkar
	79	Investigating the Efficacy of a ROS-Plugin Based RRT Path Planner: An Empirical Parametric Analysis and Recovery Behavior Study	Atharva Anil Patwe, ANIRBAN NAG
	110	3D localization of objects of daily living activities for rehabilitation applications	Abhinav Sudhakar, ANIRBAN CHOWDHURY
	146	A Lightweight Deep Learning-based Weapon Detection Model for Mobile Robots	Rajeshwar Yadav
	159	A Neural Network assisted hybrid control scheme for a custom fabricated Pneumatic Artificial Muscle driven robotic joint	Debadrata Sarkar, Sagnik Chakraborty, Chandan Har, Soumen Sen, Aman Arora
	162	A Mobile-Agent-based Swarm Reinforcement Learning in a Heterogeneous Robotic Network	Gayathri Rangu, Shivashankar B. Nair
	168	Autonomous Mobile Robot Base: Cost effective solution for research and education applications	Swapnil M Inamdar, Faizaan G Sayyad, Piyush S Salunke, Dr. M. T. Kolte, Siddharth V Shrotri, Atharva R Bhorpe
	174	Assembling of Swarm Robots in Distributed Environment in the Presence of Polygonal Obstacles	BANASHREE MANDAL, Madhumita Sardar, Deepanwita Das
180	Machine learning algorithm-based prediction of machined surface quality in end milling operation	Jay Airao , Abhishek Gupta, Gaurav Saraf , Chandrakant K Nirala	