



National Institute of Technology Silchar, Assam, India
SOCCER 2020, 3rd - 4th October, 2020

Complete Program Schedule with Links: All time are in IST (GMT + 5.30 Hrs.)

SI No	Date	Time	Event	YouTube Link
Day 1: 3rd October, 2020				
1	03.10.2020	10.30-11.00	Inauguration Ceremony	
2	03.10.2020	11.00 – 12.00	<i>Plenary Talk 1</i> <i>Prof. Dong-il Dan Cho, Seoul National University, South Korea.</i> <i>Topic: Biomimetic Robots: Current Status and Future Directions</i>	https://www.youtube.com/watch?
3	03.10.2020	12.05 – 14.05	Parallel Technical Presentation 1	
4	03.10.2020	12.05 – 14.05	Parallel Technical Presentation 2	https://www.youtube.com/watch?
5	03.10.2020	15.30 – 16.30	<i>Plenary Talk 2</i> <i>Prof. Jason Gu, Dalhousie University, Canada</i> <i>Topic: Teleoperation Related Research at Robotics Lab for Biomedical Rehabilitation and Assistive Technologies (ROL-BRAT)</i>	https://www.youtube.com/watch?
6	03.10.2020	16.40 – 18.40	Parallel Technical Presentation 3	

7	03.10.2020	16.40 – 18.40	Parallel Technical Presentation 4	https://www.youtube.com/watch?
Day 2: 4th October, 2020				
8	04.10.2020	09.30 - 10.30	<p style="text-align: center;"><i>Plenary Talk 3</i></p> <p style="text-align: center;"><i>Prof. Shyamanta Moni Hazarika, IIT Guwahati, India.</i></p> <p style="text-align: center;"><i>Topic: High Level Control Strategies in Neurorehabilitation</i></p>	https://www.youtube.com/watch?
9	04.10.2020	10.45 – 12.45	Parallel Technical Presentation 5	
10	04.10.2020	10.45 – 12.45	Parallel Technical Presentation 6	https://www.youtube.com/watch?
11	04.10.2020	14.00 – 15.00	<p style="text-align: center;"><i>Plenary Talk 4</i></p> <p style="text-align: center;"><i>Prof. Bijnan Bandyopadhyay, IIT Bombay, India</i></p> <p style="text-align: center;"><i>Topic: Terminal sliding Mode Control and its Discretization</i></p>	https://www.youtube.com/watch?
12	04.10.2020	15.30 – 17.30	Parallel Technical Presentation 7	
13	04.10.2020	17.30 – 18.00	Valedictory	

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Detailed Technical Events Schedule: Day 1, 03rd October 2020

Plenary Talk 1				
Day 1: 03rd October 2020				
Time: 11.00 - 12.00				
Speaker	Title of the talk	Affiliation	Link	Session Chair
Prof. Dang-il Dan Cho	Biomimetic Robots: Current Status and Future Directions	Seoul National University, South Korea	YouTube: https://www.youtube.com/watch?	Chair: Prof. B.K. Roy, NIT Silchar Co-Chair: Dr. Rajkumar Biswas

Technical Session: 1		Chair: Dr. Sohom Chakrabarty, IIT Roorkee		
Track: Control Theory		Co-Chair: Dr. P. Roy, Dr. Avadh Pati		
Time: 12.05 - 14.05				
Paper ID	Title of the paper	Author(s)	Presenter	Link
10	CONTROL OF TITO PROCESS USING INTERNAL MODEL CONTROL TECHNIQUE	Gaurav Kumar, Shashi Minz and Atul Sharma		YouTube: https://www.youtube.com/watch?
18	Event-triggered integral sliding mode control for an uncertain Euler-Lagrange system with actuator saturation	Manas Kumar Bera, Krishanu Nath and Asifa Yesmin	Krishanu Nath	
76	Performance Evaluation of Adaptive Dither Control Frameworks for Non linear Piezo Actuator	Sandip Jana, Dr. Saikat Kumar Shome, Dr. Arpita Mukherjee and Dr. Partha Bhattacharjee	Sandip Jana	
77	Comparative Performance Study of Different Controllers for Non -linear Piezo Electric Stack Actuator	Sandip Jana, Dr. Saikat Kumar Shome, Dr. Arpita Mukherjee and Dr. Partha Bhattacharjee	Sandip Jana	

Technical Session 2		Chair: Dr. Rahul Radhakrishnan, SVNIT Surat		
Track: Computation paradigms for robotics - 1		Co-Chair: Dr. Koena Mukherjee, Dr. Sudipta Chakraborty		
Time: 12.05 – 14.05				
Paper ID	Title of the paper	Author(s)	Presenter	Link
32	Nonlinear State Estimation using Adaptive Cubature Kalman filter with one-step randomly delayed measurements	Poluri Sri Mannarayana and Aritro Dey		YouTube: https://www.youtube.com/watch?
36	Extended Kalman Filter based Attitude Estimation using Magnetometer and Sun Sensor Aided MEMS Gyros	Jiljo K Moncy and Kesavabrahmaji Karuturi	Jiljo K Moncy	
42	Characterisation of Multi-sensor 6D Pose Determination System for Underslung Winged Body	Sai Nitish K L N, Jiljo K Moncy, Dinesh Kumar M, Karthik Bilandiran, Basker V T and Padma Kumar E S	K L N Sai Nitish	
57	Performance Comparison of EKF and UKF for Offshore Boom Crane System	Manash Jyoti Deori, Nabanita Adhikary and Krishna Jyothi Pallacherla	Krishna Jyothi Pallacherla	

Plenary Talk 2				
Day 1: 03rd October 2020				
Time: 15.30 – 16.30				
Speaker	Title of the talk	Affiliation	Link	Session Chair
Prof. Jason Gu	Teleoperation Related Research at Robotics Lab for Biomedical Rehabilitation and Assistive Technologies (ROL-BRAT)	Dalhousie University, Canada	YouTube: https://www.youtube.com/watch?	Chair: Prof. Bidyadhar Subudhi, IIT Goa Co-Chair: Dr. Rajeeb Dey

Technical Session 3		Chair: Dr. Sandip Ghosh, IIT BHU		
Track: Control Application in Robotics -1		Co-Chair: Dr. Manas Bera, Dr. Vipin Ch. Pal		
Time: 16.40 – 18.40				
Paper ID	Title of the paper	Author(s)	Presenter	Link
31	Backstepping based nonlinear control of underactuated 2-DoF Gyroscope for robust performance analysis	Manish Patel and Bhanu Pratap	Manish Patel	YouTube: https://www.youtube.com/watch?
58	Adaptive Backstepping Based Non-singular Finite Time Sliding Mode Controller for Suspension of Maglev Platforms	Nabanita Adhikary and Jobin Mathew	Nabanita Adhikary	
59	Adaptive Robust Control of Tele-Operated Master-Slave Manipulators with Communication Delay	Nabanita Adhikary, Rajeeb Dey, Muhammad Usman Asad, Jason Gu, Umar Farooq and Rupak Dutta	Nabanita Adhikary	
74	Performance Comparison Between Higher Order Sliding Mode and Fixed boundary layer Sliding Mode Controller for a 10-DoF Bipedal Robot	Koceila Cherfouh, Jason Gu, Umar Farooq, Rajeeb Dey, Nabanita Adhikary, Rupak Datta and Muhammad Asad	Koceila Cherfouh	

Technical Session: 4		Chair: Prof. Saurav Choudhury, NIT Silchar		
Track: Innovations in robotic systems		Co-Chair: Dr. Tapan Pradhan, Dr. Asha Rani M.A		
Time: 16.40 – 18.40				
Paper ID	Title of the paper	Author(s)	Presenter	Link
54	Launch Vehicle Auto-Pilot Design using H-infinity Control Technique	Vaishnavi Chintapalli and Madhav Dhekane	CH Vaisnavi	YouTube: https://www.youtube.com/watch?
25	Design and development of the pineapple harvesting robotic gripper	Shemphang Marwein, Francis Kurbah, Teiborlin Marngar and Bikash Kumar Sarkar	Bikash Kumar Sarkar	
40	Three Axis Wireless Gesture Controlled Car	Naiwrita Dey, Tridib Dey, Rishav Chakraborty, Sibam Jana and Abul Hassan	Tridib Dey	
75	Survey on Internet of Things Based Intelligent Wireless Sensor Network for Fire Detection System in Building	Dr. Arpita Mukherjee, Dr. Saikat Kumar Shome and Dr. Partha Bhattacharjee	Dr. Saikat Kumar Shome	

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Detailed Technical Events Schedule: Day 2, 04th October 2020

Plenary Talk 3 Day 2: 04 th October 2020				
Time: 09.30 – 10.30				
Speaker	Title of the talk	Affiliation	Google meet Link	Session Chair
Prof. S.M Hazarika	High Level Control Strategies in Neurorehabilitation	IIT Guwahati	YouTube: https://www.youtube.com/watch?	Chair: Dr. Sandip Ghosh Co-Chair: Dr. Nabanita Adhikary, Dr. Asha Rani M.A
Technical Session 5 Track: Computation paradigms for robotics - 2		Chair: Dr. Abhinoy K Singh, IIT Indore Co-Chair: Dr. Lalu Seban, Dr. Munmum Khanra		
Time: 10.45 – 12.45				
Paper ID	Title of the paper	Author(s)	Presenter	Google Meet Link
66	Three Dimensional Bearings-only Target Tracking: Comparison of Few Sigma Point Kalman Filters	Asfia Urooj, Rahul Radhakrishnan and Sn Sharma		YouTube: https://www.youtube.com/watch?
45	Adaptive Gaussian sum quadrature filters for intercepting a Aballistic target on reentry using seeker measurements	Rahul Radhakrishnan, Manika Saha, Shovan Bhaumik and Nutan Kumar Tomar	Rahul Radhakrishnan	
51	Performance Analysis of Speech Command Recognition using Support Vector Machine Classifiers	M.Venkata Subbarao, Akhendra Kumar Padavala and Durga Harika Kudupudi	Kudupudi Durga Harika	
78	AKIRA – A voice based Virtual Assistant with authentication	Vishnu Sai Bhonsle, Sailaja Thota and Surekha Thota	Vishnu Sai	

Technical Session 6 Track: Electric vehicles/ compact and efficient power infrastructure for robotic system			Chair: Prof. Nalin Bihari Dev Choudhury, NIT Silchar Co-Chair: Dr. Sreejith S, Dr. Amrithesh Kumar	
Time: 10.45 – 12.45				
Paper ID	Title of the paper	Author(s)	Presenter	Link
72	Parameter Extraction of Dye-Sensitized Solar Cell: Improved method and comparative analysis	Soumik Chakraborty, Ranjith G. Nair and Lalu Seban	Soumik Chakraborty	YouTube: https://www.youtube.com/watch?
3	Design of Electric Vehicle for Optimal Energy Consumption	Hamad Khalid Baig, Cherry Singh and Adeeb Khan		
49	Role of BMS in sustainable transportation	Sagar B S	SAGAR B S	
60	A Fundamental Study on Electric Vehicle Model for Longitudinal Control	Indu K and Aswatha Kumar M.	INDU K.	
70	Supercapacitor Based Automated Fast Charging System for Electric Vehicles	Saswati Pattnaik, Mano Ranjan Kumar and Sunil Kumar Mishra	Saswati Pattnaik	
73	Different Control Mechanisms of a PMSM Drive for Electrified Transportation-A Survey	Chiranjit Sain, Atanu Banerjee, Pabitra Kumar Biswas and Thanikanti Sudhakar Babu	Dr. Chiranjit Sain	
82	Direct Torque Control of BOOST-VSI Fed Induction Motor using SVPWM-PAM Technique	Sudharani Potturi and Dr. Rajashekar P Mandi	SUDHARANI POTTURI	

Plenary Talk 4 Day 2: 04th October 2020				
Time: 14.00 – 15.00				
Speaker	Title of the talk	Affiliation	Link	Session Chair
Prof. Bijnan Bandyopadhyay	Terminal sliding Mode Control and its Discretization	IIT Bombay	YouTube: https://www.youtube.com/watch?	Chair: Dr. Shyam Kamal, IIT BHU Co-Chair: Dr. Manas Bera

Technical Session 7		Chair: Prof. B. K. Roy, NIT Silchar		
Track: Control Application in Robotics -2		Co-Chair: Dr. Prasanta Roy, Dr. Koena Mukherjee		
Time: 15.30 – 17.30				
Paper ID	Title of the paper	Author(s)	Presenter	Link
17	PID Controller Design for Reference Tracking of Single Link Manipulator using Python	Sayan Das and Naiwrita Dey	SAYAN DAS	YouTube: https://www.youtube.com/watch?
21	Adaptive Backstepping Control of Multiple Mobile Robots under Limited Communication; An Event-triggered Approach	Sami Al Issa and Indrani Kar	Sami Al Issa	
22	A Multi-Master Single-Slave Teleoperation System through Composite State Convergence	Muhammad Usman Asad, Jason Gu, Umar Farooq, Rajeeb Dey and Nabanita Adhikary	Muhammad Usman Asad	
29	Design of robust controller for enhanced performance of 2-DOF torsion system	Priyam Rai and Bhanu Pratap	Priyam Rai	

Convener

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