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Volume 1 of 2

Editor:

Laxmidhar Beyhera

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Content List of Third International Conference on Advances in Control and Optimization of Dynamical Systems

VOLUME 1

Technical Program for Thursday March 13, 2014

ThaT1	Seminar Hall I
Advances in Guidance, Navigation and Control of Aerospace Systems (Regular Session)	
Chair: Bhat, M Seetharama	Indian Inst. of Science
Co-Chair: Raha, Soumyendu	Indian Inst. of Science

11:30-11:50	ThaT1.1

Gimbal Angle Constrained PN Guidance Law, pp. 1-6.

Das, Ranajit	DRDO

11:50-12:10	ThaT1.2

Hybrid Guidance Algorithm Using Flatness and Dynamic Inversion for RLV, pp. 7-13.

Babu, Reshma Susan	Coll. of Engineering, Trivandrum
U.P, Rajeev	Vikram Sarabhai Space Centre
Kumari, Letha	Univ.

12:10-12:30	ThaT1.3

Geometrical Guidance Algorithm for Soft Landing on Lunar Surface, pp. 14-19.

M P, Rijesh	ISRO SATELLITE CENTRE
George, Sijo	MANIPAL Univ.
N K, Philip	ISRO Satellite Centre, Bangalore
P, Natarajan	ISRO SATELLITE CENTRE

12:30-12:50	ThaT1.4

Least Square Estimation of Spacecraft Attitude Along with Star Camera Parameters (I), pp. 20-25.

Pal, Madhumita	Indian Inst. of Science, Bangalore
Bhat, M Seetharama	Indian Inst. of Science

12:50-13:10	ThaT1.5

Evaluation of a Novel Attitude Estimation Algorithm for a High Performance Fighter Aircraft, pp. 26-33.

Kukillaya, Raghavendra	National Aerospace Lab.
C, Kamali	National Aerospace Lab.
Saraf, Amitabh	Aeronautical Develoment Agency
S, Suganya	National Aerospace Lab.

13:10-13:30	ThaT1.6

Retro-PN Based Simultaneous Salvo Attack against Higher Speed Nonmaneuvering Targets, pp. 34-40.

Ghosh, Satadal	Indian Inst. of Science
Ghose, Debasish	Indian Inst. of Science
Raha, Soumyendu	Indian Inst. of Science

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Chair: Padhi, Radhakant	Indian Inst. of Science

11:30-11:50	ThaT2.1

Computationally Efficient Suboptimal Control Design for Impulsive Systems Based on Model Predictive Static Programming, pp. 41-46.

Sakode, Chandrashekhar	Indian Inst. of Science, Bangalore
Padhi, Radhakant	Indian Inst. of Science

11:50-12:10	ThaT2.2

Development of Frequency-Dependent Optimal Control in Independent Modal Space (I), pp. 47-54.

Chakraborty, Sanjukta	PhD student, IIT Kanpur
Ray Chaudhuri, Samit	Assistant Professor, IIT Kanpur

12:10-12:30	ThaT2.3

Comparison of Two Methods of Incorporating an Integral Action in Linear Quadratic Regulator, pp. 55-61.

Malkapure, Hanmant	Indian Inst. of Tech. madras
Manickam, Chidambaram	Indian Inst. of Tech. Madras

12:30-12:50	ThaT2.4

A Novel Characterization of Solutions of ARE, pp. 62-67.

Dilip, Sanand	Indian Inst. of Tech. (IIT), Bombay

Pillai, Harish	Indian Inst. of Tech. Bombay

12:50-13:10	ThaT2.5

Trajectory Optimization and Control of Reentry Vehicle, pp. 68-74.

Kadam, Sudin	Indian Inst. of Tech. Bombay
Hablani, Hari B.	Indian Inst. of Tech. Bombay

13:10-13:30	ThaT2.6

Optimal Control for a Vibrating String with Variable Axial Load and Damping Gain, pp. 75-81.

Sonawane, Ramdas	KAANMS Arts, Comm. and Science Coll. Satana, Dist. - Nashik
Kumar, Anil	Birla Inst. of Tech. & Science, Pilani-K K Birla Goa Ca
Nimse, S.B.	Univ. of Lucknow

ThaT3	Hall of Fame
Robotics and Control Part 1 (Regular Session)	
Chair: Kurode, Shailaja	I.I.T. Bombay
Co-Chair: Kumar, Swagat	Tata Consultancy Services

11:30-11:50	ThaT3.1

Towards Optimal Computation of Energy Optimal Trajectory for Mobile Robots, pp. 82-87.

Chaudhari, Manas	Indian Inst. of Tech. Bombay
Vachhani, Leena	Indian Inst. of Tech. Bombay
Banerjee, Rangan	Indian Inst. of Tech. Bombay

11:50-12:10	ThaT3.2

r and S Shaped Logistic Curves for Path Planning with Obstacle Avoidance, pp. 88-94.

Upadhyay, Saurabh	indian Inst. of science, bangalore
Ratnoo, Ashwini	Indian Inst. of Science

12:10-12:30	ThaT3.3

Control of Two Link Flexible Manipulator Using Higher Order Sliding Modes, pp. 95-102.

Mujumdar, Amruta	Coll. of Engineering, Pune
Kurode, Shailaja	Coll. of Engineering, Shivajinagar, Pune INDIA
Tamhane, Bhagyashri	Coll. of Engineering, Pune

12:30-12:50	ThaT3.4

Lyapunov Function Based Steering Law for Generalized Voronoi Diagram (GVD) Construction by a Mobile Robot, pp. 103-108.

G K, Arunkumar	Indian Inst. of Tech. Bombay
Sukumar, Srikant	IIT Bombay
Vachhani, Leena	Indian Inst. of Tech. Bombay

12:50-13:10	ThaT3.5

Manipulator Control Using Human Arm Imitation, pp. 109-114.

Agarwal, Bakul	Indian Inst. of Tech. Kanpur
Varshney, Ayush	Indian Inst. of Tech. Kanpur
Behera, Laxmidhar	Indian Inst. of Tech. Kanpur

13:10-13:30	ThaT3.6

Variable Gain Super Twisting Controller for the Position Stabilization of Stewart Platform, pp. 115-121.

P, Ramesh Kumar	IIT Bombay
Bandyopadhyay, Bijnan	IIT Bombay

ThaT4	Auditorium
Intelligent Systems and Control: Part I (Regular Session)	
Chair: Bosukonda, Murali Mohan	Indian Inst. of Tech. Kharagpur
Co-Chair: Deb, Alok Kanti	IIT Kharagpur

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Musmade, Lalit	Indian Inst. of Tech. Chennai
Manickam, Chidambaram	Indian Inst. of Tech. Madras

11:50-12:10	ThaT4.2

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Rangasamy, Kotteeswaran	St.Joseph's Coll. of Engineering
Lingappan, Sivakumar	SRI KRISHNA Coll. OF ENGINEERING AND Tech.

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Joshi, Girish	Indian Inst. of Science Bangalore
Padhi, Radhakant	Indian Inst. of Science

12:30-12:50	ThaT4.4

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K, Sundareswaran	National Inst. of Tech.
Kuruvinashetti, Kiran	National Inst. of Tech.
B, Hariprasad	National Inst. of Tech.
Peddapati, Sankar	National Inst. of Tech.
Nayak, P. Srinivasa Rao	National Inst. of Tech.
V, Vigneshkumar	National Inst. of Tech.

12:50-13:10	ThaT4.5

Effect of Static Synchronous Series Compensator (SSSC) for Damping Oscillations in Automatic Generation Control with Cuckoo Search Optimised Integral Double Derivative Controller, pp. 147-154.

Sarangthem,singh, Sanajaoba	NATIONAL Inst. OF Tech. SILCHAR, ASSAM

13:10-13:30	ThaT4.6

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Shukla, Anupam	Atal Bihari Vajpayee Indian Inst. of Information Tech.

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Robust Control (Regular Session)	

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Robust Predictive Control of Electro-Mechanical Servo System, pp. 159-164.

Panchal, Bhavnesh	Defence Inst. of Advanced Tech. Girinagar, Pune-411 02
Kolhe, Jaywant	R&DE (E)
Parlikar, Venkatesh	R&DE(E)
Talole, Sanjay	Defence Inst. of Advanced Tech. Girinagar, Pune-411 02

11:50-12:10	ThaT5.2

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Thomas, Jean	Beni Sueif Univ.

12:10-12:30	ThaT5.3

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Jee, Gopal	Vikram Sarabhai Space Centre
Yalagach, Akash	VSSC, ISRO
Brinda, V.	Indian Space Res. Organisation
Vr, Lalithambika	ISRO
Mv, Dhekane	ISRO

12:30-12:50	ThaT5.4

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Sarkar, Chaity	Phd Scholar
Sengupta, Aparajita	Associate Professor

12:50-13:10	ThaT5.5

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Chowdary, Nagineni Varun	Madras Inst. of Tech. Chennai
Manickam, Chidambaram	Indian Inst. of Tech. Madras

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A Novel Method on Disturbance Rejection PID Controller for Quadcopter Based on Optimisation Algorithm, pp. 192-199.

M.P.V, Sahul	Indian Inst. of Space Science and Tech.
Chander, Naveen	Indian Space Res. Organization
Kurian, Thomas	Indian Inst. of Space science and Tech.

ThbT1	Seminar Hall I
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Sharma, Ritesh kumar	IIT Bombay
Hablani, Hari B.	Indian Inst. of Tech. Bombay

14:50-15:10	ThbT1.2

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Jee, Gopal	Vikram Sarabhai Space Centre
Brinda, V.	Indian Space Res. Organisation
Vr, Lalithambika	ISRO
Mv, Dhekane	ISRO

15:10-15:30	ThbT1.3

Autopilot Design for Flexible Tactical Aerospace Vehicle Using Parameter Plane Technique, pp. 211-218.

Kedarisetty, Siddhardha	BIT MESRA
Narayanan, Vignesh	NIT Kurukshetra
Halder, Pulak	Res. Centre Imarat

15:30-15:50	ThbT1.4

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Sharan, Sukrit	International Inst. for Advanced Aerospace Tech. Sta
Nebylov, Alexander	International Inst. for Advanced Aerospace Tech. Sta

15:50-16:10	ThbT1.5

Nonlinear Autopilot Design and Guidance Validation for Tactical Engagement, pp. 226-233.

Padhi, Radhakant	Indian Inst. of Science
Chikkala Venkata Sirisha, Sirisha	DRDL, DRDO
Sarkar, A K	Scientist, Directorate of Systems, DRDL, Hyderabad-500058

16:10-16:30	ThbT1.6

Air-To-Air Tracking Performance with Inertial Navigation and Gimballed Radar: A Kinematic Scenario, pp. 234-241.

Saini, Vinod	Indian Inst. of Tech. Bombay
Hablani, Hari B.	Indian Inst. of Tech. Bombay

ThbT2	Seminar Hall II
Control , Navigation and Communication of Space Vehicles (Invited Session)	
Chair: Kumar, Vinod	Indian Space Res. Organization, Bangalore

14:30-14:50	ThbT2.1

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Kumar, Vinod	Indian Space Res. Organization, Bangalore
Hablani, Hari B.	Indian Inst. of Tech. Bombay
Pandiyan, Ramalingam	Indian Space Res. Organisation, Bangalore

14:50-15:10	ThbT2.2

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Kakula, Ashok Kumar	ISRO SATELLITE CENTRE,BANGALORE-560017
Khoral, Jasvinder Singh	ISRO Satellite Center
P, Natarajan	ISRO SATELLITE CENTRE
M P, Rijesh	ISRO SATELLITE CENTRE
Agarwal, Payal	ISRO Satellite Centre
Maini, Smiti	ISRO Satellite Centre

15:10-15:30	ThbT2.3

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Halder, Atanu	INDIAN Inst. OF Tech. KHARAGPUR
Giri, Dipak Kumar	Indian Inst. of Tech. Kharagpur
Sinha, Manoranjan	IITKGP

15:30-15:50	ThbT2.4

Rigid Spacecraft Attitude Tracking Using Finite Time Sliding Mode Control, pp. 263-270.

Tiwari, Pyare Mohan	AMITY Univ.
Janardhanan, S	IIT Delhi
Nabi, Mashuq-un-	Indian Inst. of Tech.

15:50-16:10	ThbT2.5

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Narayanan, Vignesh	NIT Kurukshetra
Swarup, Akhilesh	National Inst. of Tech. Kurukshetra
Halder, Pulak	Res. Centre Imarat

16:10-16:30	ThbT2.6

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Chatterjee, Saurabh	Indian Inst. of Tech. Bombay
Hablani, Hari B.	Indian Inst. of Tech. Bombay

ThbT3	Hall of Fame

Chaotic and Stochastic Systems and Control (Regular Session)

Chair: Deo, Brahma	IIT Kanpur
Co-Chair: Ayyagari, Ramakalyan	National Inst. of Tech. Tiruchirappalli

14:30-14:50	ThbT3.1

Nonlinear Active Control Based Hybrid Synchronization between Hyperchaotic and Chaotic Systems, pp. 287-291.

Singh, Piyush Pratap	NATIONAL Inst. OF Tech. SILCHAR
Singh, Jay Prakash	NATIONAL Inst. OF Tech. SILCHAR
Roy, Binoy Krishna	National Inst. of Tech. Silchar

14:50-15:10	ThbT3.2

Hybrid Synchronization of Lu and Bhalekar-Gejji Chaotic Systems Using Nonlinear Active Control, pp. 292-296.

Singh, Jay Prakash	NATIONAL Inst. OF Tech. SILCHAR
Singh, Piyush Pratap	NATIONAL Inst. OF Tech. SILCHAR
Roy, Binoy Krishna	National Inst. of Tech. Silchar

15:10-15:30	ThbT3.3

Mass and Length Dependent Chaotic Behavior of a Double Pendulum, pp. 297-301.

Gupta, Mukul Kumar	Univ. of petroleum and energy studies dehradun, VNIT Nagpur
Bansal, Kamal	Univ. of petroleum and energy studies dehradun
Singh, Arun Kumar	vnit nagpur

15:30-15:50	ThbT3.4

Sensitivity Analysis of Oscillatory Circuits, pp. 302-305.

Bokka, Venkat	Indian Inst. of Tech. Delhi
Sen, Shaunak	Indian Inst. of Tech. Delhi

15:50-16:10	ThbT3.5

Controllability of Semilinear Stochastic System with Multiple Delays in Control, pp. 306-312.

Shukla, Anurag	IIT Roorkee
Sukavanum, Nagrajan	IIT Roorkee
Pandey, D. N.	IIT Roorkee

16:10-16:30	ThbT3.6

A Brief Survey of Stochastic Resonance and Its Application to Control, pp. 313-320.

Monsingh, Jerome Moses	National Inst. of Tech. Tiruchirappalli
Ayyagari, Ramakalyan	National Inst. of Tech. Tiruchirappalli

ThbT4	Auditorium

Advances in Estimation Techniques (Regular Session)

Co-Chair: Kurode, Shailaja	I.I.T. Bombay

14:30-14:50	ThbT4.1

SURF-Based Human Tracking Algorithm with On-Line Update of Object Model, pp. 321-325.

Gupta, Meenakshi	IIT Kanpur
Kejriwal, Nishant	ILab Noida
Behera, Laxmidhar	Indian Inst. of Tech. Kanpur
Subramanian, Venkatesh K.	IIT Kanpur

14:50-15:10	ThbT4.2

Fault Detection and Isolation Using an Adaptive Unscented Kalman Filter, pp. 326-332.

Das, Manasi	Jadavpur Univ.
Sadhu, Smita	Jadavpur Univ. Kolkata
Ghoshal, T.K.	Jadavpur Univ.

15:10-15:30	ThbT4.3

Comparison of Cartesian and Polar Estimates of the EKF for Different Choices of the Robustness and Sensitivity Metrics, pp. 333-339.

Roy, Sourya	Jadavpur Univ.
Ghosh, Ratna	Jadavpur Univ.
Goswami, Bhaswati	Jadavpur Univ.

15:30-15:50	ThbT4.4

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Gurram, Murali Krishna	RCI, DRDO
G, Satheesh Reddy	DRDO
Muthukrishnan, Kannan	RCI, DRDO
Vadloori, Vidyakrishna	RCI, DRDO

15:50-16:10	ThbT4.5

State and Disturbance Estimation Using Higher Order Sliding Modes for Seeker System, pp. 348-354.

Tamhane, Bhagyashri	Coll. of Engineering, Pune
Kurode, Shailaja	Coll. of Engineering, Shivajinagar, Pune INDIA
Mujumdar, Amruta	Coll. of Engineering, Pune

16:10-16:30	ThbT4.6

Gaussian Sum Unscented Gaussian Sum Filter - an Improvement in GS-UKF, pp. 355-362.

Kottakki, Krishna Kumar	Res. Scholar, Chemical Engineering, IIT Bombay
Bhushan, Mani	Indian Inst. of Tech.
Bhartiya, Sharad	IIT Bombay

ThbT5	Outreach Extension
Systems Theory (Regular Session)	

14:30-14:50	ThbT5.1

Order Reduction of Interval Systems Using Eigen Spectrum and Factor Division Algorithm, pp. 363-367.

Kumar, Deepak	M. N. National Inst. of Tech. Allahabad
Jaiswal, Ankit	M. N. National Inst. of Tech. Allahabad
Singh, Pawan kumar	M. N. National Inst. of Tech. Allahabad
Gangwar, Sonam	M. N. National Inst. of Tech. Allahabad
Manmatharajan, Shambavi	M. N. National Inst. of Tech. Allahabad

14:50-15:10	ThbT5.2

Theoretical and Numerical Issues Concerning Temporal Stabilisability and Detectability, pp. 368-375.

Van Willigenburg, L.G.	Wageningen Univ.

15:10-15:30	ThbT5.3

On Observability of Irregular Descriptor Systems, pp. 376-379.

Gupta, Mahendra Kumar	Indian Inst. of Tech. Patna
Tomar, Nutan Kumar	Indian Inst. of Tech. Patna
Bhaumik, Shovan	Indian Inst. of Tech. Patna

15:30-15:50	ThbT5.4

Dynamic Model of a MAV with COG Shifting Mechanism, pp. 380-385.

Yadav, Pradeep Kumar	Indian Inst. of Tech. Bombay
Kalirajan, Karthikeyan	Indian Inst. of Tech. Bombay

15:50-16:10	ThbT5.5

Review of Five Sets of Piecewise Constant Orthogonal Functions for Function Approximation, Integration and Solution of First Order Differential Equation Using These Function Sets, pp. 386-393.

Ganguly, Anindita	St. Thomas' Coll. of Engg. and Tech.
Basu, Himadri	Jadavpur Univ.

16:10-16:30	ThbT5.6

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Chinta, Sankar Rao	Indian Inst. of Tech. Madras
Manickam, Chidambaram	Indian Inst. of Tech. Madras

Frcsh1	Room T1
Robotics and Control Part III (Regular Session)	
Chair: Sukavanam, N.	Indian Inst. of Tech. Roorkee
Co-Chair: K, Dhanalakshmi	NATIONAL Inst. OF Tech. TIRUCHIRAPPALLI

10:30-10:50	Frcsh1.1

Design and Control of Shape Memory Alloy Actuated Grippers, pp. 400-407.

S, Krishna Chaitanya	National Inst. of Tech. Tiruchirappalli
K, Dhanalakshmi	NATIONAL Inst. OF Tech. TIRUCHIRAPPALLI

10:50-11:10	Frcsh1.2

Control of Shape Memory Alloy Actuated Gripper Using Pulse-Width Modulation, pp. 408-413.

S, Krishna Chaitanya	Vignan Univ.
K, Dhanalakshmi	NATIONAL Inst. OF Tech. TIRUCHIRAPPALLI

11:10-11:30	Frcsh1.3

Evasion Strategies in Decoy Assisted Engagements, pp. 414-420.

R, Ragesh	Aerospace Engineering Department, IISc Bangalore, India
Ratnoo, Ashwini	Indian Inst. of Science
Ghose, Debasish	Indian Inst. of Science

11:30-11:50	Frcsh1.4

Modeling Simulation and Control of 6-DOF Parallel Manipulator Using PID Controller and Compensator, pp. 421-428.

Shukla, Amit	The Petroleum Inst.
Karki, Hamad	Assistant Professor

11:50-12:10	Frcsh1.5

Fuzzy PD+I Based Hybrid Force/ Position Control of an Industrial Robot Manipulator, pp. 429-436.

Chaudhary, Himanshu	IIT Roorkee
Panwar, Vikas	GBU
Sukavanum, Nagrajan	IIT Roorkee
Prasad, Rajendra	IIT Roorkee

12:10-12:30	Frcsh1.6

A Guidance Law for a Mobile Robot for Coverage Applications: A Limited Information Approach, pp. 437-442.

Tripathy, Twinkle	IIT Bombay
Sinha, Arpita	Indian Inst. of Tech. Bombay

Frcsh2	Room T2
Distributed Control of Autonomous Multi-Vehicle Systems (Invited Session)	

10:30-10:50	Frcsh2.1

Vector Field Based Formation Generation Guidance for Arbitrary Initial Conditions (I), pp. 443-447.

Challa, Vinay	Indian Inst. of Science
Ratnoo, Ashwini	Indian Inst. of Science

10:50-11:10	Frcsh2.2

Gradient-Based Collision Free Desired Formation Generation (I), pp. 448-454.

Mondal, Arindam	IIT Kanpur
Behera, Laxmidhar	Indian Inst. of Tech. Kanpur

11:10-11:30	Frcsh2.3

Relative Attitude Trajectory Tracking Using Line of Sight Measurements under Spacecraft Position Dynamics (I), pp. 455-461.

Warier, Rakesh	IIT Bombay
Sinha, Arpita	Indian Inst. of Tech. Bombay
Sukumar, Srikant	IIT Bombay

11:30-11:50	Frcsh2.4

Analysis of Obstacle Based Probabilistic RoadMap Method Using Geometric Probability (I), pp. 462-469.

Bera, Titas	Indian Inst. of Science, Bangalore
Bhat, M Seetharama	Indian Inst. of Science
Ghose, Debasish	Indian Inst. of Science

11:50-12:10	Frcsh2.5

Vision Based Alignment to Runway During Approach for Landing of Fixed Wing UAVs, pp. 470-476.

| Marianandam, Peter Arun | IISc, Bangalore |
| Ghose, Debasish | Indian Inst. of Science |

| **Frchof** | Room T3 |
| **Multi-Agent Systems and Control** (Regular Session) | |

| Chair: Ghose, Debasish | Indian Inst. of Science |

| 10:30-10:50 | Frchof.1 |

Cooperative Rendezvous Guidance Using Sliding Mode Control for Interception of Stationary Targets, pp. 477-483.

| Kumar, Shashi Ranjan | Indian Inst. of Science, Bangalore |
| Ghose, Debasish | Indian Inst. of Science |

| 10:50-11:10 | Frchof.2 |

Development of a Robotic Platform to Implement a Boundary Mapping Algorithm, pp. 484-490.

Arvind, Achal	Indian Inst. of Science
Ghose, Debasish	Indian Inst. of Science
Prathyush, Purushothama Menon	Univ. of Exeter

| 11:10-11:30 | Frchof.3 |

Target Centric Cyclic Pursuit Using Bearing Angle Measurements Only, pp. 491-496.

| Daingade, Sangeeta | Student at IIT Bombay, Mumbai |
| Sinha, Arpita | Indian Inst. of Tech. Bombay |

| 11:30-11:50 | Frchof.4 |

Relative Navigation of Satellites in Formation Using Monocular Model-Based Vision, pp. 497-504.

Kumar, Vinod	Indian Space Res. Organization, Bangalore
Hablani, Hari B.	Indian Inst. of Tech. Bombay
Pandiyan, Ramalingam	Indian Space Res. Organisation, Bangalore

| 11:50-12:10 | Frchof.5 |

Canopy Clustering Based Multi Robot Area Exploration (I), pp. 505-510.

| Shukla, Anupam | Atal Bihari Vajpayee Indian Inst. of Information Tech. |
| Sharma, Sanjeev | ABV-IIITM, Gwalior |

| 12:10-12:30 | Frchof.6 |

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| Shukla, Anupam | Atal Bihari Vajpayee Indian Inst. of Information Tech. |
| Sur, Chiranjib | ABV-Indian Inst. of Information Tech. & Management, Gwa |

| **Frcaudi** | Room T4 |
| **Advances in Fuzzy Based Modeling, Control and Optimization in Dynamical Systems** (Invited Session) | |

| Chair: Chakraverty, S. | Department of Mathematics, National Inst. of Tech. Rourkela, Odisha, India |

| 10:30-10:50 | Frcaudi.1 |

Neural Network Based Parts of Speech Tagger for Hindi (I), pp. 519-524.

Narayan, Ravi	Thapar Univ. Patiala, Punjab, India.
Chakraverty, S.	Department of Mathematics, National Inst. of Tech. Rour
Singh, V. P.	Department of Computer Science, Thapar Univ. Patiala, Punj

| 10:50-11:10 | Frcaudi.2 |

Numerical Solution of Two Group Uncertain Neutron Diffusion Equation for Multi Region Reactor (I), pp. 525-529.

| Nayak, Sukanta | National Inst. of Tech. Rourkela, Odisha, India |

| 11:10-11:30 | Frcaudi.3 |

Use of Fuzzy Equations in Technical Diagnostics Problem, pp. 530-532.

Kucherov, Alexander	S.P.Korolev Samara State Aerospace Univ. (National Res.
Kurenkov, Vladimir	S.P.Korolev Samara State Aerospace Univ. (National Res.
Yakischik, Artem	S.P. Korolev Samara State Aerospace Univ. (National Res.

| 11:30-11:50 | Frcaudi.4 |

Control of Symmetrical Cascaded Multicell Inverter Using Fuzzy Logic, pp. 533-539.

Pathipooranam, Ponnambalam	VIT Univ.
Medarametla, Praveen kumar	VIT Univ.
Varshney, Mayank	VIT Univ.
Choudhary, Dhanesh	VIT Univ.

Chakravarthula, Kalyani	VIT Univ.

11:50-12:10	Frcaudi.5

Adaptive Fuzzy Sliding Mode Control for Uncertain Nonlinear Systems, pp. 540-545.

Husek, Petr	Czech Tech. Univ. in Prague

12:10-12:30	Frcaudi.6

Support Vector Machine Based Adaptive Calibration Technique for Resistance Temperature Detector, pp. 546-551.

Venkata, Santhosh K	Manipal Inst. of Tech.
Roy, Binoy Krishna	National Inst. of Tech. Silchar

Frcoe	Room T5
Emerging Control Systems (Regular Session)	
Co-Chair: K, Dhanalakshmi	NATIONAL Inst. OF Tech. TIRUCHIRAPPALLI

10:30-10:50	Frcoe.1

Automatic Generation Control of Single Area Thermal Power System with Fractional Order PID (PIλ Dμ) Controllers, pp. 552-557.

C., Ismayil	National Inst. of Tech. Calicut,India
R., Sreerama Kumar	King Abdulaziz Univ. Jeddah, Saudi Arabia
T.K., Sindhu	Natioanl Inst. of Tech. Calicut

10:50-11:10	Frcoe.2

Robust Controller Design for Discrete Fractional Order System: A Disturbance Observer Based Approach, pp. 558-563.

Kamal, Shyam	Indian Inst. of Tech. Bombay , India
Bandyopadhyay, Bijnan	IIT Bombay

11:10-11:30	Frcoe.3

Multivariable Approach to Bandwidth Sharing in a Multi-Source Connection-Oriented Network with Heterogenous Delays, pp. 564-570.

Baburaj, P	INDIAN Inst. OF Tech. BOMBAY
Bandyopadhyay, Bijnan	IIT Bombay
Bartoszewicz, Andrzej	Tech. Univ. of Lodz

11:30-11:50	Frcoe.4

New Results on Delay-Dependent Robust Stability of Interval State-Delayed Linear Systems with Nonlinear Perturbations, pp. 571-576.

Krishnan, Ramakrishnan	Indian Inst. of Tech. Kharagpur
Ray, Goshaidas	Indian Inst. of Tech.

11:50-12:10	Frcoe.5

Prospective Self-Sensing Actuator for Stabilised Control: Beam Balancing Ball Driven by Shape Memory Alloy, pp. 577-584.

D, Josephine Selvarani Ruth	NIT Tiruchy
S, Sunjai Nakshatharan	National Inst. of Tech.
K, Dhanalakshmi	NATIONAL Inst. OF Tech. TIRUCHIRAPPALLI

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12:10-12:30	Frcoe.6

Interaction Assessment in Multivariable Control Systems through Causality Analysis, pp. 585-592.

Garg, Abhinav	Indian Inst. of Tech. Madras
Tangirala, Arun K.	Indian Inst. of Tech. Madras

Fresh1	Room T1
Model Predictive Control (Regular Session)	

14:00-14:20	Fresh1.1

Stabilization of 2-D Spider Crane with Non-Convex State Constraints Using MPC, pp. 593-598.

Mejari, Manas	Veermata Jeejabai Tech. Inst.
Gupta, Ankit	VJTI
Ketkar, Vishwanath	Veermata Jeejabai Tech. Inst.
Datar, Mandar	Veermata Jijabai Tech. Inst.
Singh, Navdeep	Veermata Jijabai Tech. Inst.
Kazi, Faruk	Indian Inst. of Tech. Bombay

14:20-14:40	Fresh1.2

On the Improvement of Set-Point Tracking Performance of Model Predictive Control, pp. 599-606.

Prabhu, Sachin	PES Inst. of Tech.
George, Koshy	PES Inst. of Tech.

14:40-15:00	Fresh1.3

A Computationally Efficient Stabilizing Model Predictive Control of Switched Systems, pp. 607-613.

K, Hariprasad	Indian Inst. of Tech. Bombay
Bhartiya, Sharad	IIT Bombay

15:00-15:20	Fresh1.4

A Model Predictive Control Strategy Based on Consistency in Wavelet Projections, pp. 614-619.

Mukhopadhyay, Siddhartha	Bhabha Atomic Res. Centre
Tiwari, Akhilanand Pati	Bhabha Atomic Res. centre

15:20-15:40	Fresh1.5

Modelling and Control of Ball and Beam System Using Coefficient Diagram Method (CDM) Based PID Controller, pp. 620-626.

Kannan, Kalpana	Kongu Engineering Coll. Perundurai
Balasubramaniam, Meenakshipriya	Kongu Engineering Coll. Anna Univ. Chennai

15:40-16:00	Fresh1.6

Motion Compensation of Airborne Synthetic Aperture Radar, pp. 627-634.

Kaliyari, Dushyant	Indian Inst. of Tech. Bombay
Shukla, Amit	Space Applications Centre, ISRO, Ahmedabad
Rao, Y. S.	Indian Inst. of Tech.
Hablani, Hari B.	Indian Inst. of Tech. Bombay

Fresh2	Room T2
Advances in Robotics (Regular Session)	
Chair: Ghose, Debasish	Indian Inst. of Science

14:00-14:20	Fresh2.1

Fusion of Navigation Solutions from Different Navigation Systems for an Autonomous Underwater Vehicle, pp. 635-642.

Awale, Vaibhav	Indian Inst. of Tech. Bombay
Hablani, Hari B.	Indian Inst. of Tech. Bombay

14:20-14:40	Fresh2.2

Multi-Robot Exploration Using Communication Link Density (I)*.

Pal, A	ABV-Indian Inst. of Information Tech. and Management

14:40-15:00	Fresh2.3

Finite-Time Control of a Quadrotor System, pp. 643-647.

Muralidharan, Vijay	Indian Inst. of Tech. Madras
Ekbote, Anup	Indian Inst. of Tech. Madras
Mahindrakar, Arun	Indian Inst. of Tech. Madras

15:00-15:20	Fresh2.4

A Heterogeneous Cyclic Pursuit Based Strategy for Boundary Tracking, pp. 648-655.

Mukherjee, Dwaipayan	Indian Inst. of Science
Prathyush, Purushothama Menon	Univ. of Exeter
Ghose, Debasish	Indian Inst. of Science

15:20-15:40	Fresh2.5

Stabilization of Balanced Circular Motion about a Desired Center, pp. 656-661.

Jain, Anoop	Indian Inst. of Science, Bangalore
Ghose, Debasish	Indian Inst. of Science
Prathyush, Purushothama Menon	Univ. of Exeter

15:40-16:00	Fresh2.6

Robotic Fish Design and Control Based on Biomechanics, pp. 662-669.

Shriyam, Shaurya	Indian Inst. of Tech. Kanpur
Agrawal, Anuj	Indian Inst. of Tech. Kanpur
Behera, Laxmidhar	Indian Inst. of Tech. Kanpur
Saxena, Anupam	Indian Inst. of Tech. Kanpur

Frehof	Room T3
Intelligent Systems and Control: Part II (Regular Session)	
Chair: Subudhi, Bidyadhar	National Inst. of Tech. Rourkela
Co-Chair: Datta, Rituparna	IIT Kanpur

14:00-14:20	Frehof.1

GA Based Adaptive Optimal Controller for 2DOF Robot Manipulator, pp. 670-675.

Jena, Debashisha	NITK, Surathkal
M, Vijay	NITK, Surathkal

14:20-14:40	Frehof.2

Design of Pid Controller for Linear Dynamic Continuous Systems Using Iglsm and De Algorithm, pp. 676-683.

Jeldi, Nancy Namratha	ANDHRA Univ.
Yerramsetty, Hemalatha	ANDHRA Univ.

14:40-15:00	Frehof.3

Practical Realization of Scalar Optimization Function of Shielded Metal Arc Welding Process, pp. 684-691.

Paul, Arun Kumar	Self

15:00-15:20	Frehof.4

Optimization of Engineering Design Problems Via an Efficient Hybrid Meta-Heuristic Algorithm, pp. 692-699.

Das, Kedar Nath	NATIONAL Inst. OF Tech. SILCHAR, ASSAM
Parouha, Raghav Prasad	NATIONAL Inst. OF Tech. SILCHAR

15:20-15:40	Frehof.5

Application of Firefly Algorithm for Radial Distribution Network Reconfiguration, pp. 700-705.

Yeruva, Lakshmi Reddy	National Inst. of Tech.
T, Sathiyanarayanan	National Inst. of Tech.
M, Sydulu	National Inst. of Tech.

15:40-16:00	Frehof.6

Application of Newton's Method with Analytical Computation of Jacobian Matrix to Solve Multi-Linear Pole Assignment Equations, pp. 706-710.

Jee, Gopal	Vikram Sarabhai Space Centre

Freaudi	Room T4
Nonlinear Systems and Control (Regular Session)	
Chair: Kar, Indrani	IIT Guwahati
Co-Chair: Patchaikani, Prem Kumar	GE

14:00-14:20	Freaudi.1

Design of Nonlinear Flight Controller for a Fighter Aircraft, pp. 711-718.

Pinjala, Lathasree	NATIONAL AEROSPACE Lab.
Ismail, Shaik	NATIONAL AEROSPACE Lab.
Pashilkar, Abhay	NATIONAL AEROSPACE Lab.

14:20-14:40	Freaudi.2

An Investigation on the Modelling and Controller Design of a Hydraulic Press, pp. 719-725.

A, Tony Thomas	KONGU ENGINEERING Coll.
R, Parameshwaran	KONGU ENGINEERING Coll.
R, Deepak Kumar	Kongu Engineering Coll.
S, Mohanraja	KONGU ENGINEERING Coll. ERODE
M, Harishwaran	Kongu Engineering Coll.

14:40-15:00	Freaudi.3

Application of Optimization Technique for Compensator Design of Launcher Attitude Control, pp. 726-733.

Kandula, Koteswara Rao	I.S.R.O
Mv, Dhekane	ISRO
Vr, Lalithambika	ISRO
Brinda, V.	Indian Space Res. Organisation

15:00-15:20	Freaudi.4

An Improved MRAC Scheme for Non-Linear Design of Adaption Gain 'γ ' Using Heuristic Algorithms, pp. 734-739.

Abraham, Anuj	Anna Univ.
Natarajan, Pappa	Associate professor, Department of Inst. Engineering,

15:20-15:40	Freaudi.5

Adaptive Backstepping Control for a Twin Rotor MIMO System, pp. 740-747.

Sodhi, Paloma	IIT Guwahati
Kar, Indrani	IIT Guwahati

15:40-16:00	Freaudi.6

Fault-Tolerant Sliding Mode Control for Uncertain Over-Actuated Systems, pp. 748-753.

Khimani, Deepti	Vivekanand Education society's Inst. of Tech. Mumbai
Patil, Machhindranath	Indian Inst. of Tech. Bombay

Freoe	Room T5
Robotics and Control Part II (Regular Session)	
Co-Chair: Mahindrakar, Arun	Indian Inst. of Tech. Madras

14:00-14:20	Freoe.1

Region Reaching and Obstacle Avoidance for Autonomous Underwater Vehicle without Velocity Measurement, pp. 754-757.

Mukherjee, Koena	IIT Delhi
Kar, Indra Narayan	Indian Inst. of Tech. Delhi
Bhatt, R. K. P.	Indian Inst. of Tech. Delhi

14:20-14:40	Freoe.2

Mobile Robot Navigation Using Evolving Neural Controller in Unstructured Environments, pp. 758-765.

Patnaik, Awhan	IIT Kanpur
Khetarpal, Khimya	IIT Kanpur
Behera, Laxmidhar	Indian Inst. of Tech. Kanpur

14:40-15:00	Freoe.3

Real Time Evaluation of Grid Based Path Planning Algorithms: A Comparative Study, pp. 766-772.

Chandrasekaran, Saranya	ISRO
Kandula, Koteswara Rao	I.S.R.O
Unnikrishnan, Manju	ISRO
Brinda, V.	Indian Space Res. Organisation
Vr, Lalithambika	ISRO
Mv, Dhekane	ISRO

15:00-15:20	Freoe.4

Robot Learns from Human Teacher through Modified Kinesthetic Teaching, pp. 773-780.

Ghoshal, Debarshi Patanjali	Indian Inst. of Tech. Kanpur
Das, Niladri	IIT Kanpur
Dutta, Samrat	IIT Kanpur
Behera, Laxmidhar	Indian Inst. of Tech. Kanpur

15:20-15:40	Freoe.5

On the Topologies Conforming Singular Perturbation in Formation Control of Nonholonomic Robots, pp. 781-786.

Sarkar, Soumic	Indian Inst. of Tech. Delhi
Kar, Indra Narayan	Indian Inst. of Tech. Delhi

15:40-16:00	Freoe.6

Motion Planning for the Three Wheel Mobile Robot Using the Reachable Set Computation under Constraints, pp. 787-793.

Datar, Mandar	Veermata Jijabai Tech. Inst.
Ketkar, Vishwanath	Veermata Jeejabai Tech. Inst.
Mejari, Manas	Veermata Jeejabai Tech. Inst.
Gupta, Ankit	VJTI
Singh, Navdeep	Veermata Jijabai Tech. Inst.
Kazi, Faruk	Indian Inst. of Tech. Bombay

Technical Program for Saturday March 15, 2014

SaeT1	Room T1
Drives and Converters (Regular Session)	

14:00-14:20	SaeT1.1

Fryze Current Controller Based Active Power Filter, pp. 794-800.

| Singh, Manish Kumar | NIT PATNA |
| Choudhary, Jayanti | National Inst. of Tech. Patna |

14:20-14:40	SaeT1.2

Design of a Three Phase Squirrel Cage Induction Motor for Electric Propulsion System, pp. 801-806.

| Behera, Ranjan Kumar | Indian Inst. of Tech. Patna |

14:40-15:00	SaeT1.3

Design and Development of Control System for Three Phase Induction Motor Using PIC Microcontroller, pp. 807-811.

Sutrave, Dattatray	solapur Univ. solapur
Jamadar, B.N.	solapur Univ. solapur
Kumbhar, Rs	shivaji Univ.
Gavhane, Ps	solapur Univ. solapur

15:00-15:20	SaeT1.4

A Routing Scheme for Voltage Stabilization in Cyber Physical Energy Systems (I), pp. 812-818.

Nandanwar, Anuj	Indian Inst. of Tech. Kanpur
Korukonda, Meher Preetam	Indian Inst. of Tech. Kanpur
Behera, Laxmidhar	Indian Inst. of Tech. Kanpur

15:20-15:40	SaeT1.5

Multi Objective Economic Emission Load Dispatch Using Teacher-Learning Based Optimization Technique, pp. 819-826.

| Tekumalla, Dinesh Varma | National Inst. of Tech. Warangal, Andhra Pradesh |
| D M, Vinod Kumar | National Inst. of Tech. Warangal |

15:40-16:00	SaeT1.6

Modeling, Simulation and Control of Semi Active Suspension System for Automobiles under MATLAB Simulink Using PID Controller, pp. 827-831.

| Kuna, Dhananjay rao | Jadavpur Univ. |

SaeT2	Room T2
Optimal Control Part II (Regular Session)	
Co-Chair: Ryali, Venkat	GE

14:00-14:20	SaeT2.1

State Constrained Model Predictive Static Programming: A Slack Variable Approach, pp. 832-839.

| Bhitre, Nitin | Indian Inst. of Science, Bangalore |
| Padhi, Radhakant | Indian Inst. of Science |

14:20-14:40	SaeT2.2

Integrated Optimal Control of Reusable Launch Vehicle and Actuation System Using Linear Quadratic Regulator, pp. 840-846.

Skariya, Santhi Elizebeth	Coll. of Engineering
Sebastian, Baby	ISRO
Namboodiripad M.N., Narayanan	VSSC, ISRO

14:40-15:00	SaeT2.3

Three Dimensional Trajectory Optimization of a Homing Parafoil, pp. 847-854.

Suresh Babu, Arun Vishnu	INDIAN Inst. OF SCIENCE
Chandran Suja, Vineeth	India Inst. of Science
Challa, Vinay	Indian Inst. of Science

15:00-15:20	SaeT2.4

Extension of Model Predictive Static Programming for Reference Command Tracking, pp. 855-861.

| Kumar, Prem | PGAD, RCI, DRDO |
| Padhi, Radhakant | Indian Inst. of Science |

15:20-15:40	SaeT2.5

Multi Response Optimization of Induction Hardening Process -A New Approach (I), pp. 862-869.

| Misra, Mohan | IIT Kanpur |
| Bhattacharya, Bishakh | Professor |

Singh, Onkar	HBTI, Kanpur
Chatterjee, A	IIT Kanpur

15:40-16:00	SaeT2.6

Guidance of Parafoil Using Line of Sight and Optimal Control, pp. 870-877.

Murali, Nitin	Univ. of Kerala
M, Dineshkumar	VSSC

SaeT3	Room T3
Fuzzy and Neural Systems (Regular Session)	
Chair: Bosukonda, Murali Mohan	Indian Inst. of Tech. Kharagpur
Co-Chair: Verma, Nishchal Kumar	INDIAN Inst. OF Tech. KANPUR

14:00-14:20	SaeT3.1

Adaptive Fuzzy PI Controller Design for Coupled Tank System: An Experimental Validation, pp. 878-881.

Mahapatro, Soumya Ranjan	Dept of EE,National Inst. of Tech.
Subudhi, Bidyadhar	National Inst. of Tech. Rourkela
Ghosh, Subhojit	Dept of EE, NIT Raipur

14:20-14:40	SaeT3.2

Mathematical Models and Computational Aspects of the Simplest Fuzzy Two-Term Controllers, pp. 882-889.

Neelimegham, Arun	Indian Inst. of Tech.
Bosukonda, Murali Mohan	Indian Inst. of Tech. Kharagpur

15:00-15:20	SaeT3.4

Solar Radiation Forecasting Using Neural Networks and Wavelet Transform, pp. 890-896.

Yadav, Ajay Pratap	IIT Kanpur
Behera, Laxmidhar	Indian Inst. of Tech. Kanpur

15:20-15:40	SaeT3.5

Estimation of Aerodynamic Derivatives Using Neural Network Based Method, pp. 897-904.

Kumar, Rakesh	PEC Univ. of Tech.
Ghosh, A.K. Ghosh	IIT Kanpur

15:40-16:00	SaeT3.6

Ship's Propulsion Neural Controller Main Engine - Pitch Propeller - Shaft Generator, pp. 905-912.

Kruszewski, Jan	Gdynia Maritime Univ. Gdynia

SaeT4	Room T4
Systems Modelling and Control (Regular Session)	
Co-Chair: Swarup, Akhilesh	National Inst. of Tech. Kurukshetra

14:00-14:20	SaeT4.1

Estimation of Process Dynamics Using Biased Relay Feedback Approach, pp. 913-916.

Pandey, Saurabh	Indian Inst. of Tech. Guwahati
Majhi, Somanath	Indian Inst. of Tech. Guwahati

14:20-14:40	SaeT4.2

Approximate Snapshot-Ensemble Generation for Basis Extraction in Proper Orthogonal Decomposition, pp. 917-921.

Nahvi, Shahkar Ahmad	Islamic Univ. of Science & Tech.
Bazaz, Mohammad Abid	National Inst. of Tech.
Nabi, Mashuq-un-	Indian Inst. of Tech.
Janardhanan, S	IIT Delhi

14:40-15:00	SaeT4.3

System Identification and Robust Control for a Stabilization System of a Two-Axis Gimbaled Sensor, pp. 922-927.

Bendi, Sudhakar	Res. centre Imarat,Defence Res. and Development Organiza
N, Subba Raju	Res. centre Imarat,Defence Res. and Development Organiza

15:00-15:20	SaeT4.4

On a Wind Turbine-Generator System in the Presence of Wind Speed Noise and Fokker-Planck Equations, pp. 928-935.

Hirpara, Ravish H	National Inst. of Tech. Surat, Gujarat, India
Sharma, Shambhu N	National Inst. of Tech. Surat, Gujarat, India

15:20-15:40	SaeT4.5

Boiler Model and Simulation for Control Design and Validation, pp. 936-940.

Unnikrishnan, Sunil Pu	GE Power and Water

| Barve, Jayesh | Inst. of Tech. Nirma Univ. |
| Nataraj, P.S.V. | Indian Inst. of Tech. |

| 15:40-16:00 | SaeT4.6 |

Evaluation of Semi-Active Suspension Control Strategies for 8x8 Armoured Vehicle Using Stochastic Road Profile Inputs, pp. 941-948.

Trikande, Mukund	VRDE DRDO
Jagirdar, Vinit	VRDE DRDO
Muralidharan, Sujithkumar	VRDE DRDO

| **SaeT5** | Room T5 |
| **Design, Dynamics and Optimization of Active Mechanisms for Dynamical Systems** (Invited Session) | |

| Chair: Bhattacharya, Bishakh | Professor |
| Co-Chair: Datta, Rituparna | IIT Kanpur |

| 14:00-14:20 | SaeT5.1 |

Analysis of Composite Plate Dynamics Using Spatial Maps of Frequency-Domain Features Described by Gaussian Processes (I), pp. 949-954.

Anderson, Sean	Univ. of Sheffield
Aram, Parham	The Univ. of Sheffield
Bhattacharya, Bishakh	Professor
Kadirkamanathan, Visakan	Univ. of Sheffield

| 14:20-14:40 | SaeT5.2 |

Advances in Addressing Challenges in Complex Control Systems Design (I), pp. 955-958.

| Chakrapani Rao, Arun | Rolls-Royce Univ. Tech. Centre in Control and Monitori |
| Liu, Jun | Univ. of Sheffield |

| 14:40-15:00 | SaeT5.3 |

An Experimental Analysis of an Active Elastic Metamaterial (I), pp. 959-965.

Pope, Simon Alexander	Univ. of Sheffield
Laalej, Hatim	Univ. of Sheffield
Kadirkamanathan, Visakan	Univ. of Sheffield

| 15:00-15:20 | SaeT5.4 |

Development of Autonomous Small EV in Japan Aging Society (I), pp. 966-972.

Wu, Nan	Waseda Univ. 2-7 Hibikino,Wakamatu-ku ,KitakyusyuCity
Ogai, Harutoshi	Waseda Univ.
Ohshiro, Masakuni	Waseda Univ.
Kamata, Seiichirou	Waseda Univ.
Tateno, Shigeyuki	WASEDA Univ.
Uchida, Akira	Kitakyusyu City Univ.
Kai, Masahiko	Kitakyusyu Fundation for Advancement of Industry Science and Tec
Iida, Makio	Kitakyusyu Fundation for Advancement of Industry Science and Tec
Sano, Yuji	Kitakyusyu Fundation for Advancement of Industry Science and Tec

| 15:20-15:40 | SaeT5.5 |

Damage Characterization in Frame Structures Using Output-Only Modal and Feature-Based Techniques (I), pp. 973-980.

Panikkaveettil, Harikrishnan	IIT Kanpur
Roy, Koushik	IIT Kanpur
Ray Chaudhuri, Samit	Assistant Professor, IIT Kanpur

| 15:40-16:00 | SaeT5.6 |

Design and Experimentation on Passive Vibration Isolation Systems Using PZT PDMS Composite and a Shape Memory Alloy Wire Integrated Mechanism (I), pp. 981-988.

Satpal, Satish B.	IIT Kanpur
Datta, Rituparna	IIT Kanpur
Chaturvedi, Vaibhav	IIT Kanpur
Bhattacharya, Bishakh	Professor

| **SafT1** | Room T1 |
| **Process Dynamics and Control** (Regular Session) | |

| 16:15-16:35 | SafT1.1 |

Closed Loop Reaction Curve Method for Identification of TITO Systems, pp. 989-996.

Ram, V.Dhanya	Indian Inst. of Tech. Madras
Manickam, Chidambaram	Indian Inst. of Tech. Madras

16:35-16:55	SafT1.2

Eigenvalue Assignment Via the Smith Predictor Based IMC-PID & the Matrix Lambert W Function for Control of Time-Delayed Process Systems, pp. 997-1002.

Prakash, Prashant	INDIAN Inst. OF Tech. KANPUR
Verma, Nishchal Kumar	INDIAN Inst. OF Tech. KANPUR
Behera, Laxmidhar	Indian Inst. of Tech. Kanpur

16:55-17:15	SafT1.3

Output-Feedback Control for Stabilization of Slosh Using Higher Order Sliding Modes, pp. 1003-1010.

Mishra, Jyoti Prakash	COEP
Kurode, Shailaja	I.I.T. Bombay

17:15-17:35	SafT1.4

Model-Based Optimisation of Integrated Algae Biorefinery, pp. 1011-1018.

Sen Gupta, Soumyajit	Indian Inst. of Tech. Bombay
Bhartiya, Sharad	IIT Bombay
Shastri, Yogendra	Indian Inst. of Tech. Bombay

17:35-17:55	SafT1.5

Developing a Soft Sensor for Fineness in a Cement Ball Mill, pp. 1019-1025.

Stanley, Peter Kavitha	Indian Inst. of Tech. Madras
Muralidharan, GuruPrasath	FLSmidth Private Limited
Tangirala, Arun K.	Indian Inst. of Tech. Madras

17:55-18:15	SafT1.6

Control Loop Performance Assessment for Two Degree of Freedom Controller: Analysis of Model-Plant Mismatch, pp. 1026-1033.

Advani, Ashish	IIT Bombay
Bhartiya, Sharad	IIT Bombay
Gudi, Ravindra D.	Indian Inst. of Tech. Bombay

SafT2	Room T2
Power Systems (Regular Session)	
Co-Chair: Mishra, Sukumar	Indian Inst. of Tech.

16:15-16:35	SafT2.1

Sliding Mode Control of Surface Mounted Permanent Magnet Synchronous Generator, pp. 1034-1038.

Gautam, Kiran K.	National Inst. of Tech. Tiruchirappalli
Velupillai, V. Sankaranarayanan	National Inst. of Tech. Tiruchirapalli

16:35-16:55	SafT2.2

Output Voltage Control and Power Management of a Dual Input Buck-Boost Converter Employing P and O Algorithm, pp. 1039-1043.

K, Sundareswaran	National Inst. of Tech.
Kuruvinashetti, Kiran	National Inst. of Tech.
Ippili, Gangadhar	National Inst. of Tech. TRICHY
Peddapati, Sankar	National Inst. of Tech.
Nayak, P. Srinivasa Rao	National Inst. of Tech.
V, Vigneshkumar	National Inst. of Tech.

16:55-17:15	SafT2.3

Optimal PMU Placement Techniques for the Topological Observability of a Partial Network of the Southern Grid of India, pp. 1044-1048.

Kotthapally, Satish Kumar	nitw Univ.
Maheshwarapu, Sydulu	nitw Univ.

17:15-17:35	SafT2.4

Combined Economic and Emission Dispatch Using a Classical Technique, pp. 1049-1053.

K Damodaran, Suresh	NIT Calicut
Kumar, T. K. Sunil	NIT Calicut

17:35-17:55	SafT2.5

Transient Stability Improvement of Multi-Machine Power System Using Higher Order Sliding Mode Control, pp. 1054-1060.

Kulkarni, Samidha	Veermata Jijabai Tech. Inst.
Irfan, Mohammad	VJTI, Univ. of Mumbai

Kulkarni, Pralhad	Mumbai Univ.
Wagh, Sushama	V. J. T. I.
Singh, Navdeep	Veermata Jijabai Tech. Inst.

SafT3	Room T3
Vibration Control (Regular Session)	
Co-Chair: Banerjee, Malay	Indian Inst. of Tech. Kanpur

16:15-16:35	SafT3.1

Design and Experimental Evaluation of Higher Order Sliding Mode Control for Vibration Suppression of Shape Memory Alloy Actuated Structure, pp. 1061-1066.

S, Sunjai Nakshatharan	National Inst. of Tech.
D, Josephine Selvarani Ruth	NIT Tiruchy
K, Dhanalakshmi	NATIONAL Inst. OF Tech. TIRUCHIRAPPALLI

16:35-16:55	SafT3.2

Analysis of Vibration in Gearbox Sensor Data Using Lipschitz Exponent (LE) Function: A Wavelet Approach, pp. 1067-1071.

| Perumalsamy, Venkatakrishnan | K.L.N Coll. of Information Tech. |

16:55-17:15	SafT3.3

A Novel Active Vibration Control Design Methodology Using Viscoelastic Phenomenology, pp. 1072-1079.

| Roy Mahapatra, D. | Indian Inst. of Science |
| G.K., Vadiraja | Honeywell Tech. Solutions |

17:15-17:35	SafT3.4

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| Malipatil, Santoshkumar | VISVESVARAYA Tech. Univ. |

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| Palanisamy, Nandakumar | Indian Inst. of Tech. Madras |
| Krishnapillai, Shankar | Indian Inst. of Tech. Madras |

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Ashokkumar, Chimpalthradi	Jain Univ.
Sridhar, Ashwin	PES Inst. of Tech.
Krishnan, Manmathan	Jain Univ.

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Co-Chair: Barve, Jayesh	Inst. of Tech. Nirma Univ.

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Agrawal, Pooja	Indian Inst. of Science
Ratnoo, Ashwini	Indian Inst. of Science
Ghose, Debasish	Indian Inst. of Science

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Vempati, Anurag Sai	Indian Inst. of Tech. Kanpur
Choudhary, Vipul	Indian Inst. of Tech. Kanpur
Behera, Laxmidhar	Indian Inst. of Tech. Kanpur

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| Suresh Babu, Arun Vishnu | INDIAN Inst. OF SCIENCE |
| Ghose, Debasish | Indian Inst. of Science |

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Tripathi, Amit	Indian Inst. of Science
G. Raja, Ramsingh	Indian Inst. of Science, Bangalore
Padhi, Radhakant	Indian Inst. of Science

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Barve, Jayesh	Inst. of Tech. Nirma Univ.
Patel, Keyurkumar	Nirma Univ.

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Chair: Deb, Alok Kanti	IIT Kharagpur
Co-Chair: Bosukonda, Murali Mohan	Indian Inst. of Tech. Kharagpur

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Dutta, Samrat	IIT Kanpur
Behera, Laxmidhar	Indian Inst. of Tech. Kanpur

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Prasad, Lal Bahadur	Indian Inst. of Tech. Roorkee
Gupta, Hari Om	IIT Roorkee
Tyagi, Barjeev	IIT Roorkee

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Padhi, Radhakant	Indian Inst. of Science
Tiwari, Shivendra Nath	DRDO
Jada, Sandeep K	IISC

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Andrade, Gustavo	Federal Univ. of Maranhão
Fonseca Neto, João Viana da	Federal Univ. of Maranhão
Moraes Rego, Patricia Helena	State Univ. of Maranhão

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Shah, Hitesh	G H Patel Coll. of Engineering & Tech.
Goapl, Madan	School of Engineering, Shiv Nadar Univ.

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Mohamed, Majeed	Flight Mechanics and Control Div. CSIR-National Aerospace L

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