

# IEEE CONTROL SYSTEMS SOCIETY DAY

Invited Lectures | 20<sup>th</sup> October, 2022



Lecture 1 | 2:30 - 3:30 pm IST

Title: *Sixty Years of Control Theory in Sixty Minutes and Sixty Slides*

Prof. M Vidyasagar

Fellow of IEEE, SERB National Science Chair, Distinguished Professor of Indian Institute of Technology Hyderabad, India.



Lecture 2 | 4:00 - 5:00 pm IST

Title: *Q-learning and it's variants for the single and multi agent settings*

Prof. Shalabh Bhatnagar

Fellow of INSA and INAE, Professor in the Department of Computer Science and Automation, Indian Institute of Science, Bangalore, India.



Lecture 3 | 6:30 - 7:30 pm IST

Title: *Adaptive Gradient Optimizer in Machine Learning: A Control Theoretic Perspective*

Prof. Nikhil Chopra

Professor in the Department of Mechanical Engineering, University of Maryland, USA.



Lecture 4 | 7:30 - 8:30 pm IST

Title: *Contraction Theory for Network Systems*

Prof. Francesco Bullo

Fellow of IEEE, Former IEEE CSS President, Distinguished Professor in the Department of Mechanical Engineering, University of California, Santa Barbara, USA.

Mode: Hybrid (all lectures will be in online mode)

Register [here](#) (before 14<sup>th</sup> October) to receive further details on how to join ([registration is free](#)).

approach  
gradient algorithm  
theory control contraction  
optimization  
processes neural state  
systems convergence model generalization  
network game adaptive  
markov stochastic successive value  
min-max two-player  
adam minimax  
zero-sum  
relaxation computation biology  
q-learning

For any further queries,  
please contact:

Prof. Ashish Ranjan Hota  
([ashish.hota@ieee.org](mailto:ashish.hota@ieee.org))

Prof. Somnath Sengupta  
([sengupta.s@atdc.iitkgp.ac.in](mailto:sengupta.s@atdc.iitkgp.ac.in))

Prof. Atreyee Kundu  
([atreyee@ieee.org](mailto:atreyee@ieee.org))