

ECE Distinguished Lecture Series



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Revisiting Exploration versus Exploitation: Adaptive Control and Multi-Armed Bandits

Tuesday, October 14, 2020, 10:00 am - 11:00 am

URL: <https://go.gwu.edu/ecedls>

Meeting number: 120 052 8857

Password: Kt3cesNPb73

Abstract

We consider the central problem of exploration versus exploitation that lies at the center of several dynamic learning problems. We revisit the problem of regret in adaptive control and examine it in the light of recent interest in solving large scale learning problems. We present a family of schemes that admits simple index policies whose regret performance appears to be at or better than the best apparently currently available, and at low computational complexity per decision. [Joint work with Xi Liu, Ping-Chun Hsieh and Anirban Bhattacharya].

Biography

P. R. Kumar's current focus includes Cyberphysical Systems, Security, Privacy, Unmanned Aerial System Traffic Management, 5G, Wireless Networks, Machine Learning, and Power Systems. He studied at IIT Madras and Washington Univ., St. Louis. He was a faculty member in the Math Dept at UMBC (1977-84), and ECE and CSL at UIUC (1985-2011). He is currently at Texas A&M Univ., where he is a Regents Professor, University Distinguished Professor, and holds the O'Donnell Foundation Chair I. He is a member of the U.S. National Academy of Engineering, The World Academy of Sciences, and Indian National Academy of Engineering. He was awarded a Doctor Honoris

Causa by ETH, Zurich. He received the IEEE Field Award for Control Systems, Eckman Award of AACC, Ellersick Prize of IEEE ComSoc, Outstanding Contribution Award of ACM SIGMOBILE, Infocom Achievement Award, SIGMOBILE Test-of-Time Paper Award, and COMSNETS Outstanding Contribution Award. He is a Fellow of IEEE and ACM. He is an Honorary Professor at IIT Hyderabad. He was awarded a Distinguished Alumnus Award from IIT Madras, Alumni Achievement Award from Washington University, St. Louis, and Drucker Eminent Faculty Award from the University of Illinois, Urbana-Champaign.