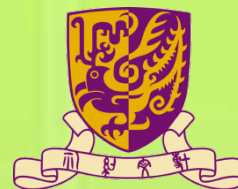


Faculty of Engineering Distinguished Lecture

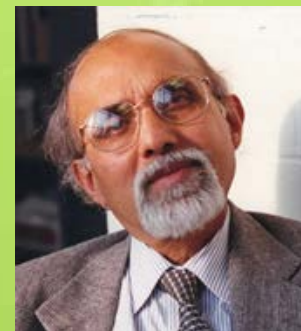


Hosted by Institute of Theoretical Computer Science and Communications

Information and Entropy Flow in Stochastic Control

Prof. Sanjoy Mitter

Professor of Electrical Engineering
Massachusetts Institute of Technology



Date: **23 January, 2018** Time: **4:00pm – 5:15pm**

Venue: **Room 121, Ho Sin Hang Engineering Building, CUHK**

Abstract

In this talk I discuss an Information- Theoretic Characterization of Nonlinear Estimation and certain Problems of Stochastic Control. The Characterization is in terms of Shannon Information and its relationship to Fisher Information. These ideas are naturally related to Interactive Statistical Mechanics.

This is joint work with Nigel Newton of the University of Essex

About the Speaker

Sanjoy K. Mitter received his Ph.D. degree from the Imperial College of Science and Technology, University of London, in 1965. He joined MIT as a Visiting Professor in 1969, and in 1973 he became a Professor of Electrical Engineering. He was the Director of the MIT Laboratory for Information and Decision Systems from 1981 to 1999 and Director of the Center for Intelligent Control Systems, an inter-university (Brown-Harvard-MIT) center for research on the foundations of intelligent systems from 1986-2000.

Prof. Mitter's research has spanned the broad areas of Systems, Communication and Control. Although his primary contributions have been on the theoretical foundations of the field, he has also contributed to significant engineering applications, notably in the control of interconnected power systems, character recognition, and automatic recognition and classification of electrocardiograms. His current research interests are theory of stochastic dynamical systems, nonlinear filtering, stochastic and adaptive control; mathematical physics and its relationship to system theory; image analysis and computer vision; and structure, function and organization of complex systems.

Prof. Mitter has served on several advisory committees and editorial boards for IEEE, SIAM, AMS, NSF and ARO. He is currently Associate Editor of the Journal of Applied Mathematics and Optimization; Random and Computational Dynamics; Sankhya and the Ulam Quarterly and Editor-at-Large for Communications in Information and Systems. He is a fellow of the IEEE and was the recipient of the 2000 IEEE Control Systems Award. He was elected a Foreign Member of Istituto Veneto di Scienze, Lettere ed Arti in 2003. In 1988 he was elected to the National Academy of Engineering.

Registration: www.erg.cuhk.edu.hk/erg/Events

Enquiry: Prof. Chandra Nair (chandra@ie.cuhk.edu.hk),
Institute of Theoretical Computer Science and Communications
(itcsc@cuhk.edu.hk)

All are welcome