講演会のご案内

A Short Course on Stochastic Analysis, Estimation, and Control

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日付: 2018年06月21日，Ⅰ: 11:00-12:30，Ⅱ: 15:15-16:45

場所: Ⅰ: 2-408，Ⅱ: 2-415

ABSTRACT: Since randomness almost always exists in real systems and in observation data, and since the random process is sometimes used to model the uncertainty in systems, it is reasonable to consider the object as a stochastic system and to consider its estimation and control issues. This short course aims to give a brief introduction to the estimation and control of discrete-time stochastic systems. Started with some preliminaries on stochastic analysis, this short course will cover a number of well-studied topics which include the online parameter estimation for time-invariant and time-varying systems, Kalman filter, optimal tracking, optimal control for quadratic cost, model reference control, and self-tuning regulator.

Part 1.1 Preliminaries on Stochastic Analysis
Part 1.2 Kalman Filter
Part 1.3 Online Parameter Estimation for Time-invariant Systems
Part 1.4 Online Parameter Estimation for Time-varying Systems
Part 2.1 Optimal Tracking
Part 2.2 Optimal Control for Quadratic Cost
Part 2.3 Model Reference Control
Part 2.4 Self-tuning Regulator

BIOGRAPHY OF WENXIAO ZHAO

Wenxiao Zhao earned his BSc degree from the Department of Mathematics, Shandong University, China in 2003 and a PhD degree from the Institute of Systems Science, AMSS, the Chinese Academy of Sciences (CAS) in 2008. After this he was a postdoctoral student at the Department of Automation, Tsinghua University. Dr. Zhao then joined the Institute of Systems of Sciences, CAS in 2010. He now is with the Key Laboratory of Systems and Control, CAS as an associate professor. His research interests are in system identification, adaptive control, and related topics. He serves as the general secretary of the IEEE Control Systems Beijing Chapter, an associate editor of the Journal of Systems Science and Mathematical Sciences and an associate editor of IEEE CSS Control Systems Letters.

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