SEMINAR SERIES

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Towards Optimal and Adaptive Control for Large-scale Systems

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报告摘要：

Classical control theory does not scale well for large systems like traffic networks, power networks and chemical reaction networks. To change this situation, new approaches need to be developed, not only for analysis and synthesis of controllers, but also for modelling and verification. In this lecture we will present some classes of networked control problems for which scalable distributed controllers can be optimised efficiently. Moreover, we will discuss how the lack of accurate models can be addressed using new methods for adaptive control with provable robustness bounds for the closed loop system, including the nonlinear learning procedure.

报告人简介：

Anders Rantzer was appointed professor of Automatic Control at Lund University, Sweden, after a PhD at KTH Stockholm in 1991 and a postdoc 1992/93 at IMA, University of Minnesota. The academic year of 2004/05 he was visiting associate faculty member at Caltech and 2015/16 he was Taylor Family Distinguished Visiting Professor at University of Minnesota. Rantzer has served as chairman of the Swedish Scientific Council for Natural and Engineering Sciences as well as the Royal Physiographic Society of Lund. He is a Fellow of IEEE and member of the Royal Swedish Academy of Engineering Sciences. His research interests are in modeling, analysis and synthesis of control systems, with particular attention to scalability, adaptation and applications in energy networks.

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