数学与系统科学研究院学术报告

报告题目：On Decentralized Control of Discrete-Event Systems

报 告 人：W.M. Wonham, Systems Control Group, ECE Department, University of Toronto

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摘要：

In this talk I will first recall the background Supervisory Control Theory (SCT) for centralized or 'monolithic' control, and then summarize a recent design approach to modular decentralized control developed together with Ph.D. student Feng Lei. This is based on the 'synchronous noncomflicting' property of component agents and the concept of 'natural observer' for language projection. In conclusion we report on the complexity of computing a natural observer from a given 'natural projection' and an algorithm for practical design.

报告人简介及联系方式：

W. M. Wonham received the B. Eng. degree in engineering physics from McGill University in 1956, and the Ph.D. in control engineering from the University of Cambridge (U.K.) in 1961. From 1961 to 1969 he was associated with several U.S. research groups in control. Since 1970 he has been a faculty member in Systems Control, with the Department of Electrical and Computer Engineering of the University of Toronto.

Wonham's research interests have included stochastic control and filtering, geometric multivariable control, and discrete-event systems. He is the author of "Linear Multivariable Control: A Geometric Approach" (Springer- Verlag: 3rd ed. 1985) and co-author (with C. Ma) of "Hierarchical Control of State Tree Structures" (Springer-Verlag: 2005).

Wonham is a Fellow of the Royal Society of Canada, a Life Fellow of the IEEE, and (2005) a Foreign Associate of the (U.S.) National Academy of Engineering. In 1987 he received the IEEE Control Systems Science and Engineering Award and in 1990 was Brouwer Medallist of the Netherlands Mathematical Society. In 1996 he was appointed University Professor in the University of Toronto, and in 2000 University Professor Emeritus.

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