数学与系统科学研究院学术报告

报告题目：The challenges for mechanisms and applications of cyber-physical Systems

报 告 人: P. R. Kumar(Texas A&M University)

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摘要：

Cyber-physical systems represent a third generation platform enabling large scale control systems, after the earlier two generations of analog control and digital control. This new platform poses multiple challenges at many levels to building reliable systems, both at the level of enabling mechanisms as well as in application design and analysis. We will address several problems related to providing guarantees on timeliness of communications, proofs of safety, and design of distributed systems.

Bio:

P. R. Kumar is at Texas A&M University, where he holds the College of Engineering Chair in Computer Engineering. His current research is focused on energy systems, wireless networks, secure networking, automated transportation, and cyberphysical systems. Kumar is a member of the National Academy of Engineering of the USA, and a fellow of the World Academy of Sciences. He was awarded an honorary doctorate by the ETH, Zurich. He received the Outstanding Contribution Award of ACM SIGMOBILE, the IEEE Field Award for Control Systems, the Donald P. Eckman Award of the American Automatic Control Council, and the Fred W. Ellersick Prize of the IEEE Communications Society. He is an ACM Fellow and a Fellow of IEEE. He is an Honorary Professor at IIT Hyderabad, and a D. J. Gandhi Distinguished Visiting Professor at IIT Bombay.