

DISTINGUISHED LECTURER SERIES

T H E I N S T I T U T E F O R S Y S T E M S R E S E A R C H



Bruce Krogh

Professor, Electrical and
Computer Engineering
Carnegie Mellon
University

Thursday, May 1, 5:00 p.m.

Applications of Formal Methods in Model-Based Development of Embedded Control Systems

In many applications, testing accounts for a significant portion of the time and cost to develop and deploy control systems, and projections indicate that the cost of testing will be prohibitive for future systems using current methods for verification and certification. To reduce testing, new methods are needed for guaranteeing the correctness of control system implementations at design time, and these methods need to become an integral part of the system certification process. This talk will review possible ways that formal methods can be used in model-based development to help reduce testing and some recent developments in verification methods for hybrid systems will be presented. The talk will conclude with some observations concerning the use of formal methods for design.

Biography

Bruce H. Krogh is professor of electrical and computer engineering at Carnegie Mellon University. He is a past Associate Editor of the IEEE Transactions on Automatic Control and Discrete Event Dynamic Systems: Theory and Applications, and founding Editor-in-Chief of the IEEE Transactions on Control Systems Technology. Dr. Krogh is a Distinguished Member of the IEEE Control Systems Society and a Fellow of the IEEE. His current research interests include design and verification of embedded control systems, discrete event and hybrid dynamic systems, and information processing in wireless sensor networks.

**Questions? Call ISR at
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A. JAMES CLARK
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Reception

Thursday, May 1, 4:30 p.m.
1115 Computer Science
Instructional Center (CSIC)

Lecture

Thursday, May 1, 5:00 p.m.
1115 Computer Science
Instructional Center (CSIC)

Roundtable discussion

Friday, May 2, 10:00 a.m.
1146 AV Williams Building

Host

Eyad Abed