Alongkrit Chutinan  
Mathworks Inc.  
Hosted by: Prof. Bruce Krogh – ECE Dept.

“Introduction to Conditionally Executed Subsystem Semantics in Simulink”

(Note: Different Time/Room Location)  
GHC-8102  
Friday, April 30, 2010  
11:00 AM

Abstract:  
Model-based design in the context of Simulink and Real-Time Workshop involves the use of Simulink models as executable specifications throughout the development of complex embedded systems in a variety of application domains. The advent of model-based design has significantly transformed Simulink in the past decade. As more companies are using Simulink and Real-Time Workshop to generate and deploy code in their embedded systems, there has been a steadily increasing demand for the ability to control the generated code and characterize embedded system parameters in Simulink. In this presentation, we take a look at conditionally executed subsystems, a set of special subsystems that are popular among our customers as a way to explicitly specify control flows for the generated code. We will also discuss the augmentation of the original Simulink semantics to accommodate the new types of subsystem and highlight common semantic issues that our customers encounter when using these subsystems.

Alongkrit Chutinan received the B.S., M.S., and Ph.D. degrees in electrical and computer engineering from Carnegie Mellon University, Pittsburgh, PA, in 1995, 1996, and 1999, respectively. His Ph.D. research topic was in the area of dynamical systems and control with emphasis on hybrid systems verification. In 2004, he joined MathWorks, Inc., Natick, MA, as a software development engineer for Simulink and Real-time Workshop product family. His work to date includes features such as the Concatenate and Permute Dimensions blocks and the simplified initialization mode for Simulink. He is currently responsible for maintaining simulation infrastructure and developing new features for subsystems and model initialization.

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