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Automatic  
Control &  
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Engineering.

The Department of Automatic Control & Systems Engineering is pleased to announce the following seminar:

## **Control of Partial Differential Equations and Delay Systems**

Speaker: **Professor Miroslav Krstic**  
*Department of Mechanical & Aerospace Engineering*  
*University of California, San Diego*

**Thursday, 22<sup>nd</sup> August 2013 at 14:00**

Location: LT01, Sir Frederick Mappin Building

### **Abstract**

Several physically-inspired stabilization problems modeled by partial differential equations or ODEs with long delays will be presented. In all problems infinite-dimensional dynamics sit in between the control input and the source of instability or uncertainty. The backstepping approach enables the construction of an infinite-dimensional feedback transformation into a stable closed-loop system and of a Lyapunov-Krasovskii functional for establishing the stability guarantees. The delay system problems covered in the presentation include delays that are time-varying, and even state dependent, for general nonlinear plants.

**Miroslav Krstic** received his Ph.D. in electrical engineering from the University of California, Santa Barbara, in 1994. After two years as assistant professor of mechanical engineering at the University of Maryland, he joined UCSD in 1997. Krstic presently holds the Daniel L. Alspach chair in Dynamic Systems and Control and is the founding director of the Cymer Center for Control Systems and Dynamics. Krstic has held the Russell Severance Springer Distinguished Visiting Professorship at UC Berkeley and the Harold W. Sorenson Distinguished Professorship at UC San Diego. He is a recipient of the PECASE, NSF Career, and ONR Young Investigator Awards, as well as the Axelby and Schuck Paper Prizes. Krstic was the first recipient of the UCSD Research Award in the area of engineering. He is a Fellow of IEEE and IFAC and serves as Senior Editor in IEEE Transactions on Automatic Control and Automatica. He has served as Vice President of the IEEE Control Systems Society.