



Seminar Series of the



AFRL/VA and AFOSR

**Collaborative Center of Control Science (CCCS)**

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## **Functional Gain Computations for Distributed Parameter Systems**

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Tuesday, September 30, at 10:30am  
260 Dreese Labs  
Dept. Electrical Engineering  
The Ohio State University

### **Abstract**

In this talk, we discuss computational methods for computing functional gains. These gains are useful representations of feedback control laws that can impact a number of control design decisions such as optimal actuator and sensor placement. For special cases with a low number of actuators and controlled outputs, we look at Chandrasekhar algorithms to compute the gains efficiently. Numerical results will be presented for controlling one- and two-dimensional PDE systems, including control of flow in a driven cavity.

### **Biography**

Dr. Borggaard received his BS ME, MS ME, and MS degrees in Applied Math from Worcester Polytechnic Institute in 1986, 1988 and 1990, respectively, and his PhD from Virginia Tech in 1995. After working as a postdoc at Virginia Tech and Cornell University until 1998, he returned to Virginia Tech, where he is currently an associate professor of Mathematics. He is a recipient of the **AF** Presidential Early Career Award for Scientists and Engineers, in 2000.