



# THE UNIVERSITY OF CHICAGO

Departments of Computer Science, Mathematics, Statistics, and the Computation Institute  
**SCIENTIFIC AND STATISTICAL COMPUTING SEMINAR**

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Duke University

## **Multiscale Analysis of Solid Materials: From Electronic Structure Models to Continuum Theories**

**THURSDAY, October 10, 2013, at 4:30 PM**

Eckhart 133, 5734 S. University Avenue

### **ABSTRACT**

Modern material sciences focus on studies on the microscopic scale. This calls for mathematical understanding of electronic structure and atomistic models, and also their connections to continuum theories. In this talk, we will discuss some recent works where we develop and generalize ideas and tools from mathematical analysis of continuum theories to these microscopic models. We will focus on macroscopic limit of electronic structure and atomistic models.

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