



INTERDISCIPLINARY CENTRE FOR  
ADVANCED MATERIALS SIMULATION

## ICAMS Special Seminar

Prof Richard LeSar

Department of Materials Science and Engineering

Iowa State University, Ames, USA

Friday, May 24, 2 p.m. ICAMS Seminar room 0.08

### Simulating Plasticity at the Mesoscale

In this talk I will introduce the basic methods by which we simulate plasticity. After a brief discussion about multiscale approaches (including atomistic simulations), simulations based on dislocations as the fundamental entities will be introduced, with the focus being on how one approaches the modeling of such a complex problem as plasticity. Examples of different approaches will be presented, as will applications of one approach to a number of systems at small and bulk scales. The pros and cons of the methodology will be emphasized.

The goal is to provide a sense of what is and is not possible (or plausible) with these simulations.

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