

Postdoctoral position at Stanford in materials simulations

Postdoctoral positions are available in the Micro and Nano Mechanics group led by Prof. Wei Cai in the Mechanical Engineering Department at Stanford University (<http://www.stanford.edu/~caiwei>).

The group's research focuses on fundamental mechanisms of material deformation at the micro and nano scales by means of computer simulations and theoretical modeling of imperfections in solids. For example, we are currently investigating deformation behavior of metal micro pillars and semiconductor nano wires using Dislocation Dynamics (mesoscopic) and Molecular Dynamics (atomistic) simulations.

One of the postdoctoral positions is available immediately starting in July 2007, to carry out a new three-year project funded by AFOSR that aims at understanding the interactions between ultrasound and dislocations and at enabling non-destructive evaluation of fatigue damage in structural materials. The successful candidate is expected to contribute to further development of *ParaDiS* (for *Parallel Dislocation Simulator*), an advanced large-scale Dislocation Dynamics simulation program developed by the Stanford group jointly with the *ParaDiS* team at the Lawrence Livermore National Laboratory (LLNL). Another important aspect of this project concerns coupling of the atomistic and mesoscopic models for inelastic deformation of materials.

Postdoctoral positions are also available in the general area of micro-mechanical modeling of materials.

Postdoctoral candidates should have earned a PhD in Solid Mechanics, Mechanical Engineering, or Materials Science. A strong computational background in the atomistic and continuum modeling of materials properties is preferred while some experience with scientific software development and massively parallel computing would be a definite plus. Interested candidates should send their curriculum vitae and a list of references to:

Prof. Wei Cai

caiwei@stanford.edu

Please mark your message on the subject line: application for the postdoctoral position.

This job posting is also on line at <http://www.stanford.edu/~caiwei/JobOpening>