Morphology of Particles in Stressed Solids

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Time: 3.30 pm – 4.30 pm
Venue: SPMS-Executive Classroom 1, MAS-03-06
School of Physical and Mathematical Sciences

Numerous structural materials are produced through solid state diffusional transformations. We discuss the modeling, the numerical methods and some numerical results in the diffusional evolution of microstructures in elastically stressed binary alloys. Equilibrium and growth shapes of a single precipitate embedded coherently in an infinite matrix are obtained for different materials and misfit strains.

Speaker Biography

Dr Xiaofan Li received his BS in Applied Mathematics at Zhejiang University in 1987, MS and PhD in Applied Mathematics at UCLA in 1993. He was a postdoc at UCSD and Ohio State University from 1994 to 1999. He joined the Department of Applied Mathematics at Illinois Institute of Technology in 1999 as an Assistant Professor and became Associate Professor in 2005. He is also the Director of Graduate Studies since 2005. His research interests include suspension of deformable particles, phase transformation in binary alloys and boundary integral methods.

Host: Mathematical Imaging and Vision Research Group, Division of Mathematical Sciences, School of Physical and Mathematical Sciences

Website: http://www1.spms.ntu.edu.sg/~image