

Special Issue

ASME Journal of Engineering Materials and Technology “Multi-Scale Modeling of Deformation and Fracture”

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Prolegomena

A symposium on multi-scale modeling of deformation and fracture was held on September 27–30, 1998 at Washington State University as a part of the 35th technical annual meeting of the Society of Engineering Science. The motivation for this symposium was to bring together scientists and engineers who are working on the problem of deformation and fracture from different perspectives and scales, spanning the hierarchy from the atomic scale to the continuum scale. The symposium consisted of a number of sessions covering 1) atomic-scale modeling, 2) discrete dislocation dynamics modeling (micro-scale), 3) polycrystalline modeling (meso-scale), 4) continuum modeling (macro-scale) and 5) advances in experimental methods. This special issue constitutes a small collection of new approaches to the problem of deformation and fracture. The papers presented in this issue give a wide range of numerical and

experimental techniques and provide a flavor of various modeling and theoretical approaches to the problem.

We would like to extend our special thanks to all the participants in the symposium who contributed to this special volume of JEMT.

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