

7 Publications

7.1 Structures and Materials

- Albe, K., K. Nordlund, and R. S. Averback, "Modeling Metal-semiconductor Interaction: Analytical Bond-order Potential for Platinum-carbon," *Phys. Rev. B* (submitted).
- Albe, K., K. Nordlund, J. Nord, and A. Kuronen, "Modeling of Compound Semiconductors: Analytical Bond-order Potential for GaAs," *Phys. Rev. B* (submitted).
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- Ashkenazy, Y., K. Albe, and R. S. Aveback, "Nanocluster Rotation on Pt Surfaces: Twist Boundaries," *Phys. Rev. B* (accepted for publication).
- Bellur-Ramaswamy, R. S., R. B. Haber, N. A. Sobh, and D. A. Tortorelli, "Modeling and Optimization of Extrusion Process," Sixth U.S. National Congress on Computational Mechanics, Dearborn, MI, 195, August 2001.
- Bellur-Ramaswamy, R. S., R. Haber, N. A. Sobh, D. A. Tortorelli, "Modeling and Process Optimization for Functionally Graded Materials," in review, 2001.
- Crane, N., and I. D. Parsons, "A Scalable Multilevel Adaptive Meshing Scheme for Unstructured 3D Meshes," Sixth U.S. National Congress on Computational Mechanics, Dearborn, MI, July-August 2001.
- Crane, N., and I. D. Parsons, "Advanced Adaptive Multigrid Tools for Rigid Airport Pavements," Proceedings of the Second International Symposium on 3D Finite Elements for Pavement Analysis, Design and Research, Charleston, WV, October 2000.
- Estrada, H., and I. D. Parsons, "FRP Stub Flange Joint Design Procedures," *Journal of Pressure Vessel Technology* (submitted).
- Fiedler, R., X. Jiao, A. Namazifard, A. Haselbacher, F. Najjar, and I. D. Parsons, "Coupled Fluid-Structure 3-D Solid Rocket Motor Simulations," AIAA/ASME/SAE/ASEE Joint Propulsion Conference, Salt Lake City, UT, 2001-3954, July 2001.
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- Haber, R. B., L. Yin, and A. Acharya, "A Space-time Discontinuous Galerkin Method for Elastodynamics Using Implicit-explicit Grids," ICTAM 2000, Chicago, IL, August 2000.

- Hales, J., and I. D. Parsons, "The Parallel Performance of an Implicit Multigrid Contact Algorithm," Sixth U.S. National Congress on Computational Mechanics, Dearborn, MI, July-August 2001.
- Hjelmstad, K. D., and E. Taciroglu, "Mixed Methods and Flexibility Approaches to Bernoulli-Euler Beam Finite Elements" International J. for Cons. Steel Research (accepted for publication).
- Hjelmstad, K. D., and E. Taciroglu, "Mixed Variational Methods for Finite Element Analysis of Geometrically Nonlinear, Inelastic Bernoulli-Euler Beams," Int. J. Numerical Methods Engineering (submitted).
- Hjelmstad, K. D., and E. Taciroglu, "The Variational Basis of Nonlinear Flexibility Methods for Structural Analysis of Frames," ASCE Journal of Engineering Mechanics (submitted).
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7.2 Fluid Dynamics

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7.3 Combustion and Energetic Materials

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