Curriculum Vitae for Rao V. Garimella

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Research Interests:

Unstructured Mesh Generation, Geometric Modeling, Computational Geometry, Finite Element Methods, Finite Volume Methods and Numerical Optimization.

Education:

Ph.D., Mechanical Engineering, 1998, Rensselaer Polytechnic Institute, Troy, NY.
MS, Mechanical Engineering, 1992, Ohio University, Athens, OH.
BS, Mechanical Engineering, 1989, S J College of Engineering, Mysore, India.

Employment:

Staff Scientist, T-7, Los Alamos National Laboratories. (06/01 - Present)
Postdoctoral Research Associate, T-7, Los Alamos National Laboratories. (06/01 - 06/02)
Postdoctoral Research Associate, EES-6, Los Alamos National Laboratories. (06/99 - 06/01)
Postdoctoral Research Fellow, SCOREC, Rensselaer Polytechnic Institute. (01/99 - 06/99)
Research Assistant, SCOREC, Rensselaer Polytechnic Institute. (05/93 - 01/99)
Research Assistant, Mechanical Engineering, Ohio University. (01/90 - 07/92)
Project Engineer, Aerospace Engineering, Indian Institute of Science, India. (01/90 - 06/90)

Publications:

[1] P. Vachal, R. V. Garimella, and M. J. Shashkov. Untangling of 2d meshes in ale simulations. *Journal of Computational Physics*, to appear 2004.

[2] R. V. Garimella, M. J. Shashkov, and P. M. Knupp. Triangular and quadrilateral surface mesh quality optimization using local parametrization. *Computer Methods in Applied Mechanics and Engineering*, 193(9-11):913–928, Mar 2004.

[3] R. V. Garimella and B. K. Swartz. Curvature estimation for unstructured triangulations of surfaces. Technical Report LA-UR-03-8240, Los Alamos National Laboratory, Nov 2003.

[4] R. V. Garimella. Mesh data structure selection for mesh generation and FEA applications. *International Journal of Numerical Methods in Engineering*, 55(4):451–478, Oct 2002.

[5] B. K. Karamete, R. Garimella, and M. S. Shephard. Recovery of an arbitrary edge on an existing surface mesh using local mesh modifications. *International Journal for Numerical Methods in Engineering*, 50(6):1389–1409, Feb 2001.

[6] R. V. Garimella and M. S. Shephard. Boundary layer mesh generation for viscous flow simulations. *International Journal of Numerical Methods in Engineering*, 49(1-2):193–218, Sep 2000.

[7] R. V. Garimella and M. S. Shephard. Generation of tetrahedral meshes with multiple elements through the thickness. *Engineering with Computers*, 15(2):181–197, 1999.