Rao V. Garimella - Lifetime Publications

Journal publications

1. Shephard, M.S., Beall, M.W., Garimella, R. and Wentorf, R. “Automatic construction of 3-D models in multiple scale analysis,” *Computational mechanics*, v 17, n 3, pp. 196-207, Dec 1996.
2. Agrawal S.K., Garimella, R. and Desmier, G. “Free-Floating Closed-Chain Planar Robots: Kinematics and Path Planning,” in *Nonlinear Dynamics*, v 9, pp. 1-19, Feb 1996.
3. Agrawal, S.K. and Garimella, R.”Kinematics, Workspace, and Design of a Dual-Arm Spatial Robot in Zero Gravity,” *Journal of mechanical design*, v 116, n 3, pp. 901-907, Sep 1994.
4. Karamete, B.K., Garimella, R. and Shephard M.S. “Recovery of an Arbitrary Edge on an Existing Surface Mesh using Local Mesh Modifications,” in preparation for submission to *International Journal of Numerical Methods in Engineering*, 1998.
5. Garimella, R.V. and Shephard M.S. “Unstructured Anisotropic Tetrahedral Mesh Generation for Viscous Flow Simulations in Complex Geometric Domains,” in preparation for submission to *International Journal of Numerical Methods in Engineering*, 1998.
6. Garimella R.V. and Shephard M.S. “Anisotropic Tetrahedral Mesh Refinement through the Thickness of Arbitrarily Complex Geometric Domains,” in preparation for submission to *International Journal of Numerical Methods in Engineering*, 1998.
7. Garimella R.V. and Shephard M.S. “Construction of Non-Manifold Representations from Appropriately Defined Assemblies in Two-Manifold Geometric Modeling Systems,” in preparation for submission to *Engineering with Computers*, 1998.

Conference publications

1. Garimella, R.V. and Shephard, M.S. “Boundary Layer Meshing for Viscous Flows in Complex Domains,” accepted for publication in the *Proceedings of the 7th International Meshing Roundtable*, organized by Sandia National Laboratories, Dearborn, MI, Oct 1998.
2. Garimella, R., Shephard, M.S. and Webster, B.E. “Automatic Mesh Generation Of Complex Configurations Including Viscous Boundary Layers,” to appear in *Proceedings of the 10th International Conference on Finite Elements in Fluids*, Tucson, AZ, Jan 98.
3. Garimella, R. and Shephard, M.S. “Tetrahedral Mesh Generation with Multiple Elements Through The Thickness,” *Proceedings of 4th International Meshing Roundtable Conference*, pp. 321-334, Albuquerque, NM, Oct 95.
4. Shephard, M.S., Sham, T.-L., Song, L.-Y. and Garimella, R. “The Use of ABAQUS in the Automated Global/Local Thermomechanical Analysis of Multichip Modules,” in *Proceedings of the Abaqus Users Conference,* Newport, RI, pp. 475-490, Jun 94.
5. Shephard, M.S., Sham, T.L., Song, L.Y., Wong, V.S., Garimella, R., et.al. “Global/local analyses of multichip modules: automated 3-D model construction and adaptive finite element analysis,” in *ASME, EEP Advances in Electronic Packaging, Proceedings of the 1993 ASME International Electronics Packaging Conference*, v4-1, pp. 39-48, Binghamton, NY, Sep 29-Oct 2 1993.
6. Agrawal, S.K. and Garimella, R. “Path planning algorithm for a free-floating closed-chain planar manipulator,” in *ASME, Design Engineering Division (Publication) DE, Flexible*

Mechanisms, Dynamics, and Analysis 22nd Biennial Mechanisms Conference, v 47, pp. 645-652, Scottsdale, AZ, Sep 13-16 1992.

7. Agrawal, S.K., Garimella, R. "Inverse kinematic solutions of free-floating closed-chain planar manipulators," in *ASME, Design Engineering Division (Publication) DE, Advances in Design Automation 17th Design Automation Conference at the 1991 ASME Design Technical Conferences,* v 32, n pt 2, Miami, FL, 1991.

Conference presentations

1. Garimella, R., Shephard, M.S. and Webster, B.E. "Automatic Mesh Generation Of Complex Configurations Including Viscous Boundary Layers," *10th International Conference on Finite Elements in Fluids*, Tucson, AZ, Jan 98.
2. Frey, P.J., Shephard, M.S., Dey, S., Garimella, R. and Georges, M.K. "Optimization of Tetrahedral Meshes using Local Retriangulation," in *Third U.S. National Congress on Computational Mechanics*, Dallas, TX, Jun 12-14, 1995.
3. Garimella, R., Shephard M.S. "Mesh Generation for Viscous Flow Analysis in Complex Geometric Domains," in *Fourth U.S. National Congress On Computational Mechanics*, San Francisco, CA, Aug 6-8, 1997.
4. Garimella, R. and Shephard, M.S. "Tetrahedral Mesh Generation with Multiple Elements Through The Thickness," *4th International Meshing RoundTable Conference*, Albuquerque, NM, Oct 95.
5. Shephard, M.S., Sham, T.-L., Song, L.-Y. and Garimella, R. "The Use of ABAQUS in the Automated Global/Local Thermomechanical Analysis of Multichip Modules," *Abaqus Users Conference*, Newport, RI, Jun 94.
6. Shephard, M.S., Sham, T.L., Song, L.Y., Wong, V.S., Garimella, R., et.al. "Global/local analyses of multichip modules: automated 3-D model construction and adaptive finite element analysis," *ASME International Electronics Packaging Conference*, Binghamton, NY, Sep 29-Oct 2 1993.
7. Agrawal, S.K. and Garimella, R. "Path planning algorithm for a free-floating closed-chain planar manipulator," in ASME, Design Engineering Division (Publication) DE, Flexible Mechanisms, Dynamics, and Analysis 22nd Biennial Mechanisms Conference, v 47, pp. 645-652, Scottsdale, AZ, Sep 13-16 1992.
8. Agrawal, S.K., Garimella, R. "Inverse kinematic solutions of free-floating closed-chain planar manipulators," in ASME, Design Engineering Division (Publication) DE, Advances in Design Automation 17th Design Automation Conference at the 1991 ASME Design Technical Conferences, v 32, n pt 2, Miami, FL, 1991.

Technical Reports:

1. Agrawal S.K., Garimella, R. and Desmier G. "Optimal Workspace Designs of Free-floating Planar Manipulators," *NASA Technical Memorandum 103274*, pp. 1653-1658, published by NASA, Washington, DC, Nov 1990.

2. Garimella, R., et. al. “Finite Octree Mesh Generation and Output Options,” Technical Report #5-1994, Scientific Computation Research Center, Rensselaer Polytechnic Institute, Troy, NY 12180, Jan 1994.

3. Garimella, R., et. al. “Specification of Mesh Control Functions in Finite Octree,” Technical Report #5-1994, Scientific Computation Research Center, Rensselaer Polytechnic Institute, Troy, NY 12180, Jan 1994.

4. Garimella R., “Support of non-manifold modeling with manifold models”, Technical Report, Scientific Computation Research Center, Rensselaer Polytechnic Institute, Troy, NY 12180, 1993.

5. Garimella R. and Shephard M.S. “Mesh Generation of ICCA Models Using Finite Octree,” Technical Report (submitted to ARPA-ICCA group), Scientific Computation Research Center, Rensselaer Polytechnic Institute, Troy, NY 12180, 1995.

6. “REPAS - Rensselaer Electronic Packaging Analysis Software Users’ Manual,” Technical Report #17-1994, Scientific Computation Research Center, Rensselaer Polytechnic Institute, Troy, NY 12180, 1994.

7. “REPAS - Rensselaer Electronic Packaging Analysis Software Programmers’ Manual,” Technical Report #18-1994, Scientific Computation Research Center, Rensselaer Polytechnic Institute, Troy, NY 12180, 1994.