Ghodrat Karami, PhD, MS, BS, CEng, DIC, MIMech, Mem. ASME
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Education

- Ph.D., Mechanical Engineering, 1984, Imperial College of Science and Technology, University of London, England.
- MS, Applied Mechanics, 1980, Imperial College of Science and Technology, University of London, England.
- BS, Mechanical Engineering, 1978, Shiraz University, Shiraz, Iran.

Research Interests

Multiscale Computational Mechanics, Biomechanics, Cellular Mechanics, Micromechanics and Composites Analysis, Continuum Mechanics, Contact, Impact, and Fracture Mechanics, Plates, Shells and Structural Analysis, Elasto-hydrodynamic Lubrication, Finite and Boundary Elements, Multiscale Engineering Education

Professional Experience

- Associate Professor, Dept. of Mechanical Engineering and Applied Mechanics, NDSU, Fargo, August 2003-
- Research Associate and Visiting Professor, Dept. of Mechanical Engineering, University of Wyoming, August 2002-July 2003
- Visiting Adjunct Professor, School of Mechanical Engineering, Washington State University, August 2001-July 2002
- Professor, Dept. of Mechanical Engineering, Shiraz University, 1993-2001
- Associate Professor, Dept. of Mechanical Engineering, Shiraz University, 1989-1993
- Assistant Professor, Dept. of Mechanical Engineering, Shiraz University, 1986-1989
- Research Fellow, Dept. of Mechanical Engineering, University of Wales, Cardiff, U.K., 1984-1986.
- Chairman, Dept. of Mechanical Engineering, Shiraz University, 1987-1989.
- Shiraz University Industrial Liaison, 1991-1993
- Visiting Professor, Institute of Technische Mechanik, University of Erlangen-Nuremberg, Germany, 1990-1991, 1992-1993 and 2001.

Teaching Activities

(a) Courses Taught at Graduate Level

Continuum Mechanics, Advanced Continuum Mechanics, Fracture Mechanics, Finite Elements, Nonlinear Finite Elements, Boundary Elements, Advanced Numerical Methods, Advanced Mechanical Engineering Design, Engineering Analysis, Theory of Elasticity, Plates and shells, Nonlinear Mechanics, Composite Analysis and Design

(b) Courses Taught at undergraduate Level

Mechanics (Statics, Dynamics), Mechanics of Materials, Intermediate and Advanced Mechanics and Strength of Materials, Mechanical Engineering Design I and II, Computer Aided Design, Finite Elements, Continuum Mechanics, Numerical Methods, Strength of Materials Lab

(c) Current Teaching Activity

Mechanics of Materials ME 223, Intermediate Mechanics of Materials ME423, Finite Elements ME477/677, Machine Design ME442, Fracture Mechanics ME796, Advanced Mechanics and Failure of Composite Materials ME 725, Advanced Finite Elements ME712, Advanced Engineering Analysis, ME711

Professional Services

(a) Professional Membership

- Member, American Society for Engineering Education, 2003-
- Member, American Society of Mechanical Engineers, 1986-
- Member, Institution of Mechanical Engineers, London, 1991-
- Member, Iranian Society of Mechanical Engineers, 1992-2001
- Charted Engineer (CEng), from Institution of Mechanical Engineers, London
- Member of International Society of Boundary Elements-1988-
- Member of Association of Numerical Methods in Engineering, 1987-

(b) Editorial activity

Member of Editorial or Advisory Board to

- International Journal of Modeling and Simulation, ACTA Press
- Iranian Journal of Science and Technology, Shiraz University Press
- Scientia Iranica, Sharif University of Technology press
- Asian J. of Structural Engineering
- Amirkabir Journal, Amirkabir University Press
- International J. of Engineering
- Communication in Boundary Elements Analysis
- Journal of Iranian Society of Mechanical Engineers

(c) Conference Organizer or Member of the Organizing Committee

- 3rd International Iranian Congress of Civil Engineering, University of Shiraz, Shiraz, May 1990
- 4th Annual Conference of Iranian Society of Mechanical Engineers, Shiraz University, Shiraz, Iran, May 14-17, 1996.
- 1st International Iranian Conference on computational Mechanics, June 1992.
- 7th Annual Conference of Iranian Society of Mechanical Engineers, Sistan and Baluchestan University, Zahedan, Iran, ISME Conference, Rasht, Guilan, May 2001 Proc. of
- 3rd Iranian Rubber Technology Seminar, Iran Rubber Research Engineering Co., Tehran, Iran (2000).
- 8th Annual ISME Mechanical engineering Conference, Rasht, Guilan, May 2001

(d) University committee member

At NDSU

- NDSU Academic Affair Committee, May 2007-
- NDSU Program Review Committee 2004-2006
- Dept. of Mechanical Engineering Strategic Planning Committee, 2005-
- Dept. of Mechanical Engineering Undergraduate Committee, 2005-
- Dept. of Mechanical Engineering-Computer Advisory Committee, 2005-
- Dept of Mechanical Engineering Scholarship Selection Committee, 2005-
- College of Engineering and Architecture Graduate Committee 2004-2005
- Dept of Mechanical Engineering Mechanics Group Committee, 2005-

At Shiraz University

- Shiraz University Press Council 1995- 2001
- Shiraz University School of Engineering Strategic Committee, 1998-2001.
- Shiraz University School of Engineering Computational Mechanics Committee, 1991-2001
- Shiraz University School of Engineering Research Committee 1993-1998
- Shiraz University School of Engineering Education Committee 1989-1991
- Chair of several Ph.D. graduate committees at Shiraz University and also, at Sharif, AmirKabir and Tarbiat Moddarres Universities in Tehran.

(e) Reviewers to:

Int. Journal for Numerical Methods in Engineering, J. of Solids & Structures, J. of sounds and Vibration, J. of Fracture, Computer and Structures, Computer Methods in Applied Mechanics and Engineering, Engineering Analysis with Boundary Elements, Communication in Numerical Methods in Engineering …

Honors and Awards:

- 2007 College of Engineering and Architecture Researcher of the year
- Member, New York Academy of Sciences,
- NDSU College of the Engineering and Architecture Researcher of the Year Award 2007
- Teaching Mentor Participation Certification, NDSU provost 2007
- Germany Prestigious Alexander von Humboldt Fellowship Award, 1989, 2001
- Researcher of the year, Shiraz University 1988, 1993, 1997,2001
- Teacher of the year, Shiraz University 1996
- Iranian Ministry of Industry award for publishing best scientific paper, 1996
- Iranian Ministry of Guidance award for publishing the book on Boundary Elements, 1998
- ISME (Iranian Society of Mechanical Engineers) award for distinguished advisor to PhD student (D. Derkhshan) 1998
- ISME (Iranian Society of Mechanical Engineers) award for distinguished advisor to PhD student (M.R. Hematiyan) 2000
- Best paper award –ISME (Iranian Society of Mechanical Engineering), 1999,2000
- Youngest Engineering Professor Shiraz University, 1994
- Distinguished Student Award, Imperial College 1978
- Member of National Iranian Academy of Sciences 1993-2001
- Member of ASME (American Society of Mechanical Engineers), 1987-
- Member of IMechE (UK Institute of Mechanical Engineering), 1991-
- Member of editorial boards of several engineering journals (as listed)
- Member and organizer of Conferences on computational mechanics (as listed)
- Chartered Engineer (CEng) UK Professional Engineer, 1991-
- Member, New York Academy of Sciences
- Name in who's who in the world, 1998
- Name in Who's Who in Engineering, 2000
- Name in International Biography in 1999
- Imperial College of Science and Technology Scholarship Award for PhD education, 1980-
- Distinguished M.S. Graduate from Imperial College of Science and technology, University of London, DIC (Diploma of membership of Imperial College) award.
- Iranian Ministry of Higher Education of Iran Scholarship, 1978.
- Isfahan University of Technology Scholarship Award, 1979
- Top B.S. graduate student from Shiraz University in 1978

Funded Research Projects

(a) Current Research Grants

- (co-PI) Lightweight Composite Solutions for the Spartan SCOUT, an Unmanned Navy Patrol Vessel. Federal Appropriated Funding through the U.S. Navy and SpaceAge Synthetics, Inc. (*PI* Chad Ulven), $225,281.00, *Period*: 05/07 – 12/08.
- (PI) Blast and the Consequences on Traumatic Brain Injury- Multiscale Mechanical, ND DEPSCoR 2006, Modeling of Brain , 04/01/07-03/31/10, $468,804 (co-PI, Dr. Ziejewski)
- (PI) Transition from Continuum-based Mechanics to Multiscale Mechanics in Engineering Education, NSF CCLI, $125,000, NSF 0536126 (co-Pi R. Pieri,).
- ND-NASA EPSCoR, Travel Funding, $6280, Jan2007-July 2007.
- ND-EPSCoR, Summer Student $10000, (PI Dr. Chad Ulven)
- (PI) Micromechanical Characterization of Composites, ND EPSCoR, $27000, Faculty Start-up; 2003-2004.
- (co-PI) Supplemental Activities of Mechanical Characterization of Silicone Dielectric Gel, A Brain Substitute Material, Fargo-Moorhead Area Foundation, 11/01/2005-10/31/006, $30,000 (PI, Dr. M. Ziejewski)
- (co-PI) Mechanical Dynamic Response of Silicone Dielectric Gel, as a Brain Substitute Material, Fargo-Moorhead Area Foundation, 9/01/2006-8/31/2007, $49,000 (PI, Dr. M. Ziejewski)

(b) Past Research Grants

- Design of Z-shape Steerable Bogies for High-loaded Railways, supported by Iran Railways Industries, 1999-2001.
- Crash worthiness of SAIPA car in Iran, supported by Iran Ministry of Industry –Car section, 1994-1998.
- Mechanical Design and Analysis of Bias and Radial Tires, Iran Rubber Research and Engineering Company and Dena Tire Company, 1992-1997,
- Interface elements and their implementations in contact structural analysis, supported by Iran Ministry of Research, and Technological Developments, 1998-2000.
- Boundary element analysis for elasto-plastic contact problems in structural analysis, supported by Iran Ministry of Research, and Technological Developments, 1987-1990,
- Boundary elements for bending for plate bending Analysis, supported by Iran Ministry of Research, and Technological Developments, 1989-1993, 3 years.
- Development of ISAR code (a finite element package) for static, dynamic and stability analysis of spatial and skeletal structures (with Prof Farshad), supported by Iran Ministry of Research, and Technological Developments, 1988-1990.
- Elasto-hydrodynamic lubrication of bearings and spherical bodies by finite elements, supported by Iran Ministry of Research, and Technological Developments and Toos Bearing Manufacturing, 1993-1995.

- An algorithm for large deformation analysis and by Finite Elements, supported by Iran Ministry of Research, and Technological Developments, 1995-1997.

Professional Experiences:

Consultant to several major companies (mainly in car manufacturing) in Iran, some will include,

- Consultant and the design engineer of a sea port ship unloader, SA Company 1998-2000,
- Consultant to Fars Cement Factory -cement mill gearbox design 1999-2000,
- Consultant to Iran Combine Manufacturing Company - design of feeder house platform 1994-2000,
- Consultant to Iran Combine Manufacturing Company - design of a new mower1996-1998,
- Consultant to Iran Rubber Research and Engineering Company - design and mechanical analysis of bias and radial tires 1992-1997,
- Consultant to a company for hovercraft structural design and analysis1993-2000,
- Consultant to Iran ministry of industry, car manufacturing design section-crash worthiness. 1994-1999,
- Consultant to Iranian Railways industries -design of Steerable Bogies. 1999-2001,

Current Research Group

(a) Current Post-docs

Dr. Xuchun Ren, multiscale mechanics of tissue, September 2007-

(b) Current Research Students

1. Nabi Abolfathi, PhD, "Multiscale analysis of a cell- brain injury analysis", in progress expected graduation date Spring, 2009, (joint Advising with Dr. Ziejewski)
2. Mahdi Sotudeh Chafi, PhD, "Brain analysis under impact loading", in progress expected graduation date, Spring 2008, (joint Advising with Dr. Ziejewski)
3. Abhay Naik, MS, "Micromechanical Analysis of Viscoelastic Composites" in progress expected graduation date Spring, 2008
4. Nick Grundman, MS, "Micromechanical Analysis of Hyperelastic Composites" in progress expected graduation date Summer, 2008
5. Venkata Dirisala M.S., Biomechanics impact analysis, Spring 2009.

(c) Past Research Students

PhD as Major Professor

1. Davar Derakhshan, PhD, Continuum-based Elasto-plastic and Thermoelastic Large Deformation Analysis by Boundary Element Method, , June 1998.
2. Dr M R Hematiyan, PhD, Application of Coupled Boundary Elements and Finite Elements in Inverse Heat Conduction and Solidification Problems, August 2000.

3. P. Malekzadeh, PhD, DQM static, dynamic and stability analysis of Composite Laminates and beams, September 2003.
4. Ali Shahpari, PhD, Dynamics and Stability Analysis of Sandwich Structures by DQM, 2004
5. Ali Reza Setoodeh, PhD, Impact and stability Analysis of Composite Laminas under Large Deformation, 2004
6. Reza Naderi, Numerical Analysis of fractured rocks by Discontinuous Deformation Algorithm, 1998 (Joint advisor- Dr Ghahramani).
7. F. Talati, (Co-Adv). Solidification analysis by Boundary Elements, Tabriz University, (Joint Advisor with Prof. Delkhosh).

M.S. as Major Professor

1. M. Hakimhashemi, Boundary elements application to Poissons-type problems, 1987.
2. A.A. Karimi, Heat transfer analysis by boundary elements, 1988 (joint-adviser Prof M Yaghoubi).
3. M.R. Hematiyan, Coupling of finite elements and boundary elements in 2D heat conduction analysis, 1990.
4. R. Shayegh, Nonlinear analysis of plates by strip method, 1992.
5. M. Nourouzi, Frictional contact analysis by boundary elements, (discontinued).
6. S Ghazanfari Oskooei, Thermoelastic shrink fit analysis by boundary elements, , 1992.
7. T R Jairanpour, wo-dimensional flow analysis using finite elements, , 1994 (co-advised with Dr Zarinchang).
8. M. Hemayati, Boundary elements thermoelastic analysis using particular integrals, 1994.
9. Davoodi, Dynamics analysis of pre-twisted and spatial rods considering the shear deformation and damping, 1994.
10. F. Ghadak, Evaluation of stress intensity factors in mixed mode using finite elements, 1995.
11. Foroughi, Plate bending analysis using boundary elements, 1993.
12. M. Hedayatizadeh, Evaluation of stress intensity factors using singular elements, 1995.
13. H. Shahrabi, A study on the wheel profile and the contact stresses in rail systems, 1995.
14. P. Malekzadeh, Small and Large deformation in thermoelastic and elastic analysis of shells, 1995.
15. H. Zohari, Thermo-mechanical analysis of tires by finite elements under inflation and temperature gradients, 1996.
16. R. Satourians, Elastohydrodynamic analysis of spherical bodies using finite elements, 1995.
17. F M. R. Sharif Jah, Failure analysis of pined joints made of laminated composites, 1996.
18. Y. Daneshbod, Wave propagation in an-isotropic media, 1996.
19. M.R. Golbahar Haghighi, Dynamics analysis of Mindlin plates using strip elements, 1997.
20. M. Ghasemzadeh, Numerical evaluation of temperature distribution on cooling plates of a steel furnace using finite elements, 1997 (co-advised with Prof Yaghoubi).
21. K. Sepahvand, Shape optimizations in conjunction with boundary elements analysis, 1997.

22. A. Rezvani, Determination of heat transfer properties and calculation of heat transfer in tires, 1997 (co-advised with Prof Yaghoubi).
23. K. Javadi Fakhar, Frictional contact analysis of spur gears using boundary elements, 1998.
24. A.R. Setoudeh, Large deformation analysis using degenerated elements, 1998.
25. A. Joukar, Impact of an elastic body with a frictional rigid wall, 1998.
26. Thermoelastic analysis of multi-layered pre-stressed pressure vessels, F. Niknam Moghadam, 1999.
27. M. Koucheki, A new composite non-conforming elements for the analysis of laminas with shear, 2000.
28. M. Momeni, Analysis of composite laminated beams, May 2000.
29. H. Tavangar Marvasti, Employment of a layerwise composite element having piecewise linear in-plane displacements across layers, August, 2000.
30. S. Zare, Strength analysis of a self-steered bogie, May 2001.
31. A.Tayyari, Dynamics and Kinematical analysis of a steerable bogie, Jan 2002.
32. S. Ziaei, Determination of an optimized rail-wheel contact design, Oct, 2002.

(e) Member of Ph.D. Dissertations Committee or co-supervisor

1. S. R. Mohebpour, Dynamic Analysis of a Composite Beam Subjected to Moving Load, 1997(member).
2. G. R. Zendehboudi, Pulsatile Flow of Blood through a Stenotic Artery, 1998 (member).
3. Shahani, Fracture Analysis of a Solid Body under Inclined Loadings. Sharif University, Tehran 1998 (member).
4. Tehrani, Boundary Elements Analysis of a fractured body under thermal Shock Loading, 1999 (member).
5. M Shareiat, Thermal buckling of Cylindrical Shells, Amir Kabir University Tehran, 1998.
6. F Talati, Solidification analysis by Boundary Elements, Tabriz University.
7. Rahaee, Element free finite element analysis of fractured bodies, Sharif University, Tehran (member).
8. Chavanin Siripirom, Hyperelasticity and coating materials, NDSU (member)

Publications

(a) Books

1. **G. Karami**, A Boundary Element Method For Two-dimensional Contact problems, Springer-Verlag, Berlin, 1988.
2. **G. Karami**, An Introduction to Boundary Elements Method (in Persian), Shiraz University Press. 1990.
3. **G. Karami**, Principles of Linear and Nonlinear Continuum Mechanics (to be published).

(b) Peer-reviewed Journal Papers

1. **G. Karami** and R. Pieri, From Continuum-based to Multiscale-based Engineering Mechanics Education, *Int. J. of Engineering Education*, 2007, 23 (3), 582-590.
2. Naik, N. Abolfathi, G. Karami, and M. Ziejewski, Micromechanical Viscoelastic Characterization of Fibrous Composites, J. of Composite Materials, 2007. (under 2nd review)
3. N. Abolfathi, **G. Karami** and M. Ziejewski, Biomechanical Cell Modeling under Impact Loading, *International Journal of Modeling and Simulation*, 2007 (in press)
4. P. Malekzadeh, and **G. Karami**, A mixed differential quadrature and finite element free vibration and buckling analysis of thick beams on two-parameter elastic foundations, J. Applied Mathematical Modeling, 2007 (in press)
5. M. Ziejewski, **G. Karami** and A. Akhatov, Selected Biomechanical Issues of Brain Injury Caused by Blasts, *Brain Injury Professional*, 2007;4(1), 10-15.
6. P. Malekzadeh, and **G. Karami**, Differential quadrature large deformation analysis of skew composite plates based on FSDT, *J. of Engineering Structures*, 2006, 28, pp.1307-1318.
7. P. Malekzadeh, **G. Karami** and S. Mohebpour, DQM free vibration analysis of moderately thick symmetric laminated plates with elastically restrained edges, *J. of Composite Structures, Volume 74, Issue 1, July 2006, Pages 115-125* 2006.
8. P. Malekzadeh, H. Rahideh and **G. Karami**, Optimization of convective–radiative fins by using differential quadrature element method, *Energy Conservation and Management, Volume 47, Issues 11-12, July 2006, Pages 1505-1514.*
9. P. Malekzadeh, H. Rahideh, and **G. Karami**, A Differential Quadrature Element Method for Nonlinear Transient Heat Transfer Analysis of Extended Surfaces, *J. of Numerical Heat Transfer*, 2006; 49,511-523.
10. **G. Karami** and M. Garnich, Micromechanical Study of Thermoelastic Behavior of Composites with Periodic Fiber Waviness, J of *Composites Part B: Engineering, Volume 36, Issue 3, April 2005, Pages 241-248.*
11. **G. Karami** and M. Garnich, Effective Moduli and Failure Considerations for Composite with Periodic Fiber Waviness, J. of *Composite Structures, Volume 67, Issue 4, March 2005, Pages 461-475.*
12. M. Garnich and **G. Karami** Localized Fiber Waviness and Failure in Unidirectional Composites, *J. of Composite Materials.* 2005; 39 (14): 1225-1246.

13. P. Malekzadeh and **G. Karami**, Polynomial and harmonic differential quadrature methods for free vibration of variable thickness thick skew plates, *J. of Engineering Structures*, 2005;27(10):1563-1574.

14. P. Malekzadeh, **G. Karami** and M. Farid, A semi-analytical DQEM for free vibration analysis of thick plates with two opposite edges simply supported, J. of *Computer Methods in Applied Mechanics and Engineering, Volume 193, Issues 45-47, 12 November 2004, Pages 4781-4796.*

15. M. Garnich, and **G. Karami**, Finite Element Micromechanics for Stiffness and Strength of Wavy Fiber Composites. *J. of Composite Materials*, 38(4); 273-292, 2004.

16. A.R. Setoodeh, and **G. Karami,** Static, free vibration and buckling analysis of anisotropic thick laminated composite plates on distributed and point elastic supports using a 3-D layer-wise FEM, *J. of Engineering Structures*, 2004;26(2):211-220.

17. P. Malekzadeh and **G. Karami**, Vibration of non-uniform thick plates on elastic foundation by differential quadrature method, *J. of Engineering Structures, 2004;26(10):1473-1482.*

18. P. Malekzadeh and **G. Karami**, in plane free vibration analysis o circular arches with varying cross sections, *Journal of Sound and Vibration.* 2004;274:777-799.

19. P. Malekzadeh and **G. Karami**, Out-of Plane analysis of circular arches by DQM, *Int. J. of Solids and Structures*, 2003; 40;6527-6545.

20. **G. Karami** and A.R. Setoodeh, A solution for the vibration and buckling of composite laminates with elastically restrained edges, *J. Composite Structures*, 2003;60(3):245-253.

21. **G. Karami** and P. Malekzadeh, An efficient differential quadrature methodology for free vibration analysis of arbitrary straight-sided quadrilateral thin plates *J. Sound and Vibration*, 2003;263:425-442.

22. H.M. Zbib, M. Shehadeh, S. Khan and **G. Karami**, Multiscale Dislocation Dynamics Plasticity, *Int. Journal for Multiscale Computational Engineering*, 2003;1(1):75-91.

23. **G. Karami** and P. Malekzdeh, DQEM for free vibration analysis of Timoshenko beams on elastic foundations, *Journal of Computational Mechanics*, 2003;31(3/4): 219-228.

24. **G. Karami**, P. Malekzadeh, and S.A Shahpari, A DQEM for vibration of shear deformable nonuniform beams with general boundary conditions. *J. of Engineering Structures*, 2003;25(9):1169-1178.

25. **G. Karami**, S. Ali Shahpari and P. Malekzadeh, DQM analysis of skewed and trapezoidal laminated plates, *J. Composite Structures*. 2003; 59(3):391-400.

26. **G. Karami** and P. Malekzadeh, Application of a new differential quadrature methodology for free vibration analysis of rectangular plates, *Int. J. for Numerical Methods in Engineering.* 2003;56(3):847-868.

27. M.R. Hematiyan and **G. Karami**, A Boundary Element Formulation for Inverse Analysis of Solidification Problems Using Pseudo Heat Source Method, *Journal of Computational Mechanics*, 31(3/4), 262-271, 2003.

28. **G. Karami** and P. Malekzadeh, An efficient differential quadrature methodology for free vibration analysis of arbitrary straight-sided quadrilateral thin plates *J. Sound and Vibration*, 2002.

29. **G. Karami** and P. Malekzadeh, Application of a new differential quadrature methodology for free vibration analysis of rectangular plates, *Int. J. Numerical Methods in Engineering*, 2002

30. **G. Karami** and P. Malekzadeh, Static and Stability Analysis of Arbitrary Straight-sided Quadrilateral Thin Plates by DQM, *Int. J. Solids & Structures*, 39(19) pp. 4927-4947, 2002.

31. **G. Karami** and P. Malekzadeh, A new differential quadrature methodology for beam analysis and the associated DQEM'', *Computer Methods in Applied Mechanics and Engineering*, 191(32), 3509-3526, 2002.

32. **G. Karami** and P. Malekzadeh, A Variational based Modeling for Energy Release Rate Fiber/Matrix Interfacial Fracture, *Composite and Structures*, 55, No.2, pp.185-194, 2002.

33. **G. Karami** and F. Niknam Moghaddam, Themoelastic contact analysis of a monolayer welded pressure vessel using interface elements, *Scientia Iranica*, 18, 2002.

34. M. Hemayati and **G. Karami**, A Boundary Elements and Particular Integrals Implementation for Thermoelastic Stress Analysis, *Int. J. of Engineering, 15*, 2001.

35. **G. Karami,** and D. Derakhshan, Field Boundary Element Method for Large deformation Analysis of hyperelastic problems, *Scientia Iranica*, 20, pp441-452, 2000.

36. **G. Karami**, and M.R. Hematiyan, A boundary element method of inverse non-linear heat conduction analysis with point and line heat sources, *Communication in Numerical Methods Engineering*. 16, pp. 32-53, 2000.

37. **G. Karami,** and M.R. Hematiyan, Boundary Elements Analysis of Nonlinear Heat Conduction Problems with Line and Distributed Sources employing Analytical Integration, *Numerical Heat Transfer*, 38(4), 2000.

38. **G. Karami** and A.R. Setoudeh, Development of a degenerated element tangent stiffness matrix in large deformation analysis, *Asian J. of Civil Engineering*, 1, No. 3, pp 71-79, 2000.

39. **G. Karami**, and M.R. Hematiyan, Field Boundary Element Formulation of Materially Nonlinear and Large Deformation Analysis, *Iranian J. of Science and Technology*, 21, pp 229-252, 1997.

40. **G. Karami**, H. Zohari and K. Hematian, Stress distribution analysis of bias tires, an investigation into the foot-print and contact loading using finite element method, *Rubber Magazine,* 2, No. 5, pp. 5-12, 1997.

41. **G. Karami**, and Y. Daneshbod, Elastic wave Propagation in Anisotropic Laminates, *J. of. Mechanical Engineering Trans. ISME*, 1, pp. 32-53, 1997.

42. **G. Karami**, H. Zohari and E. Setoudeh, Stress Distribution Change in Bias Tires due to Change in Cord Angle, A Finite Element Analysis, *Kautschuk Gummi KunstStoffe*(J. of Rubber Materials), 5, pp.450-455, 1998.

43. **G. Karami**, and M.R. Sharifi-Jah Failure Analysis of Laminated Composite Pinned connections, *Scientia Iranica*, 6, pp 86-100, 1999.

44. **G. Karami**, and D. Derakhshan, An Efficient Method to Evaluate Hypersingular and Supersingular Integrals in Boundary Integral Equations Analysis, *J. Engineering Analysis with Boundary Elements*, 23, 317-326,1999.

45. **G. Karami** J. Zarinchang and B. Foroughi, An analytical Treatment of Boundary Integrals in Direct Boundary Element Analysis of Plate Bending Problems, *Int. J. Numerical Methods in Engineering*, 37, 2409-2427, 1994.

46. **G. Karami** and S. Ghazanfari Oskooei, A Thermoelastic Analysis of Shrink - fit Type Constructions by Boundary Element Method, *Int. J. Computers and Structures*. 53, 1373-1379, 1994.

47. **G. Karami** J. Zarinchang, R Satourians Eraghi and H Kazeminejad, A Finite Element Method for EHL Analysis of Spherical bodies, *Communications in Applied Numerical Methods*, 10, 501-510, 1994.

48. **G. Karami**, and G. Kuhn, A finite element-boundary element treatment for the analysis of elastohydrodynamic lubrication problems, *Computational Mechanics*, 14, 289-297, 1994.

49. **G. Karami**, and G. Kuhn, Body-Force Linear Elastic Stress Intensity Factor Calculation Using Boundary Element Method, *Int. J. Computers and Structures*, 49, 107-115, 1993.

50. **G. Karami**, Boundary Element Analysis of Two-dimensional Elasto-Plastic Contact Problems, *Int. J. Numerical Methods in Engineering,* 36,221-236, 1993.

51. M.A.Yaghoubi, **G. Karami** and A.A. Karimi, A Boundary Element Modeling for Two - Dimensional Transient Heat Conduction, *Nuclear Engineering and Design*, 135, 2277-285, 1992.

52. **G. Karami**, and G. Kuhn, Implementation of Thermoelastic Forces in Boundary Element Analysis of Fracture and Contact Problems, *J. Engineering Analysis with Boundary Elements*, 10, 313-322, 1992.

53. **G. Karami**, Boundary Element Method For Elasto-Plastic Stress Analysis of Contact Problems, *Int. J. Computers and Structures*, 41, 927-935,1991.

54. M.R.Banan, **G. Karami** and M. Farshad, Nonlinear Theory for Elastic Spatial Rods, *Int. J. of Solids and Structures*, 27, pp 713-724, 1991.

55. **G. Karami**, M.R. Banan and M. Farshad, Pretwisted Rods- An Efficient Finite Element Modeling, *J. of Finite Element in Analysis and Design*, 9, pp 77-85, 1991.

56. **G. Karami** and M. Farshad and M.R. Banan, Spatial Buckling of Arches- A Finite Element Analysis, *Int. J. of Computers and Structures*, 34, pp. 565-576,1990.

57. M.R. Banan, **G. Karami** and M. Farshad, A Finite Element Stability Analysis of Curved Beams on Elastic Foundations, *Mathematical and Computational Modeling*, 14, 863-867, 1990.

58. **G. Karami** and M. Farshad, Earthquake Analysis of Spatial Rod Systems, J. *of Engineering analysis*, 3, 134-147, 1990.

59. **G. Karami,** Pseudo-Body Force Boundary Element Method for Thermoelastic Problems, *Mathematical and Computational Modeling,* 14, 883-887, 1990.

60. **G. Karami**, M. Farshad and M. Yazdchi, Free Vibration of Spatial Rods- A Finite Element Analysis, *Communication in Applied Numerical Methods.* 6, pp 417-428, 1990.

61. Dyson, H.P. Evans, **G. Karami,** M.C. Paliwal and R.W. Snidle, Scuffing Failure of Steel Discs: Conditions for the Failure of Elastohydrodynamic Lubrication, *Proc. Instn. of Mechanical Engineers*., 204, pp 91-97, 1990.

62. **G. Karami** and M. Hakimhashemi, Application of Boundary Element Method to Two Dimensional Poisson's Equation, *J. of Engineering Analysis*, 2, 85-97, 1989.

63. **G. Karami**, Elastohydrodynamic Lubrication of Rollers Having Sinusoidal Roughness: Effect of Entraining Oil Velocity, *Iranian J. of Science and Technology*, 12, pp 56-67, 1989.

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