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WORK HISTORY

Assistant professor, Dep. of Mech. Eng., Shahrood Univ. of Tech.

2008 – Now

EDUCATION

Shockwave and condensed matter research center, Kumamoto University, Kumamoto, Japan ([link](#))

Ph.D. in Mechanical Engineering

2008

Tarbiat Modares University, Tehran, I.R.Iran ([link](#))

M.Sc. in Mechanical Engineering, Manufacturing and Production

2004

Amirkabir University of Technology, Tehran, I.R.Iran ([link](#))

B.Sc. in Mechanical Engineering, Manufacturing and Production

2001

RESEACH INTRESTES

Metal forming

Finite element simulation

Nano mechanics and nano structures

Impact mechanics

Reverse engineering

TEACHING EXPERIENCE

Engineering Drawing-I

Statics

Dynamics

Mechanics of Materials-I

Mechanics of Materials-II

English for Mechanical Engineers

Measurement Systems

Impact Mechanics of Materials

Analysis of Metal Forming

Advanced CAD/CAM

PUBLICATIONS**Journal Articles**

- 1) Soleimani Ivvari, & S. A., Ghaderi, S. H. (2013). Compensation of Temperature Variation in a Volume-Meter Device Using Particle Swarm Optimization Algorithm, *Journal of Solid and Fluid Mechanics* (in Persian, Accepted).
- 2) Ghaderi, S. H., & Hajiesmaili, E. (2013). Nonlinear analysis of coiled carbon nanotubes using molecular dynamics finite element method. *Materials Science and Engineering: A*, 582, 225–234
- 3) Ghaderi, S. H., & Hajiesmaili, E. (2012). Molecular structural mechanics applied to coiled carbon nanotubes. *Computational Materials Science*, 55, 344-349.
- 4) Manikandan, P., Lee, J. N., Mizumachi, K., Ghaderi, S. H., Mori, A., & Hokamoto, K. (2012, January). Transition Joints of Aluminum and Magnesium Alloy Made by Underwater Explosive Welding Technique. In *Materials Science Forum* (Vol. 706, pp. 757-762).
- 5) Hajiesmaili, E., & Ghaderi, S. H. (2011). A closed-form expression for second-order recurrences. *Acta Math. Univ. Comenianae*, 80(2), 259-261.
- 6) Ghaderi, S. H., Manikandan, P., Hokamoto, K., & Thadhani, N. N. & Fujita, M. (2009), Effect of strength of the flyer plate material on the collision parameters in explosive welding, *Science and Technology of Energetic Materials*, 70(4),81-86.
- 7) Ghaderi, S. H., Hokamoto, K., & Fujita, M. (2009). Analysis of stationary deformation behavior of a semi-infinite rigid-perfect plastic beam subjected to moving distributed loads of finite width. *International Journal of Impact Engineering*, 36(1), 115-121.
- 8) Ghaderi, S. H., Mori, A., & Hokamoto, K. (2008, February). Explosion Joining of Magnesium Alloy AZ31 and Aluminum. In *Materials Science Forum* (Vol. 566, pp. 291-296).
- 9) Hokamoto, K., Thadhani, N. N., Manikandan, P., & Ghaderi, S. H. (2008, February). Observation of High Velocity Oblique Collision of Titanium and Stainless Steel Plates by Using Gas Gun. In *Materials Science Forum* (Vol. 566, pp. 273-278).
- 10) Manikandan, P., Hokamoto, K., Ghaderi, S. H., & Thadhani, N. N. (2008, February). Observation of High Velocity Oblique Collision of Titanium and Stainless Steel Plates by Using Gas Gun. In *Materials Science Forum* (Vol. 566, pp. 273-278).
- 11) Ghaderi, S. H., Mori, A., & Hokamoto, K. (2008). Analysis of explosively welded aluminum-AZ31 magnesium alloy joints. *Materials transactions*, 49(5), 1142-1147.
- 12) Ghaderi, S. H., Naeini, H. M., & Hossein Liaghat, G. (2007). Numerical analysis of plastic deformation of a circular sheet metal subjected to transverse impact loading. *International journal of impact engineering*, 34(4), 668-680.

Conference Papers

- 1) S.H Ghaderi, Investigation of Nonlinear Tensile Behavior of Defective Carbon Nanotubes Using a Modified Molecular Structural Mechanics Model, UFGNSM2013.
- 2) S. Dodangei, M. Ghatee, S.H. Ghaderi, Evaluation of Mechanical Properties of Yttria Stabilized Zirconia Tubular Thin Films Prepared By Electrophoretic Deposition, UFGNSM2013.
- 3) M. Ghatee, S.H. Ghaderi, O Sam Daliri, Preparation and Characterization of Alumina/3YSZ Nanocomposite Doped

with Alumina-Coated Multi-Wall Carbon Nanotubes, UFGNSM2013.

- 4) S.H. Ghaderi, H. Baghizade, Numerical analysis of cold forming of an automotive helical spring, National congress on mechanical Engineering 2013, 30 May, Malayer, Iran (in Persian).
- 5) S.H Ghaderi, E. Hajiesmaili, Analysis of Nonlinear Mechanical Response of Coiled Carbon Nanotubes under Axial Loading Using Molecular Mechanics Finite Element Method, 21th Annual International Conference on Mechanical Engineering-ISME2013 7-9 May, 2013, School of Mechanical Eng., K. N. Toosi University of Technology, Tehran, Iran.
- 6) H. Baghizadeh, S.H.Ghaderi, H. Moslemi Naieni, Numerical study of explosive forming of sheet metal in hemispherical and conical dies, International Conference on Mechanical Engineering and Advanced Technology- ICMEAT2012 10-12 October, Isfahan, Iran (in Persian)
- 7) S.H Ghaderi, E. Hajiesmaili, Investigation of the Mechanical Properties of Armchair Coiled Carbon Nanotubes Using Molecular Structural Mechanics Approach, 20th Annual International Conference on Mechanical Engineering-ISME2012 16-18 May, 2012, School of Mechanical Eng., Shiraz University, Shiraz, Iran
- 8) S. H. Ghaderi¹, E. Hajiesmaili, An Algorithm for Finding Optimum Distribution of the Turbine Blades Considering the Initial Wheel Unbalance, 3rd Conference on Rotating Equipment in Oil & Power Industry, Jan 2-3, 2012 (in Persian)
- 9) S.A. Soleimani, E. Hajiesmaili, S.H. Ghaderi, Design and manufacturing of an acoustic volume-meter and compensation of thermal effects, 1st international conference on acoustics and vibrations, Dec. 21-22, 2011, Tehran, Iran (in Persian).
- 10) S. H. Ghaderi, K. Hokamoto, M. Fujita, Effect of strength of the material of the flyer plate on the collision parameters in explosive welding, Proceedings of the 3rd International Symposium on Energetic materials and their applications ISEM 2008, 24-35 April 2008, Tokyo Japan.
- 11) S. H. Ghaderi, A. Mori, K. Hokamoto, Analysis of Dissimilar Welds between Magnesium Alloy and Light Metals Obtained Using Explosive Welding, Yellow Sea Rim Workshop on Explosion, Combustion and other Energetic Phenomena, Kumamoto University, Japan, pp. 9-11, October, 2007.
- 12) S. H. Ghaderi, K. Hokamoto, R. Tomoshige, Dissimilar Welding of Magnesium Alloy AZ31 with Aluminum Alloy Using Explosive Bonding, 2nd Asian Symposium on Magnesium Alloys (ASMA-II), Fukuoka, Japan, pp. 250-251, October, 2007.
- 13) S. H. Ghaderi, A. Mori, K. Hokamoto, Analysis of dissimilar welds between magnesium alloy and light metals obtained by explosive welding, Proceedings of 58th Japanese Joint Conference for the Technology of Plasticity, Sapporo, Japan, pp. 499-500, October, 2007.
- 14) S. H. Ghaderi, K. Hokamoto, Joining of Magnesium Alloy AZ31 and Aluminum Alloy A1100 Using Explosive Welding Method, 2nd Yellow-Sea Rim International Symposium on Mg alloys, Gwangju Research Center, KITECH, Korea, March, 2007.
- 15) S. H. Ghaderi, H. Moslemi Naeini, G. H. Liaghat, Numerical Analysis of Visco-Plastic Behaviour of Circular Sheet Metal Under Shock Pressure, 13th Ann. Int. Mech Eng. Con. ISME2005, ISME2005 Isfahan Univ. of Tech. Isfahan, I.R. Iran.