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Seyed-Yousef, Ahmadi-Brooghani

Education

1994 - 1998, The University of Sheffield, Sheffield, U.K.

- **PhD in Mechanical Engineering.**
- The Title of PhD Thesis: Application of the Dual Boundary Element Method to Linear Elastic Fracture Mechanics of Plate Bending Problems.

1988- 1990, Iran University of Science and Technology, Tehran, Iran

- **MSc in Mechanical Engineering.**
- The Title of MSc Thesis: Coupled Thermo-Elasticity of Conical Shells (Dynamic Analysis).

1983 - 1988, The University of Mashad (Ferdowsi), Mashad, Iran

- **BSc in Mechanical Engineering.**
- The Project Title: Calculations of Absorption Refrigeration System by Computer.

Professional experience

Nov 2004-May 2005: Visiting Prof. At the University of Nottingham, Nottingham, UK

1999 – Now The University of Birjand, Birjand, IRAN.

- Associate Professor
- Head of Mechanical Engineering Dept. (2000-2002)
- Dean of Engineering Faculty (2002-2004)
- Dean of Engineering Faculty (2014-2016)

1998-1999 Iranian Research Org. for Science and Technology, Mashad, Iran

- Research Assistant.

1995 – 1998 The University of Sheffield, Sheffield, UK.

- Demonstrator on the following subjects:
- FEM, FORTRAN, Solid Mechanics Lab., Dynamics Lab.

1990 - 1993 Iranian Research Org. for Science and Technology, Mashad, Iran

- Work as a designer.
- Research assistant.

• Journal Publications

- D. Yazdani, and S. Y. Ahmadi Brooghani, Effect of Stone-Wales Defect on Ultimate Strength of Carbon Nanotubes,, Journal of Advanced Materials, Vol. 35, No 1, 2016 (in Persian)
- H. Farahat, and S. Y. Ahmadi Brooghani, *Effect of heat treatment on the impact response of aluminum foam with consideration of statistical analysis*, Modares Mechanical Engineering, Vol. 16, No. 10, 2017 (In Persian)
- H. Farahat, and S. Y. Ahmadi Brooghani, *Design and instrumentation of low velocity drop-weight impact testing machine for estimation of energy absorption capacity in aluminium based composite foam*, Modares Mechanical Engineering, Vol. 16, No. 7, 2016 (In Persian)
- H. Amirabadi, S. Y. Ahmadi Brooghani, and S. M. Emam, *Simulation of Anodic Dissolution in Electro-Chemical Machining and Tool Design using Sensitivity Method*, Journal of Solid and Fluid Mechanics, Vol. 6 , No 1, 2016 (in Persian)
- P. Kahhal, S.Y. Ahmadi Brooghani, and H. Deilami Azod, *Investigation of Drawing Bead Parameters and Multi Objective Optimization in Deep Drawing Process*. Aerospace Mechanics Journal, V 13 , No 3, 2017 (in Persian)
- P. Kahhal, S. Y. Ahmadi Brooghani, and H. Deilami Azodi, *Multiobjective Optimization Method for Drawbead and Blank-Holder Force Design in Sheet Metal Forming Process*, Journal of Solid and Fluid Mechanics, V 6 , No 2, 2016, (in Persian)
- S. E. Mirmohammadsadeghi, Kh. Khalili, S. Y. Ahmadi, and S. J. Hosseinipour, *Experimental and finite element simulation investigation of axial crushing of grooved thin-walled tubes*, International Journal of Advanced Manufacturing Technology, V 77, No 6, 2015
- S. E. Eftekhari Shahri, S. Y. Ahmadi Brooghani, and K. Khalili, *Designing Approach for the Ultrasonic Tube Hydroforming System*, Journal of Solid and Fluid Mechanics, V 5 , No 1, 2015 (in Persian)
- S E Eftekhari Shahri, S Y Ahmadi Brooghani, Kh Khalili, and Aminollah Mohammadi: *Improve the formability in tube Hydroforming process using ultrasonic vibrations*, Modares Mechanical Engineering, Vol. 14, No. 5, 2014 (In Persian)
- H. Shahrajabian, S. Y. Ahmadi Brooghani, S. J. Ahmadi, M. R. Saeb, and M. Moghri: *Study on the physical and mechanical properties of electron-beam-irradiated Vinyl ester/TiO₂ nanocomposites*. Journal of Vinyl and Additive Technology, Vol. 22, No. 2, 2016
- K. Khalili, S. Y. Ahmadi Brooghani, and M. Bagherian: *Modeling of shrinkage of clay-like material drying*, Iranian Journal of Ceramic Engineering and Science, Vol. 3, No 1, 2014 (in Persian)
- S. E. Eftekhari Shahri, K. khalili, and S. Y. Ahmadi Brooghani: *Optimization of loading curve in tube hydroforming process using multi-level response syrface method*, Modares Mechanical Engineering, Vol. 13, No. 13, 2014 (in Persian)
- S. Y. Ahmadi Brooghani, K. Khalili, S. E. Eftekhari Shahri, B. S. Kang, *Loading path optimization of a hydroform part using multi level response surface method*. International Journal of Advanced Manufacturing Technology, Vol. 70, No. 5, 2014
- K. Khalili, S. Y. Ahmadi Brooghani, and M. Bagherian, *Experimental and numerical study of the ceramic drying process and cracking*, Journal of Solid and Fluid Mechanics, Vol. 4 , No. 1, 2014 (in Persian)
- P. Kahhal, S. Y. Ahmadi Brooghani, and H. Deilami Azodi, *Multi-objective optimization of sheet metal forming die using FEA coupled with RSM*, Journal of Mechanical Science and Technology, Vol. 27, No. 12, 2013

- P. Kahhal, S. Y. Ahmadi Brooghani, and H. Deilami Azodi, *Multi-objective Optimization of Sheet Metal Forming Die Using Genetic Algorithm Coupled with RSM and FEA*. Journal of Failure Analysis and Prevention, Vol. 13, No. 6, 2013
- H. Shahrajabian, S. Y. Ahmadi-Brooghani, and S. J. Ahmadi: *Characterization of Mechanical and Thermal Properties of Vinyl-ester/TiO₂ Nanocomposites Exposed to Electron Beam*, Journal of Inorganic and Organometallic Polymers and Materials; Vol. 23, No. 6, 2013
- S. E. Eftekhari Shahri, S. Y. Ahmadi Brooghani, K. Khalili, and B. S. Kang, *Ultrasonic tube hydroforming, a numerical and analytical study*, Modares Mechanical Engineering, Vol. 13, No. 4, 2013 (In Persian)
- S. M. Safi, S. Y. Ahmadi Brooghani, H. Amirabadi, K. Khalili, and M. K. Besharati Givi, *A Comparison of Tensile Strength and Impact Energy of Austempered versus Step Quenched 4340 Ultra High Strength Steel*, Key Engineering Materials, Vol. 553, 2013
- K. Khalili, S. Y. Ahmadi-Brooghani, and Amir Ashrafi, *Investigation on the Effect of Pulsating Pressure on Tube-Hydroforming Process*, Key Engineering Materials Vol. 473, 2011
- S. J. Ahmadi, Y. D. Huang, N. Ren, A. Mohaddespour, and S. Y. Ahmadi-Brooghani, *The comparison of EPDM/clay nanocomposites and conventional composites in exposure of gamma irradiation*, Composites Science and Technology, Vol. 69, No. 7, 2009.
- K. Khalili, S. Y. Ahmadi-Brooghani, and M. Rakhshkhorshid, *CAD Model Generation Using 3D Scanning*, Advanced Materials Research, Vol. 23, 2007
- J. L. Wearing and S. Y. Ahmadi-Brooghani, *The Evaluation of Stress Intensity Factors, in Plate Bending Problems using the Dual Boundary Element Method*, Journal of Engineering Analysis with Boundary Element, Vol. 23, No.1, 1999
- J. L. Wearing and S. Y. Ahmadi-Brooghani, *Fracture Analysis of Plate Bending Problems Using the Boundary Element Method*, Chapter in book: "Boundary Element Formulation for Plate Bending Analysis" in Series: "Advances in Boundary Element Methods" published in 1998, 27pp
- S. Y. Ahmadi-Brooghani and J. L. Wearing, *Developments in the use of the dual boundary element method for the fracture analysis of plate bending problems*, Proceedings of the 20th International Conference on Boundary Element Methods, Computational Mechanics Publications, Southampton, 1998
- S. Y. Ahmadi-Brooghani and J. L. Wearing, *The application of J-Integral in Linear Elastic Problems in Plate Bending*, Proceedings of the 19th International Conference on Boundary Element Methods, Computational Mechanics Publications, Southampton, 1997
- J. L. Wearing and S. Y. Ahmadi-Brooghani, *The Fracture Analysis of Plate Bending Problems Using the Boundary Element Methods*, Proceedings of the 16th Canadian Congress of applied Mechanics, Quebec, Canada, 1997
- J. L. Wearing and S. Y. Ahmadi-Brooghani, *The Use of J-Integrals in the Boundary Element Method for the Fracture Analysis of plate*, Proceedings of the 3rd International Conference on Modern Practice in Stress and Vibration Analysis, Stress Analysis Group of the Institute of Physics, Dublin, 1997.
- S. Y. Ahmadi-Brooghani and J. L. Wearing, *The application of the Dual Boundary Element Method in Linear Elastic Crack Problems in plate bending*, Proceedings of the 18th International Conference on Boundary Element Methods, Computational Mechanics Publications, Southampton, 1996
- J. L. Wearing and S. Y. Ahmadi-Brooghani, *Quarter Point Boundary Elements for the Analysis of Crack Problems in Plate Bending*, Proceedings of the 18th

International Conference on Boundary Element Methods, Computational Mechanics Publications, Southampton, 1996

- S.Y. Ahmadi-Brooghani, *Singular Integral Evaluation in the Dual Boundary Element Method Applied to Plate Bending Problems*, Proceeding of third UK Conference on Boundary Integral Methods, Ed. P.J. Harris 2001.
- S.Y. Ahmadi-Brooghani and K. Khalili, *Development in the Fracture Analysis of Plate Bending Problems Using the Dual Boundary Element method*, Proceeding of 5th Int. Mechanical Engineering Conference, Vol.4, 2001
- Kh. Khalili and S.Y. Ahmadi-Brooghani, *Development of an Automated Flexible Assembly Cell: Integration and Development*, Proceeding of 5th Int. Mechanical Engineering Conference, Vol.4, 2001
- S.Y. Ahmadi-Brooghani, *Application of Boundary Element Method to Rissner Plate Bending Problems*, Presented at 3rd Conference on The Numerical Analysis and its Application, Zahedan, Iran, 2000 (In Persian)
- Ahmadi and M. Haghpanahi, "Coupled Thermoelasticity Analysis in Conical Shell" presented in the International Conference on Applied Mathematics, Tehran, Iran, 1991.

Additional professional activities

Teaching:

- ✓ Engineering Statics (1999-2002)
- ✓ Engineering Dynamics (1999-Now)
- ✓ Mechanical Vibration (2001 & Now)
- ✓ Theory of Machines (2001-2002)
- ✓ Machine Design (2000-2002)
- ✓ Elasticity (2002-Now, Graduate)
- ✓ Advanced Engineering Mathematics (2000-Now, Graduate & Undergrad.)
- ✓ Numerical Methods (2000-Now, Graduate & Undergrad.)
- ✓ Finite Element Method (2002-Now, Graduate & Undergrad.)
- ✓ Non Linear Finite Element Method (2002-Now, Graduate.)
- ✓ Fortran Programming. (1999-2002)

Computer programming experience:

FORTRAN and BASIC (Visual and Quick),

Engineering Software experience:

ANSYS(Very good), Abaqus (very good).

Languages

Persian and English