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Research Interests

- Additive Manufacturing
- Design and Optimization
- Smart Structures
- Computer-Aided Design and Manufacturing
- Functionally Graded Materials
- Sheet Metal Forming

Education

Ph.D. in Mechanical Engineering, Missouri University of Science and Technology, Aug. 2012- May. 2017

- Thesis Title: Optimal Design and Freeform Extrusion Fabrication of Functionally Gradient Smart Parts
- Advisor: Dr. Ming C. Leu

M.S. in Mechanical Engineering, Sharif University of Technology, Sep. 2009- Jan. 201

Sharif University of Technology, Tehran, Iran; Sep. 2009- Jan. 2012

Graduate Teaching Assistant

Taught AutoCAD (F10) and Mechanical Vibrations Lab (F10&Sp11).

Books

1. “NX 12 for Engineering Design,” M.C. Leu, W. Tao, A. Ghazanfari, and K. Kolan, Department of Mechanical and Aerospace Engineering, Missouri University of Science and Technology, 2018.
2. “NX 10 for Engineering Design,” M.C. Leu, A. Ghazanfari, and K. Kolan, Department of Mechanical and Aerospace Engineering, Missouri University of Science and Technology, 2016.

Journal Papers

1. “Characterization of zirconia specimens fabricated by ceramic on-demand extrusion,” W. Li, A. Ghazanfari, D. McMillen, M.C. Leu, G.E. Hilmas, and J.L. Watts, *Ceramics International* 44, pp. 12245-12252, 2018.
2. “A Novel Freeform Extrusion Fabrication Process for Producing Solid Ceramic Components with Uniform Layered Radiation Drying,” A. Ghazanfari, W. Li, M.C. Leu, and G.E. Hilmas, *Additive Manufacturing Journal* 15, pp. 102-112, 2017.
3. “Mechanical Characterization of Parts Produced by Ceramic On-Demand Extrusion Process,” A. Ghazanfari, W. Li, M.C. Leu, J.L. Watts, and G.E. Hilmas, *International Journal of Applied Ceramic Technology* 14, pp. 486-494, 2017.
4. “Additive Manufacturing and Mechanical Characterization of High Density Fully Stabilized Zirconia,” A. Ghazanfari, W. Li, M.C. Leu, J.L. Watts, and G.E. Hilmas, *Ceramics International* 43, pp. 6082-6088, 2017.
5. “Fabricating Ceramic Components with Dissolvable Support Structures by Ceramic On-Demand Extrusion Process,” W. Li, A. Ghazanfari, D. McMillen, M.C. Leu, and G.E. Hilmas, *CIRP Annals – Manufacturing Technology* 66, pp. 225-228, 2017.
6. “Extrusion-On-Demand Methods for High Solids Loading Ceramic Paste in Freeform Extrusion Fabrication,” W. Li, A. Ghazanfari, M.C. Leu, and R.G. Landers, *Virtual and Physical Prototyping* 12, pp. 193-205, 2017.
7. “Advanced Ceramic Components with Embedded Sapphire Optical Fiber Sensors for High Temperature Applications,” A. Ghazanfari, W. Li, M.C. Leu, Y. Zhuang, and J. Huang, *Materials and Design* 112, pp. 197-206, 2016.
8. “Modeling and Analysis of Paste Freezing in Freeze-Form Extrusion Fabrication of Thin-Wall Parts via a Lumped Method,” M. Li, A. Ghazanfari, W. Li, R.G. Landers, and M.C. Leu, *Journal of Materials Processing Technology* 237, pp. 163-180, 2016.
9. “Adaptive Rastering Algorithm for Freeform Extrusion Fabrication Processes,” A. Ghazanfari, W. Li, and M.C. Leu, *Virtual and Physical Prototyping* 10, pp. 163-172, 2015.
10. “The Effect of the Imposed Boundary Rate on the Formability of Strain Rate Sensitive Sheets Using the MK Method,” R. Hashemi, A. Ghazanfari, K. Abrinia, and A. Assempour, *Journal of Materials Engineering and Performance* 22, pp. 2522-2527, 2013.
11. “Loading Path Determination for Tube Hydroforming Process of Automotive Component Using APDL,” E.M. Khalil Abad, A. Ghazanfari, and R. Hashemi, *International Journal of Automotive Engineering* 3, pp. 555-563, 2013.
12. “Calibration of Forming Limit Diagrams Using a Modified Marciniak-

13. "A New Calibration Method for FLCs in the M-K Frame-Work," A. Ghazanfari and A. Assempour, *Advanced Materials Research* 341, pp. 426-431, 2012.
14. "Forming Limit Diagrams of Ground St14 Steel Sheets with Different Thicknesses," R. Hashemi, A.

13. "Effect of Manufacturing Processes on Formability of Steel Sheets," A. Ghazanfari A, R. Hashemi, A. Assempour, K. Abrinia, and A. Akbarzadeh, 3rd International Conference on Manufacturing Engineering (ICME2011), Tehran, Iran, 2011.
14. "Prediction of the Dead Metal Zone Profile in the Extrusion Process of Flat Dies Using Energy Minimization Method," M. Rastegar, A. Assempour, and A. Ghazanfari, 3rd International Conference on Manufacturing Engineering (ICME2011), Tehran, Iran, 2011.
15. "A New Calibration Method for FLCs in the M-K Frame-Work," A. Ghazanfari A and A. Assempour, International Conference on Material and Manufacturing Technology (ICMMT 2011), Xiamen, China, 2011.
16. "A Modified NADDRG Relation for Prediction of the Limiting Strains," A. Assempour and A. Ghazanfari, 5th National Conference of Metals and Materials Forming, Tehran, Iran, 2011.

Invited Talks

1. "Free-From Fabrication: From Freezing to Firing," University of California, Merced, 2018.
2. "Finite Element Analysis and Topology Optimization Using NX," Student Section of American Society of Mechanical Engineers, Missouri University of Science and Technology, 2016.

Grants

1. "Bioinspired Design of a Soft Robot Hand using Fluidic Elastomer Materials," awarded by **NIH** INBRE, \$55,000, 2018 (PI: T. Ashuri, Co-PI: A. Ghazanfari).
2. "Optimal Design of Functionally Graded Spacecraft Components for Additive Manufacturing," awarded by **NASA** ASGC, \$5,000, 2018 (PI: A. Ghazanfari, Co-PIs: T. Ashuri, and B. Chehroudi).