

Behrad Koohbor

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Academic Background

Jan. 2013 – Present **PhD** candidate, Department of Mechanical Engineering, University of South Carolina

Sep. 2008 – Jan. 2011 **MSc** student of Metal Forming at the Department of Materials Science and Engineering, Sharif University of Technology

Sep. 2004 – Sep. 2008 **BSc** student of Materials Engineering at the Department of Materials Science and Engineering, Sharif University of Technology

Publications

Journal Papers

[20] **B. Koohbor**, K. Moaven. *Finite element modeling of thermal aspects in high speed cold strip rolling*. Proceedings of the Institution of Mechanical Engineers – Part B: Journal of Engineering Manufacture 2015 (In Press).

[19] **B. Koohbor**, S. Mallon, A. Kidane, A. Anand, V. Parameswaran. *Through thickness elastic profile determination of functionally graded materials*. Experimental Mechanics 2015 (In Press)

[18] S. Mallon, **B. Koohbor**, A. Kidane, A. P. Reynolds. *On the effect of microstructure on the torsional response of AA7050-7651 at elevated strain rates*. Materials Science and Engineering A 2015; 639: 280-287.

[17] F. Khodabakhshi, M. Haghshenas, H. Eskandari, **B. Koohbor**. *Hardness-strength relationships in fine and ultra-fine grained metals processed through constrained groove pressing*. Materials Science and Engineering A 2015; 636: 331-339.

[16] **B. Koohbor**, S. Mallon, A. Kidane, W. Y. Lu. *The deformation and failure response of closed-cell PMDI foams subjected to dynamic impact loading*. Polymer Testing 2015; 44: 112-124.

- [15] **B. Koohbor**, S. Ravindran, A. Kidane. *Meso-scale strain localization and failure response of an orthotropic woven glass-fiber reinforced composite*. Composites Part B: Engineering 2015; 78: 308-318.
- [14] **B. Koohbor**. *Finite element modeling of thermal and mechanical stresses in work-rolls of warm strip rolling*. Proceedings of the Institute of Mechanical Engineers – Part B: Journal of Engineering Manufacture 2015 (In Press)
- [13] S. Mallon, **B. Koohbor**, A. Kidane and M. A. Sutton. *Fracture behavior of prestressed composites subjected to shock loading: a DIC-based study*. Experimental Mechanics, 2015; 55: 211-225.
- [12] **B. Koohbor**, A. Kidane, S. Mallon. *Effect of elastic properties of material composition on the fracture response of transversely graded ceramic/metal material*. Materials Science and Engineering A 2014; 619: 281-289.
- [11] **B. Koohbor**, S. Mallon, A. Kidane, M. A. Sutton. *A DIC-based study of in-plane mechanical and quasi-static fracture response of orthotropic carbon fiber reinforced composites*. Composites Part B: Engineering 2014; 66: 388-399.
- [10] **B. Koohbor**. *On the influence of rolling path change on the static recrystallization behavior of commercial purity Aluminum*. International Journal of Material Forming 2014; 7: 53-63.
- [9] R. Siavash Moakhar, M. Mehdipour, M. Ghorbani, M. Mohebali, **B. Koohbor**. *Investigation of the failure in boilers economizer tubes used in power plants*. Journal of Materials Engineering and Performance 2013; 22: 2691-2697.
- [8] **B. Koohbor**, D. Ohadi. *On the influence of deformation rate and cooling media on the static strain aging of a warm rolled low carbon steel*. International Journal of Material Forming 2013; 6: 417-422.
- [7] L. Khalili, S. Serajzadeh, **B. Koohbor**. *Thermomechanical behavior of work rolls during warm strip rolling*. Metallurgical and Materials Transactions B 2012; 43: 1638-1648.
- [6] M. S. Shahriary, **B. Koohbor**, A. A. Ekrami, K. Ahadi, M. K. Qomi, T. Izadyar. *The effect of dynamic strain aging on room temperature mechanical properties of high martensite dual phase (HMDP) steel*. Materials Science and Engineering A 2012; 550: 325-332.
- [5] **B. Koohbor**, S. Serajzadeh. *Influence of deformation path change on static strain aging of cold rolled steel strip*. International Journal of Advanced Manufacturing Technology 2012; 61: 901-909.
- [4] **B. Koohbor**, S. Serajzadeh. *Thermo-mechanical behaviors of strip and work-rolls in cold rolling process*. Journal of Strain Analysis for Engineering Design 2011; 46: 794-804.

[3] **B. Koohbor**, S. Serajzadeh. *Study on effect of residual stress distributions on kinetics of static strain aging after cold rolling*. *Materials Science and Technology* 2011; 7: 1620-1627.

[2] **B. Koohbor**, S. Serajzadeh. *Kinetics of static strain aging after temper rolling of low carbon steels*. *Ironmaking & Steelmaking: Processes, Products and Applications* 2011; 38: 314-320.

[1] **B. Koohbor**, D. Ohadi, S. Serajzadeh, J. M. Akhgar. *Effect of rolling speed on the occurrence of strain aging during and after warm rolling of low-carbon steel*. *Journal of Materials Science* 2010; 45: 3405-3412.

Conference Proceedings

[10] **B. Koohbor**, A. Kidane, W. Y. Lu. *Dynamic flow response of rigid polymer foam subjected to direct impact*. In: *Conference Proceedings of the Society for Experimental Mechanics*, Springer 2016.

[9] **B. Koohbor**, G. Valeri, A. Kidane, M. A. Sutton. *Thermo-mechanical properties of metals at elevated temperatures*. In: *Conference Proceedings of the Society for Experimental Mechanics*, Springer 2016.

[8] A. Tessema, R. W. Mitchell, **B. Koohbor**, S. Ravindran, A. Kidane, M. Van Tooren. *On the mechanical response of polymer fiber composites reinforced with nanoparticles*. In: *Conference Proceedings of the Society for Experimental Mechanics*, Springer 2016.

[7] **B. Koohbor**, S. Mallon, A. Kidane. *Through thickness fracture behavior of transversely graded Ti/TiB material*. In: *Conference Proceedings of the Society for Experimental Mechanics (Volume 5)* J. Carroll, S. Daly (Editors), Springer 2015, pp: 51-56.

[6] S. Mallon, **B. Koohbor**, A. Kidane. *Fracture of Pre-Stressed Woven Glass Composite Exposed to Shock Loading*. In: *Conference Proceedings of the Society for Experimental Mechanics (Volume 1)* B. Song, D. Casem, J. Kimberley (Editors), Springer 2015, pp: 213-219.

[5] N. Zohhadi, **B. Koohbor**, F. Matta, A. Kidane. *Characterization of fracture behavior of multi-walled carbon nanotube reinforced cement paste using digital image correlation*. In: *Conference Proceedings of the Society for Experimental Mechanics (Volume 5)* J. Carroll, S. Daly (Editors), Springer 2015, pp: 73-79.

[4] S. Ravindran, **B. Koohbor**, A. Kidane. *On the meso-macro scale deformation of low carbon steel*. In: *Conference Proceedings of the Society for Experimental Mechanics (Volume 3)* H. Jin, C. Sciammarella, S. Yoshida, L. Lamberti (Editors), Springer 2015, pp: 409-414.

[3] **B. Koohbor**, S. Serajzadeh. *Effect of rolling path change on the subsequent static recrystallization of Al-1050*. 4th National Conference of Materials Engineering Society for Iran (IMES), Tehran, Iran, November 2010.

[2] **B. Koohbor**, S. Serajzadeh. *Finite element prediction of the stress and strain fields within work-roll in cold rolling process*. 11th Iranian Conference on Manufacturing Engineering, Tabriz, Iran, October 2010.

[1] **B. Koohbor**, D. Ohadi, S. Serajzadeh, J. M. Akhgar. *Study on the effect of roller speed on the strain aging of warm-rolled low-carbon steel*. 11th National Steel Symposium, Ahwaz, Iran, January 2009.

Professional Experience

- Research Assistant at the Department of Mechanical Engineering, University of South Carolina (Columbia, SC), January 2013 – Present.
- Senior metallurgical engineer at 'Barz Engineering Co.' (Tehran), October 2011 - January 2013.
- Designer of the hot rolling pass schedule for tandem and twin stand Steckel mills at 'Barz Engineering Co.' (Tehran), October 2011 – January 2013.

Reviewer for

- International Journal of Materials Science and Applications
(Also a member of the Editorial Board)
- Advances in Materials
(Also a member of the Editorial Board)
- American Journal of Mechanics and Applications
(Also a member of the Editorial Board)
- Journal of Mechanics Engineering and Automation
(Also a member of the Editorial Board)
- Engineering Science and Technology, an International Journal (Elsevier)
- Materials Research Innovation (Maney)

Honors and Awards

- Travel Grant, Department of Mechanical Engineering, University of South Carolina, Columbia, SC, January 2015.

- Graduate Assistantship, Department of Mechanical Engineering, University of South Carolina, Columbia, SC, January 2013.
- Recipient of McGill Engineering Doctoral Award (MEDA), Department of Mining and Materials Engineering, McGill University, Montreal, QC, Canada, September 2012.
- Ranked **1st** among the students of Metal Forming, Department of Materials Science and Engineering, Sharif University of Technology, 2011.
- Ranked **2nd** among 90 MSc students at the Department of Materials Science and Engineering, Sharif University of Technology, 2011.

Professional Membership

- American Society of Mechanical Engineers (**ASME**), Student member since 2013
- Society for Experimental Mechanics (**SEM**), Student member since 2014

Research Interests

- Dynamic Behavior of Materials
- Fracture mechanics
- Multi-scale (Micro, Meso and Macro) Digital Image Correlation
- Hot and cold metal forming processes
- Numerical methods in materials and mechanical engineering