

Behrad Koohbor

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Academic Background

Jan. 2013 – Present **PhD** candidate of Mechanical Engineering at the 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

Theses

1. (MSc Thesis) Prediction of strain field within strip and work-roll during cold rolling of low-carbon steel, Jan. 2011
Department of Materials Science and Engineering, Sharif University of Technology
2. (BSc Thesis) Effect of cooling rate on the occurrence of static strain aging after warm rolling of low-carbon steel, Sep. 2008
Department of Materials Science and Engineering, Sharif University of Technology

Journal Papers

1. **B. Koohbor**, D. Ohadi, S. Serajzadeh and 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, 45 (13), 2010, 3405-3412.
2. **B. Koohbor** and S. Serajzadeh, “*Kinetics of static strain aging after temper rolling of low carbon steels*”, Ironmaking & Steelmaking: Processes, Products and Applications, 38 (4), 2011, 314-320.

3. **B. Koohbor** and S. Serajzadeh, "Study on effect of residual stress distributions on kinetics of static strain aging after cold rolling", *Materials Science and Technology*, 27 (11), 2011, 1620-1627.
4. **B. Koohbor** and S. Serajzadeh, "Thermo-mechanical behaviors of strip and work-rolls in cold rolling process", *Journal of Strain Analysis for Engineering Design*, 46 (8), 2011, 794-804.
5. **B. Koohbor** and S. Serajzadeh, "Influence of deformation path change on static strain aging of cold rolled steel strip", *International Journal of Advanced Manufacturing Technology*, 61, 2012, 901-909.
6. **B. Koohbor** and 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*, 6 (3), 2013, 417-422.
7. M. S. Shahriary, **B. Koohbor**, A. A. Ekrami, K. Ahadi, M. K. Qomi and 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*, 550, 2012, 325-332.
8. L. Khalili, S. Serajzadeh and **B. Koohbor**, "Thermomechanical behavior of work rolls during warm strip rolling", *Metallurgical and Materials Transactions B*, 43 (6), 2012, 1638-1648.
9. R. Siavash Moakhar, M. Mehdipour, M. Ghorbani, M. Mohebbali and **B. Koohbor**, "Investigation of the failure in boilers economizer tubes used in power plants", *Journal of Materials Engineering and Performance*, 22 (9), 2013, 2691-2697.
10. **B. Koohbor**, "On the influence of rolling path change on the static recrystallization behavior of commercial purity Aluminum", *International Journal of Material Forming*, 7 (1), 2014, 53-63.
11. **B. Koohbor**, S. Mallon, A. Kidane and 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*, 66, 2014, 388-399.
12. 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*, 2014 in press. DOI: 10.1007/s11340-014-9936-5

Conference Proceedings

1. A. Kidane and **B. Koohbor**, "Full field study of fracture and failure of woven composites subjected to combined in-plane and out of plane loading", ASME 2014 International Mechanical Engineering Congress and Exposition, Montreal, QC, November 2014.
2. **B. Koohbor**, S. Mallon and A. Kidane, "Through thickness fracture behavior of transversely graded Ti/TiB material", Society for Experimental Mechanics (SEM), Greenville, SC, June 2014.
3. S. Mallon, **B. Koohbor** and A. Kidane, "Fracture of Pre-Stressed Woven Glass Composite Exposed to Shock Loading", Society for Experimental Mechanics (SEM), Greenville, SC, June 2014.

4. N. Zohhadi, **B. Koohbor**, F. Matta and A. Kidane, “*Characterization of fracture behavior of multi-walled carbon nanotube reinforced cement paste using digital image correlation*”, Society for Experimental Mechanics (SEM), Greenville, SC, June 2014.
5. S. Ravindran, **B. Koohbor** and A. Kidane, Society for Experimental Mechanics (SEM), Greenville, SC, June 2014.
6. **B. Koohbor** and 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.
7. **B. Koohbor** and 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.
8. **B. Koohbor**, D. Ohadi, S. Serajzadeh and 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](#))

Honors

- 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
- The Minerals, Metals and Materials Society (**TMS**), Student member since 2014
- Society for Experimental Mechanics (**SEM**), Student member since 2014

Skill Areas

Computer Skills

- Digital Image Correlation software, **Vic-2D** and **Vic-3D**
- Finite element package **ABAQUS**
- Programming skills: **MATLAB**, **PASCAL**
- **CATIA**
- **TECPLOT**
- **MS Office**

Teaching Skills

- Teaching Assistant of 'Engineering Lab III (EMCH 363)', Department of Mechanical Engineering, University of South Carolina, January 2013 - present.
- Mechanics and metallurgy of cold strip rolling (a 40-hour course), Seven Diamonds Industries, 2012.
- Teaching Assistant of 'Metal Forming' Lab, Department of Materials Science and Engineering, Sharif University of Technology, 2012.
- Teaching Assistant of 'Heat treatment' Lab, Department of Materials Science and Engineering, Sharif University of Technology, 2012.
- Teaching Assistant of 'Mechanical properties of materials' Lab, Department of Materials Science and Engineering, Sharif University of Technology, 2011.

Extra-curricular activities

- Member of the editorial board, periodical journal of the Department of Materials Science and Engineering, Sharif University of Technology, September 2011 – January 2013.
- Conference Manager of the 4th and 5th National Conference of Metals and Materials Forming (MATFORM), Sharif University of Technology, 2008 and 2011.

Research Interests

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