Robert L. Jackson
Professor, Auburn University
SUMMARY (Updated Oct., 2016)

TEACHING

Advised as Major Professor:

Ph.D. Students Graduated	5
Masters Students Graduated	16
Undergraduate Honors Thesis	2

Advised as Committee Member:

Ph.D. Students Graduated	15
Masters Students Graduated	18

Courses Taught:

Number of Different Courses Taught	6
New courses Developed	4

Teaching Awards:

- 2014 STLE Recognition for Commitment to the Advancement of the Science of Tribology
- 2013 Mark A. Spencer Creative Mentorship Award (with Ryan Whitmore)

New Program

Created Minor in Tribology (*first in USA*)
20 Students are Currently Enrolled (4 grads)

SERVICE and OUTREACH

Professional Organizations:

Member, STLE Conf. Planning Cmte.
Member, IEEE Holm Prize Paper Cmte.
Chair, Prev. ASME Tribology Division
Chair, Prev. Chattahoochee Section, ASME
Chair, Prev. STLE Steering Committee
Member, IEEE Holm Conf. Tech Cmte.
Chair/Co-Chair of over 15 Tech. Sessions

Auburn University:

ASME Faculty Advisor 2005-2014
STLE Faculty Advisor 2012-
Member: Mech. Eng. E-Day Cmte.
Member: ME Graduate Prog. Cmte.
Director, Tribology Minor
Judge, Research Week, GERS, GSF

Journal Service:

Assoc. Editor, ASME J. of Tribol., 2010-
Technical Editor, STLE Tribology and Lubrication Technology, 2014, 2015, 2016
Reviewed over 200 papers for 20 journals

Other Service and Outreach:

Propoosal Review, NSF, DoE
Started Tribology Minor in 2012
Received over $100k in external funds
Donated test equipment (10+)
Taught 10+ Distance Learning Courses

RESEARCH

Extramural Funding (NSF, DoE, etc.):

Total Funds: $4,000,000+

Publications:

Refereed Journal Publications	74
Publication citations (Google)	
Citations of top paper	363
Total Citations	2138
H Index	22
Several of the most cited papers in two different major Tribology journals.	
Chapters in Books	3
Other Publications (discussions, etc.)	3
Conf. Presentations (Papers)	126 (63)
Invited Lectures	18

Patents: Patent Disclosures Submitted 3

Research Related Awards:

- 2011 ASME Burt L. Newkirk Award for notable contributions to the field of tribology as indicated by significant publications before reaching the age of 40.
- 2009 Erle Shobert Prize Paper Award at the 55th IEEE Holm Conference on Electrical Contacts.
- 2009 STLE Hunt Award: Best paper published in the field of lubrication for Jackson, R. L., Green, I., 2008, *Trib. Trans*, 51, 1, pp. 19–32.
- 2013 STLE Annual Meeting Best Poster Award, Hamed Ghaednia, *STLE 68th Annual Meeting*.
- 2008, 2009 Best Reviewer for the ASME Journal of Tribology

Other Recent Student Awards

- 2015 UKC Conference Best Poster Award (Hyeon Lee)

First Place, 2013 Graduate Engineering

- Research Showcase (Hamed Ghaednia) –First time Mech. Eng. won.
- 2013 STLE Booser Fellowship (Hannah Neuffer, Tribology Minor student)
- 2015 STLE Booser Fellowship (Chris Jaudon, Tribology Minor student)
- 2016 Merriwether Fellowship (Hamid Ghaednia, PhD student)

Robert L. Jackson

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Auburn, AL 36849

Professional Preparation

Ph.D. Mechanical Engineering, Georgia Institute of Technology,
Thesis Title: *The Wear and Thermo-elastohydrodynamic Behavior of Thrust Washer Bearings Under Non-Axisymmetric Loads*
Major: Friction, Lubrication and Wear Minor: Dynamics and Vibrations
Advisor: Itzhak Green
M.S. Mechanical Engineering, Georgia Institute of Technology
B.S. Mechanical Engineering, Georgia Institute of Technology

Appointments

Professor, Oct. 1, 2015-
Auburn University – Department of Mechanical Engineering
Description: Education and research in Mechanical Engineering, specifically multi-scale tribology and machine design.

Associate Professor, Oct. 2009-Oct. 2015
Auburn University – Department of Mechanical Engineering

Assistant Professor, July 2004-Oct. 2009
Auburn University – Department of Mechanical Engineering

Graduate Research Assistant, 1998-2004
The Center for Surface Engineering and Tribology – Georgia Institute of Technology
Description: Design, maintenance and operation of thrust washer bearing test rig. Construction and implementation of numerical simulation of thrust washer bearing system.

Undergraduate Research Position, Summer 1997
Georgia Institute of Technology – The Woodruff School of Mechanical Engineering

Engineering Intern, Summer 1996
Raytheon E-Systems Communications Division

Honors and Awards

- 2014 Society of Tribologists and Lubrication Engineers (STLE) Recognition for Commitment to the Advancement of the Science of Tribology (via the Auburn University Tribology Minor)
- 2013 Mark A. Spencer Creative Mentorship Award (with Ryan Whitmore)
- 2011 American Society of Mechanical Engineers (ASME) Burt L. Newkirk Award for notable contributions to the field of Tribology as indicated by significant publications before reaching the age of 40.
- 2009 Erle Shobert Prize Paper Award at the 55th IEEE Holm Conference on Electrical Contacts for Jackson, R. L., Malucci, R. D., Angadi, S., Polchow, J. R., A Simplified Model of Multiscale Electrical Contact Resistance and Comparison to Existing Closed Form Models, *The 55th IEEE Holm Conference on Electrical Contacts*, Vancouver, BC, Canada, September 14-16, 2009.
- 2009 STLE Hunt Award: Best paper published in the field of lubrication for Jackson, R. L., Green, I., The Thermoelastic Behavior of Thrust Washer Bearings Considering Boundary Lubrication, Asperity Contact and Thermoviscous Effects, 2008, *Trib. Trans,* 51, 1, pp. 19–32.
- 2015 Conference Best Poster Award for H. Lee, R. L. Jackson, R. R. Hanson, Equine Articular Cartilage Hyperelastic Properties Differ Between Joints, US-Korea Conference 2015, Atlanta, GA, July 29 - August 1, 2015.
- First Place, 2013 Graduate Engineering Research Showcase, Hamed Ghaednia –First time Mechanical Engineering has won.
- 2013 STLE Annual Meeting Best Poster Award, Hamed Ghaednia (PhD Student), "The Effect of Nanoparticle Additives in the Elasto-hydrodynamic Lubrication Regime", *STLE 68th Annual Meeting*, Detroit, MI, May 5-9, 2013.
- 2015 ILMA Robert F. Jackson Award (Xiaohan Zhang, PhD student)
- 2016 Merriwether Fellowship (Hamid Ghaednia, PhD student)
- 2013 Merriwether Fellowship (Hamed Ghaednia, PhD student)
- 2013 Outstanding Auburn University Masters Student (Hyeon Lee)
- 2016 STLE Booser Fellowship (Zoe Tucker, Tribology Minor student)
- 2015 STLE Booser Fellowship (Chris Jaudon, Tribology Minor student)
- 2013 STLE Booser Fellowship (Hannah Neuffer, Tribology Minor student)
- 2011 Level 3 Grant via AU's Intramural Grant Program on "Articular Cartilage Mechanical Behavior with Respect to the Various Operating Conditions of Specific Joints"
- 2008, 2009 Best Reviewer for the ASME Journal of Tribology (Twice)
- NSF Fellowship (Summer Course)–July 2004, July 2006
- 2006, 2010, 2012, 2013 Auburn Undergraduate Research Fellowship - Christine Taylor, Patrick Smyth, Ryan Whitmore, William Campbell
- 2008 Auburn University Competitive Research Grant, Biomimetic Self Adapting Lubricated Surfaces, Robert L. Jackson.
- 2004 Auburn University Mentor Program (with George T. Flowers).

Research/Creative Work

Book Chapters

Jackson, R. L., "Chapter 14: Lubrication," in Handbook of Lubrication and Tribology, Volume II: Theory and Design, edited by Bruce, R.W., pp. 14.1-14.14 Boca Raton, FL, USA, CRC Press, 2012.

Jackson, R. L., "Stochastic Contact Theories: Other Theories Based on the Greenwood-Williamson Model." Chap. 514 In *Encyclopedia of Tribology*, edited by Wang, Q. J. and Chung. Y.-W., P. 3299-306: Springer US, 2013.

Jackson, R. L., Ghaednia. H., Lee, H., Rostami, A., Wang, X., "Contact Mechanics." In *Tribology for Scientists and Engineers*, edited by Menezes, P.L.; Ingole, S.; Nosonovsky, M.; Kailas, S.V.; Lovell, M.R., p. 946: Springer US, 2013.

Article-length Publications

Dr. Jackson has written 80 journal articles. 74 of them have been published or are accepted for publication in peer reviewed journals. Three more are currently under review for publication. These publications have been accepted to a wide range of well-respected technical journals, including Applied Physics Letters, ASME Journal of Tribology, ASME Journal of Heat Transfer, STLE Tribology Transactions, Wear, IEEE Transactions on Components and Packaging Technologies, Tribology International, Tribology Letters, Engineering Failure Analysis, and IMECHE Part J. Journal of Engineering Tribology. This shows that Dr. Jackson's work is not only making impacts in the field of tribology, but also in heat transfer and electronics.

Refereed Journal Publications (Accepted: 74, Submitted: 7):
-Note that a * indicates that an author is a graduate or undergraduate student.

Published or Accepted

74. Xu, Y.*, Jackson, R.L., 2016, Statistical Models of Nearly Complete Elastic Rough Surface Contact-Comparison with Numerical Solutions, Accepted to *Tribology International.*
73. Jackson, R. L., Xu, Y.*, Mahajan, M., Fundamentals and Previous Experiments of the Squeeze Film Levitation Mechanism, Accepted to *Proceedings of the National Academy of Sciences of the United States of America*.
72. Zhang, X.*, Xu, Y.*, Jackson, R. L., An Analysis of Generated Fractal and Measured Rough Surfaces in Regards to Their Multi-scale Structure and Fractal Dimension, Accepted in *Tribology International*. DOI: 10.1016/j.triboint.2016.09.036
71. Lee, H.*, Campbell, W. D.*, Canning, M. E.*, Theis, K. M.*, Young, H. E.*, Jackson, R. L., Hanson, R. R., Correlation between Signalment and the Biphasic Hyperelastic Mechanical Properties of Equine Articular Cartilage, Accepted to *Biotribology*. DOI: *10.1016/j.biotri.2016.07.001*

70. Zhang, X.*, Jackson, R. L., An Analysis of the Multi-scale Structure of Surfaces with Various Finishes, Accepted to *STLE Tribology Transactions*.
69. Saha, S.*, Xu, Y.*, Jackson, R. L., Perfectly Elastic Axisymmetric Sinusoidal Surface Asperity Contact, 2016, *J. of Tribol., Trans. ASME, 138, 3, p. 031401;* DOI: 10.1115/1.4031994
68. Ghaednia, H.*, Jackson, R. L., Tribological Performance of Silver Nanoparticle-Enhanced Polyethylene Glycol Lubricants, Accepted to *STLE Tribology Transactions*; DOI: 10.1080/10402004.2015.1092623
67. Ghaednia, H.*, Pope, S.*, Jackson, R. L., A Comprehensive Study on the Elasto-Plastic Contact of a Sphere and a Flat, 2015, *Tribology International*, 93, pp. 78-90; DOI: 10.1016/j.triboint.2015.09.005
66. Jackson, R. L., Crandall, E. R., Bozack, M. J., Rough Surface Electrical Contact Resistance Considering Scale Dependent Properties and Quantum Effects, 2015, *J. of Appl. Phys.*, 117, pp. 195101; DOI: 10.1063/1.4921110
65. Jackson, R. L., Ghaednia, H.*, Pope, S.*, A Solution of Rigid Perfectly Plastic Deep Spherical Indentation based on Slip Line Theory, 2015, *Tribology Letters*, 58, pp. 47; DOI: 10.1007/s11249-015-0524-3
64. Xu, Y.*, Rostami, A.*, Jackson, R. L., Elastic Contact Between A Geometrically-Anisotropic Bi-Sinusoidal Surface and A Rigid Base, 2015, *ASME J. of Tribology*, 137, 2, pp. 021401; DOI: 10.1115/1.4029537
63. Ghaednia, H.*, Marghitu, D. B., Jackson, R. L., Predicting the Permanent Deformation After the Impact of a Rod with a Flat Surface, 2015, *ASME J. of Tribology, 137, 1, pp.011403; DOI:* 10.1115/1.4028709
62. Ghaednia, H.*, Jackson, R. L., Khodadadi, J. M., Experimental Analysis of Stable CuO Nanoparticle-Enhanced Lubricants, 2015, *Journal of Experimental Nanoscience, 10, 1,* p. 1-18, DOI**:** 10.1080/17458080.2013.778424.
61. Smyth, P. A.*, Green, I., Jackson, R. L., Hanson, R. R., Biomimetic Model of Articular Cartilage Based on In Vitro Experiments, 2014, *Journal of Biomimetics, Biomaterials and Tissue Engineering,*21, pp. 75-91. DOI: 10.4028/www.scientific.net/JBBBE.21.75
60. Lee, H.*, Kirkland, W. G.*, Whitmore, R. N.*, Young, H. E.*, Richardson, A. J.*, Jackson, R. L., Hanson, R. R., Comparison of Equine Articular Cartilage Thickness in Various Joints, 2014, *Connective Tissue Research, 55, 5-6, pp. 339-347;* DOI: 10.3109/03008207.2014.949698
59. Lee, H.*, Theis, K M.*, Malpass, C. A.*, Jackson, R. L., Hanson, R. R., Equine Articular Cartilage Stiffness Determination using Indentation, 2014, *ASME J. of Tribology*, 137, 1, pp. 011201; DOI: 10.1115/1.4028285
58. Vadgama, B. N.*, Harris, Daniel K., Jackson, R. L., Molecular Scale Analysis of Dry Sliding Copper Asperities, 2014, *Applied Nanoscience,* DOI: 10.1007/s13204-014-0339-9
57. Jackson, R. L., Lei, J., Hydrodynamically Lubricated and Grooved Biomimetic Self-Adapting Surfaces, 2014, *Journal of Functional Biomaterials*, *5,* pp. 78-100; doi:10.3390/jfb5020078
56. Barrett, E.*, Hanson, R.R., Jackson, R. L., Biomechanical Testing of a Novel Tendon Implant Device for the Repair of Equine Flexor Tendon Lacerations, 2014, *Veterinary Surgery*, 43, 6, pp. 685-690. DOI: 10.1111/j.1532-950X.2014.12181
55. Rostami, A.*, Jackson, R. L., Three-dimensional Modeling of Elasto-plastic Sinusoidal Contact under Time Dependent Deformation due to Stress Relaxation, 2014, *Tribology*

International, 73, pp.25-35. DOI: 10.1016/j.triboint.2013.12.020

54. Rifkin, R. E.*, Smyth, P. A.*, Jackson, R. L., Hanson, R. R., The average roughness and fractal dimension of articular cartilage during drying, 2013, *Scanning*, 36, 3, pp. 368-375. DOI: 10.1002/sca.21128
53. Xu, Y.,*, Jackson, R. L., Marghitu, D. B., Statistical Model on the Almost Complete Elastic Rough Surface Contact, 2014, *International Journal of Solids and Structures*, 51, 5, pp. 1075-1088. DOI: 10.1016/j.ijsolstr.2013.12.005
52. Ghaednia, H.*, Babaei, H.*, Jackson, R. L., Bozack, M. J., Khodadadi, J. M., The effect of nanoparticles on thin film elasto-hydrodynamic lubrication, 2013, *Applied Physics Letters*, 103, pp. 263111. DOI: 10.1063/1.4858485
51. Rostami, A.*, Jackson, R. L., Predictions of the Average Surface Separation and Stiffness between Contacting Elastic and Elastic-Plastic Sinusoidal Surfaces, 2013, *Proc. of the IMechE, Part J: J. of Eng. Tribology*, 227, 12, pp. 1376-1385. DOI: 10.1177/1350650113495188
50. Ghaednia, H.*, Jackson, R. L., On the Effect of Nanoparticles on the Real Area of Contact, Friction and Wear, 2013, *J. of Tribol., Trans. ASME*, , 135, 4, pp. 041603 (10 pages). DOI: 10.1115/1.4024297.
49. Goedecke, A., Jackson, R. L., Mock, R., A Fractal Expansion of a Three Dimensional Elastic-Plastic Multiscale Rough Surface Contact Model, 2013, *Tribology International*, 59, pp. 230-239.
48. Dawkins, J. J.*, Bevly, D. M., Jackson, R. L., Evaluation of Fractal Terrain Model for Vehicle Dynamic Simulations, 2012, *Journal of Terramechanics,*49, 6, pp. 299-307.
47. Smyth, P. A.*, Rifkin, R. E.*, Jackson, R. L., Hanson, R. R., The Fractal Structure of Equine Articular Cartilage, 2012, *Scanning*, 34, 6, pp. 418-426.
46. Fu, R.*, Choe, S.-Y., Jackson, R. L., Flowers, G. T., Kim, D., Modeling and Analysis of Vibration-induced Changes in Connector Resistance of High Power Electrical Connectors for Hybrid Vehicles, 2012, *Mechanics Based Design of Structures and Machine* ,40, 3, pp. 349-365.
45. Jackson, R. L., Ghaednia, H.*, Yasser, A. E.*, Bhavnani, S. Knight, R., A Closed-Form Multiscale Thermal Contact Resistance Model, 2012, *Components, Packaging and Manufacturing Technology, IEEE Trans*., 2, 7, 1158-1171.
44. Smyth, P. A.*, Rifkin, R. E.*, Jackson, R. L., Hanson, R. R., A Surface Roughness Comparison of Cartilage in Different Types of Synovial Joints, 2012, *J. Biomech. Eng.*, 134, 2, 021006 (5 pages).
43. Angadi, S.*, Jackson, R. L., Choe, S.-Y., Flowers, G. T., Lee, B.-Y., Zhong, L.., A Multiphysics Finite Element Model of a 35A Automotive Connector including Multiscale Rough Surface Contact, 2012, *J. of Electronic Packaging, Trans. ASME*, 134, 1, 011001 (12 pages).
42. Fu, R.*, S.Y. Choe, R.L. Jackson, G.T. Flowers, M.J. Bozack, L. Zhong, and D. Kim, Vibration-Induced Changes in the Contact Resistance of High Power Electrical Connectors for Hybrid Vehicles, 2012, *Components, Packaging and Manufacturing Technology, IEEE Trans*., 2, 2, pp.185-193.
41. Dawkins, J. J.*, Jackson. R. L., Bevly, D. M., Fractal Terrain Generation for Vehicle Simulation, 2012, *International Journal of Vehicle Autonomous Systems, 10, 1-2*, 10.1504/IJVAS.2012.047693.
40. Ibrahim Dickey, R.*, Jackson, R. L., Flowers, G. T. Measurement of Static Friction

Coefficients and Comparison to Theoretical Models, 2011, *J. of Tribol., Trans. ASME*, 133, 031408.

39. Shah, S.*, Krithivasan, V.*, Jackson, R. L., An Electro-mechanical Contact Analysis of a Three-Dimensional Sinusoidal Surface against a Rigid Flat, 2011, *Wear*, 270, 11-12, pp. 914-921.
38. Marghitu, D., Cojocaru, D., Jackson, R. L. Elasto-Plastic Impact of a Rotating Link with a Massive Surface, 2011, *International Journal of Mechanical Sciences, 53, 4, pp.* 309-315.
37. Jackson, R. L., Green. I., On the Modeling of Elastic Contact Between Rough Surfaces, 2011, *Trib. Trans.*, 54, 2, pp. 300 – 314.
36. Kim, S. J.*, Dean, R., Jackson, R. L., Flowers, G., An Investigation of the Damping Effects of Various Gas Environments on a Vibratory MEMS Device, 2011, *Trib. Int.,*, 44, 2, pp. 125-133.
35. H. Wang*, M. Zou, R. L. Jackson, P. R. Larson, M. B. Johnson, Nanoindentation Modeling of a Nanodot-Patterned Surface on a Deformable Substrate, 2010, *Int. J. of Solids and Structures*, 47, 22-23, pp. 3203-3213.
34. Wadwalkar, S. S.*, Jackson, R. L., Kogut, L., A Study of The Elastic Plastic Deformation of Heavily Deformed Spherical Contacts, 2010, *IMechE Part J, J. of Eng. Tribol.*, 224, pp. 1091-1102.
33. Goedecke, A.*, Jackson, R. L., Mock, R., Asperity Creep under Constant Force Boundary Conditions, 2010, *Wear*, 268, 11-12, pp. 1285-1294.
32. Jackson, R. L., A Scale Dependent Simulation of Liquid Lubricated Textured Surfaces, 2010, *ASME J. Tribol*., 132, 2, pp. 022001.
31. Jackson, R. L., An Analytical Solution to an Archard-type Fractal Rough Surface Contact Model, 2010, *STLE Trib. Trans*., 53, 4, pp.543 - 553.
30. Jackson, R. L., Green, I., Marghitu, D., Predicting the Coefficient of Restitution of Impacting Elastic-Perfectly Plastic Spheres, 2010, *Nonlinear Dynamics*, 60, 3, pp. 217–229.
29. Wilson, W. E.*, Angadi, S. V.*, Jackson, R. L., Surface Separation and Contact Resistance Considering Sinusoidal Elastic-Plastic Multi-Scale Rough Surface Contact, 2010, *Wear*, 268, 1-2, pp. 190-201.
28. Singh, R. A.*, Yoon, E.-S., Jackson, R. L., Biomimetics: The science of imitating nature, 2009, *Tribol. & Lub. Tech.*, 65, 2, pp. 40-47.
27. Streator, J. L., Jackson, R. L., A Model for the Liquid-Mediated Collapse of 2-D Rough Surfaces, 2009, *Wear*, 267, 9-10, pp. 1436-1445.
26. Angadi, S. V.*, Jackson, R. L., Choe, S.-Y., Flowers, G. T., Suhling, J. C., Chang, Y.-K., Ham, J.-K., Reliability and Life Study of Hydraulic Solenoid Valve - Part 1 - A Multi-physics Finite Element Model, 2009, *Engineering Failure Analysis*, 16, 3, pp. 874-887.
25. Angadi, S. V.*, Jackson, R. L., Choe, S.-Y., Flowers, G. T., Suhling, J. C., Chang, Y.-K., Ham, J.-K., Bae, J.-I., Reliability and Life Study of Hydraulic Solenoid Valve - Part 2 - Experimental Study, 2009, *Engineering Failure Analysis*, 16, 3, pp. 944-963.
24. Duvvuru, R. S.*, Jackson, R. L., Hong, J. W., Self-adapting Micro Scale Surface Grooves For Hydrodynamic Lubrication, 2009, *Trib. Trans.*, 52, 1, pp.1-11.
23. Jackson, R. L., Krithivasan, V., Wilson, W. E., The Pressure to Cause Complete Contact between Elastic Plastic Sinusoidal Surfaces, 2008, *IMechE J. of Eng. Trib.*, 222, 7, pp. 857-863.
22. Jackson, R. L., Bhavnani, S. H., Ferguson, T. P., A Multi-scale Model of Thermal Contact Resistance between Rough Surfaces, 2008, *J. of Heat Transfer, Trans. ASME*, 130, 8, pp.

081301.

21. Mahajan, M.*, Jackson, R. L., Flowers, G. T., Experimental and Analytical Investigation of a Dynamic Gas Squeeze Film Bearing, 2008, *Trib. Trans*., 51, 1, pp. 57-67.
20. Jackson, R. L., Green, I., The Thermoelastic Behavior of Thrust Washer Bearings Considering Boundary Lubrication, Asperity Contact and Thermoviscous Effects, 2008, *Trib. Trans*, 51, 1, pp. 19–32.
19. Jackson, R. L., Green, I., An Experimental Investigation of Various Materials on Thrust Washer Bearing Operation, 2007, *IMechE Part J*, 221, 7 pp. 761-770.
18. Krithivasan, V.*, Jackson, R. L., An Analysis of Three-Dimensional Elasto-Plastic Sinusoidal Contact, 2007, *Trib. Letters*, 27, 1, pp. 31-43.
17. Almeida, L.*, Ramadoss, R., Jackson, R. L., Ishikawa, K., Yu, Q., Laterally actuated multi-contact MEMS Relay fabricated using MetalMUMPS process: Experimental Characterization and Multiscale Contact Modeling, 2007, *J. Micro/Nanolith. MEMS MOEMS* , 6, 2, 023009.
16. Jackson, R. L., Kogut, L., Electrical Contact Resistance Theory for Anisotropic Conductive Films Considering Electron Tunneling and Particle Flattening, 2007, *IEEE Transactions on Components and Packaging Technologies*, 30, 1, pp. 59-66.
15. Jackson, R. L., Duvvuru, R. S.*, Meghani, H.*, Mahajan, M.*, An Analysis of Elasto-plastic Sliding Spherical Asperity Interaction, 2007, *Wear*, 262, 1-2, pp. 210-219.
14. Jackson, R. L., Streator, J. L., A Multiscale Model for Contact between Rough Surfaces, 2006, *Wear*, 261, 11-12, pp. 1337-1347.
13. Jackson, R. L., Self Adapting Mechanical Step Bearings for Variations in Load, 2005, *Trib. Letters*, 20, 1, pp. 11-20.
12. Jackson, R. L., The Effect of Scale Dependant Hardness on Elasto-plastic Asperity Contact between Rough Surfaces, 2006, *Trib. Trans.*, 49, 2, pp.135-150.
11. Almeida, L.*, Jackson, R., Ramadoss, R., Ishikawa, K., Yu, Q., Study of the electrical contact resistance of multi-contact MEMS relays fabricated using the MetalMUMPs process, 2006, *J. Micromech. Microeng.*, 16, 7, pp. 1189-1194.
10. Kim, D.*, Jackson, R. L., Green, I., Experimental Investigation of Thermal and Hydrodynamic Effects on Radial Grooved Thrust Washer Bearings, 2006, *Trib. Trans.* 49, 2, *pp.*192-201.
9. Jackson, R. L., Green, I., The Behavior of Thrust Washer Bearings Considering Mixed Lubrication and Asperity Contact, 2006, *Trib. Trans.*, 49, 2, pp.233-247.
8. Jackson, R. L**.,** Kogut, L., A Comparison of Flattening and Indentation Approaches for Contact Mechanics Modeling of Single Asperity Contacts, 2006, *J. of Tribol., Trans. ASME,* 128, 1, pp. 209-212.
7. Kogut, L., Jackson, R. L., A Comparison of Elastic Contact Modeling Utilizing Statistical and Fractal Approaches, 2006, *J. of Tribol., Trans. ASME,* 128, 1, pp. 213-217.
6. Jackson, R. L., Green, I., A Finite Element Study of Elasto-plastic Hemispherical Contact Against a Rigid Flat, 2005, *J. of Tribol., Trans. ASME*, 127, 2, pp. 343-354.
5. Jackson, R. L., Chusoipin, I., Green, I., A Finite Element Study of the Residual Stress and Strain Formation in Spherical Contacts, 2005, *J. of Tribol., Trans. ASME*, 127, 3, pp. 484-493.
4. Jackson, R. L., Green, I., A Statistical Model of Elasto-plastic Asperity Contact of Rough Surfaces, 2006, *Tribol. Int.*, 39, 9, pp. 906-614.
3. Quicksall, J.*, Jackson, R. L., Green, I., Elasto-plastic Hemispherical Contact for Varying

Mechanical Properties, 2004, *IMechE J. of Eng. Trib.* 218, pp.313-322.

2. Jackson, R. L., Green, I., Experimental Analysis of the Wear, Life and Behavior of PTFE Coated Thrust Washer Bearings Under Non-axisymmetric Loading, 2003, *Trib. Trans.*, 46, 4, pp. 600-607.
1. Jackson, R. L., Green, I., Study of the Tribological Behavior of a Thrust Washer Bearing, 2001, *Trib. Trans.*, 44, 3, pp. 504-508.

Submitted Articles

1. Wang, X., Xu, Y., Jackson, R.L., Elastic-Plastic Sinusoidal Waviness Contact under Combined Normal and Tangential Loading, Submitted to *Tribology Letters.*
2. Wang, X., Xu, Y., Jackson, R.L., The pressure to cause complete contact between elastic sinusoidal surfaces in full stick, Submitted to *ImechE J. Engineering Tribology.*
3. Jackson, R.L., A Solution of Rigid Plastic Cylindrical Indentation in Plane Strain, Submitted to *Tribology International*.
4. Sharma, A., Jackson, R. L., A Finite Element Study of a Elasto-Plastic Cylindrical Contact Against a Rigid Flat in Plane Stress, Submitted to *STLE Tribology Transactions*.
5. Xu, Y., Jackson, R.L., 2016, Periodic Contact Problems in Plane Elasticity - the Fracture Mechanics Approach, Submitted to *J. of Tribol., Trans. ASME*.
6. Ghaednia, H., Wang, X., Saha, S., Jackson, R. L., Xu, Y., Sharma, A., A Review of Elastic-Plastic Contact Mechanics, Submitted to *Applied Mechanics Reviews*
7. Lee, H., Campbell, W. D., Theis, K. M., Canning, M. E., Young, H. E., Jackson, R. L., Hanson, R. R., Comparison on Hyperelastic Behavior between Fresh and Frozen Equine Articular Cartilage in Various Joints, Submitted to *Journal of Biomedical Materials Research - Part A.*

Other Publications:

Jackson, R. L., Willis, R. J., Arnold, M., Palmer, C., Synthesis of the Effects of Pavement Properties on Tire Rolling Resistance, 2011, NCAT Report 11-05.

Jackson, R. L., Ghaednia, H., Babaei, H., Khodadadi, J., Comment on Šperka, P., I. Křupka, M. Hartl (2014). "Evidence of Plug Flow in Rolling–Sliding Elastohydrodynamic Contact.", *Tribol. Letters.*

Jackson, R. L., Green, I., Discussion of "Experimental Investigation of Fully Plastic Contact of a Sphere Against a Hard Flat" by J. Jamari and D. J. Schipper, *J. of Tribol., Trans. ASME*.

Conference Papers and Lectures

Dr. Jackson and his group have presented 63 reviewed conference papers at international conferences and research symposium and 63 presentations without a paper (126 total). Also, he has been invited to give 18 invited lectures at conferences and for industry.

Conference Proceedings and Papers

63. Zhang, X., Xu, Y., Jackson, R. L., An Analysis of Generated Fractal and Measured Rough Surfaces, *The 62nd IEEE Holm Conference on Electrical Contacts*, Clearwater, FL**,** USA, Oct. 9-12, 2016.
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12. Jackson, R. L., A Multiscale Study of the Average Real Contact Pressure between Rough Surfaces, *ASME Chattahoochee Symposium on Contact Mechanics*, Auburn, AL, April 17, 2008.
11. Lei, J., Jackson, R. L., A Numerical Simulation of Lubricated Grooved Self Adapting Surfaces, *2007 STLE Annual Meeting*, Philadelphia, PA, May 6-10, 2007.
10. Duvvuru, R. S., Jackson, R. L., Hong, J. W., Novel Micro Scale Surface Textures For Hydrodynamic Lubrication, *2007 STLE Annual Meeting*, Philadelphia, PA, May 6-10, 2007.
9. Jackson, R. L., Bhavnani, S. H., Ferguson, T. P., A Multi-scale Model of Thermal Contact Resistance between Rough Surfaces, *2006 ASME International Mechanical Engineering Congress and Exposition*, Chicago, IL, USA – Nov. 5-10, 2006.
8. Jackson, R. L., Investigating the Lubricating Properties of Biofuels, *Alternative Energy Solutions From Alabama's Natural Resources*, Auburn, AL, October 23-24, 2006.
7. Jackson, R. L., Green, I., An Experimental Investigation of Various Materials on Thrust Washer Bearing Operation, *2006 STLE Annual Meeting*, Calgary, Canada, May 7-11, 2006.
6. Mahajan, M., Jackson, R. L., Flowers, G. T., Experimental and Analytical Investigation of a Dynamic Gas Squeeze Film Bearing, *2006 STLE Annual Meeting*, Calgary, Canada, May 7-11, 2006.
5. Jackson, R. L., A Micro to Nano-scale Simulation of Liquid Lubricated Textured Surfaces, *2006 ECI Frontiers of Boundary Lubrication Conference*, Lyon, France, April 9-14, 2006.

4. L. Almeida, K. Ishikawa, Q. Yu, R. Jackson, and R. Ramadoss, "Reliability Study of Ohmic contact type MEMS Relay Fabricated Using MetalMUMPS Process," *IEEE International Microwave Symposium 2005*, Long Beach, California, June 11-17, 2005.
3. Jackson, R. L., Green, I., An Investigation of a Tilted Thrust Washer Bearing Including TEHD, Asperity Contact and Boundary Lubrication Part 2: Experimental Results, *2004 STLE Annual Meeting,* Toronto, Ontario, Canada, May 16 – 20, 2004, Paper No. , pp. 1-29.
2. Jackson, R. L., Chusoipin, I., Green, I., A Finite Element Study of the Residual Stress and Strain Formation in Spherical Contacts, *2004 ASME/STLE International Tribology Conference,* Long Beach, California, October 24-27, 2004.
1. Jackson, R. L., Green, I., Study of the Tribological Behavior of a Thrust Washer Bearing, 56th STLE Annual Meeting, Orlando, Florida, USA, May 20-24, 2001.

Invited Lectures and Seminars: 18

1. "Surface and Friction Engineering," Oct. 2-3, 2016, 14th Annual Elements of Mechanical Engineering Conference, Auburn University.
2. "High Power Electrical Connector and Tribology Research,", July 22, 2016, Silicon Valley Technical Seminar Series, Tyco Electronics, Harrisburg, PA
3. "Mutliscale Contact Mechanics," November 13, 2015, Department of Materials Engineering Seminar Series, Clemson University.
4. "From Transmissions to Graphene: Leading Friction and Wear Research and Education into the Digital Age," March 5, 2015, Department of Mechanical Engineering Seminar Series, Clemson University.
5. "Introduction to Friction, Wear and Lubrication," Nov. 4-5, 2012, 10th Annual Elements of Mechanical Engineering Conference, Auburn University.
6. "An Introduction to Tribology and Related Research at Auburn University," July 20, 2011, Renewable Fuels Workshop, Auburn University.
7. "Multiscale Electrical and Thermal Contact Resistance," Feb. 18, 2010, Physics Department, Auburn University.
8. "Hydraulic Solenoid Valve Reliability and Modeling Study," May 29, 2008, *Korea Testing Laboratory*, Seoul, Korea.
9. "Multiscale Contact Modeling: Incorporating Micro and Nano-scale Surface Contact Effects into Larger Scale Component Models," *2008 Materials Engineering Seminar Series,* Auburn University.
10. "Multiscale Modeling of Contact and Friction," May 22, 2007, *Korea Institute of Science and Technology*, Seoul, Korea.
11. "Multiscale Contact Modeling: Incorporating Micro and Nano-scale Surface Contact Effects into Larger Scale Component Models," Symposium on Virtual Tribology, *2007 STLE/ASME International Joint Trib. Conference.*
12. "Multi-scale 'Smart' Surfaces for Bearing and Machine Interfaces," March 31, 2006, *NASA Glenn.Research Center,* Cleveland, OH.
13. "Multi-scale 'Smart' Surfaces for Bearing and Machine Interfaces," March 23, 2006, *Caterpillar Inc.,* Peoria, IL

14. "Compressible Squeeze Film Damping," January 24, 2006, *Qualcomm, MEMS Technologies,* San Jose, CA.
15. "Multi-scale 'Smart' Surfaces for Bearing and Machine Interfaces," December 14, 2005, *Hughes Christensen*, Houston, TX.
16. "The Behavior of Thrust Washer Bearings Considering the Effects of Thermoelastic Deformation and Asperity Contact," *March 30, 2005, Oak Ridge National Laboratory.*
17. "The Behavior of Thrust Washer Bearings Considering the Effects of Thermoelastic Deformation and Asperity Contact," *February 11, 2005, Society of Tribologists and Lubrication Engineers, Ohio Section,* Dayton, Ohio.
18. Jackson, R. L., Contact and Friction: From Asperity Interaction to Hardness Testing, *Chemical Engineering Seminars at Auburn University*, September 10th, 2004.

Patent Disclosures

Technology Disclosure submitted to the Auburn University Technology Transfer Office on "Silver Nanoparticle Additive for Lubricants."

Technology Disclosure submitted to the Auburn University Technology Transfer Office on "Controlled Surface Texture and Profile via Microfluidics."

Technology Disclosure submitted to the Auburn University Technology Transfer Office on "Self Adapting Mechanical Smart Bearings for Variations in Load."

Scholarly Contributions

Dr. Jackson's scholarly contributions are outlined in the following sections. There is a section dedicated to each area of contribution (teaching, research, and service/outreach).

Teaching

Required Courses Taught:
MECH 3130 Mechanics of Materials
MECH 3230 Machine Design

Electives Taught:
(All Original Courses Created by Prof. Jackson)
MECH 5230/6230/6236 Friction, Wear and Lubrication
MECH 5240/6240/6346 Boundary and Full-film Lubrication
MECH 5970-009/6970-009/6976-009 Multiscale Contact Mechanics
MECH 7970-009 Multiphysics Modeling

Graduate Students

Graduated Advised Students (5 PhD students, 16 Masters Students)

1. Manoj Mahajan, M.S. (Graduated, Fall 2006)
   Thesis Title – "Experimental and Analytical Investigation of a Dynamic Gas Squeeze Film Bearing Including Asperity Contact Effects"
   Current Position: Technical Team Lead at Schlumberger
2. Ravi Duvvuru, M.S. (Graduated, Fall 2007)
   Thesis Title – "Novel Self-Adapting Microscale Surface Textures for Hydrodynamic Lubrication"
   Current Position: Senior Oracle Programmer/Analyst at The World Bank
3. Vijaykumar Krithivasan, M.S. (Graduated, Spring 2008)
   Thesis Title – "Finite Element Analysis of Three-Dimensional Elasto-Plastic Sinusoidal Contact and Inclusion in a Multi-Scale Rough Surface Contact Model"
   Current Position: Packaging R&D Engineer at Intel Corporation
4. Santosh Angadi, M. S., (Graduated, Fall 2008)
   Thesis Title – "Hydraulic Solenoid Valve Reliability and Modeling Study"
5. W. Everett Wilson, M. S., (Graduated, Fall 2008)
   Thesis Title – "Surface Separation and Contact Resistance Considering Sinusoidal Elastic-Plastic Multi-Scale Rough Surface Contact"
   Current Position: Mechanical Engineer at L-3 Communications
6. Saurabh Wadwalkar, M. S., (Graduated, Fall 2009)
   Thesis Title – "A Study of Elastic Plastic Deformation of Heavily Deformed Spherical Surfaces"
   Current Position: Senior Project Engineer at Nextant
7. J. Robert Polchow, M. S., (Graduated, Spring 2010)

Thesis Title – "A Multi-Physics Finite Element Analysis of Round Pin High Power Connectors"
Current Position: Field Engineer at Schlumberger

8. Rujian Fu, M. S., (Graduated, Spring 2011)
Thesis Title – "Experimental and Theoretical Analysis of High Power Connectors for Hybrid Vehicles"
Current Position: Battery Simulation Engineer at A123 Systems
9. Russell Green, M. S., (Graduated, Summer 2011)
Thesis Title – "A Non-contact Method for Sensing Tire Contact Patch Deformation Using a Monocular Vision System and Speckled Image Tracking"
Current Position: Engineer, Advanced R&D, John Deere
10. Vijaykumar Krithivasan, Ph. D. (Graduated, Spring 2011)
Dissertation Title – "Theoretical and Experimental Analysis of Strain in a Tire Under Static Loading and Steady-State Free-Rolling Conditions"
Current Position: Packaging R&D Engineer at Intel Corporation
11. Santosh Angadi, Ph. D., (Graduated, Fall 2011)
Dissertation Title – "An Experimental Investigation and a Multiscale Electro-thermo-mechanical Model of a 40A High Power Electrical Connector"

12. Jeremy J. Dawkins, Ph. D. (Graduated Fall 2011)
Dissertation Title – "Terrain Characterization and Roughness Estimation for Simulation and Control of Unmanned Ground Vehicles"
Current Position: Assistant Professor at the U.S. Naval Academy
13. Yang Xu, M. S. (Graduated, Summer 2012)
Thesis Title – "An Analysis of Elastic Rough Contact Models"
Current Position: PhD Student at Auburn Univ.
14. James Gatherer, M. S. (Graduated, Summer 2013)
Thesis Title – "A Study of the Effect of Various Material Combinations on the Bolted Contacts of Busbars"
Current Position: Process Engineer at Intel Corporation
15. Amir Rostami, M. S. (Graduated, Summer 2013)
Thesis Title – "Three-Dimensional Modeling of Elasto-Plastic Sinusoidal Contact Under Time Dependent Deformation Including Both Stress Relaxation and Creep Analysis"
Current Position: PhD Student, Georgia Tech
16. Hyeon Lee, M. S. (Graduated, Summer 2013)
Thesis Title – "A Comparison between the Mechanical Behaviors of Different Equine Articular Cartilage Surfaces"
Current Position: PhD Student, Virginia Tech
17. Bhavin N. Vadgama, Ph. D. (Graduated Spring 2014)
Dissertation Title – "Molecular Dynamics Simulations of Dry Sliding Asperities to Study Friction and Frictional Energy Dissipation"
Current Position: Engineering Project Director at Accurate Engineering Inc.
18. Hamed Ghaednia, Ph. D. (Graduated Fall 2014)
Dissertation Title – "An Analytical and Experimental Investigation of Nanoparticle Lubricants"
Current Position: Research Engineer, Ford Motor Company

19. Sara Pope, M. S. (Graduated Fall 2014)
    Thesis Title – "The Effect of Sand on the Wear of Anodized Aluminum"
    Current Position: Recently Graduated.
20. Xiaohan Zhang, M. S. (Graduated Fall 2014)
    Thesis Title – "An Analysis of the Multi-scale Structure of Rough Surfaces"
    Current Position: PhD student at Auburn University
21. Yang Zhao, M. S. (Graduated Summer 2015)
    Thesis Title – "Experimental Analysis of the Wear of Rubber Against Harder Materials in Reciprocating Motion"
    Current Position: PhD student at the University of Arkansas

Two Undergraduate Honors Thesis:

Patrick Austin Smyth, "An Exploration of Equine Cartilage Considering Statistical and Fractal Mathematics," Spring, 2011

Christine Louise Taylor, "Testing of Food Grade Bearings Under Severe Conditions," Spring, 2007

Current Students

Ph. D. Students

1. Yang Xu, Ph. D., (Began Spring 2013)
2. Xianzhang Wang, Ph. D., (Began Summer 2011)
3. Xiaohan Zhang, Ph. D. (Began Spring 2013)
4. Swarna Saha, Ph. D. (Began Fall 2014)
5. Akshay Kumar, Masters, Varakala (Began Spring 2016)
6. Nolan Chu, Masters, (Began Summer 2016)

Served as a thesis committee member for the following students:

1. Rujian Fu (ME PhD to Completion)
2. Chase Wortman (Masters to Completion)
3. Patrick Smyth (Masters to Completion, Georgia Tech)
4. Dan Clary (Chemistry PhD to Completion)
5. Prajwal Swamy Sripathi (Masters to Completion)
6. Aimee Poda (ChemE PhD to Completion)
7. Rahul Jhaver (Masters to Completion)
8. Darshanuday Shinde (Masters to Completion)
9. Jordan Roberts (Masters to Completion)
10. Darrell Krueger (Masters to Completion)
11. Chris Johnson (Masters to Completion)
12. Piyush-chunilal Savalia (Masters to Completion)
13. Lia Almeida (EE Masters to Completion)
14. Paul Pearson (Masters to Completion)
15. Prakriti Choudhary (Masters to Completion)

16. Liwei Wang (Mat. Eng. PhD to Completion)
17. Kendall Hurst (ChemE PhD to Completion)
18. Dhananjay Panchagade (ME PhD to Completion)
19. Sameep U. Gupte, (ME Masters to Completion)
20. Chen Chen (ME PhD to Completion)
21. Eliza Banu (ME PhD to Completion)
22. Sakthivael Kandaswaamy (ME PhD to Completion)
23. Namo Pankaj Vijayakumar (ME Masters to Completion)
24. Namo Vijayakumar (ISYE PhD to Completion)
25. Harideepan Ravindran (ME Masters to Completion)
26. Naveed Ansari (ChemE PhD to Completion)
27. Vishnuvardhan Chandrasekaran (ME PhD to Completion)
28. Haoyue Yang (ME Masters to Completion)
29. Naved Siddiqui (Mat. Eng. PhD to Completion)
30. Melissa Peacock (ME Masters to Completion)
31. Mattie A. McMaster (Masters to Completion, Vet. Med.)
32. Francis Duggan (Masters to Completion, Department of Mechanical Engineering National University of Ireland, Galway)
33. Hamid Ghaednia (ME Masters)
34. HongLong Wang (Mat. Eng. PhD to Completion)
35. Raj Krishna Abhiram Pasumarthy (ME Masters)
36. Patrick Smyth (PhD Georgia Tech)
37. Amir Rostami (PhD Georgia Tech)
38. Andrea Bigi (ME PhD)
39. Jeffrey Gaddes (ME Masters)
40. Jonathan Patillo (ME PhD)
41. Wesley Hunko (ME PhD)
42. Bryan Griffith (MME)
43. Pratik Deokar (ME PhD)

Courses and Curricula Developed

Dr. Jackson has created a new minor in Tribology. Coinciding with the formation of the new Tribology Minor, several new courses were created. They are listed below. Some of them were actually created prior to the minor.

MECH 5230/6230/6236 – Friction, Wear and Lubrication
This course was developed by Dr. Jackson as an introductory course into friction, wear and lubrication (tribology) to senior level undergraduate students and graduate students. The course covers the theory and techniques for considering friction, wear, and lubrication in the design of machine components, and other surface interactions. The course includes a group design project on optimizing the tribological performance of a component. This course provides both very practical and very fundamental knowledge in an important area of engineering.

MECH 5240/6240/6246: Boundary and Full-film Lubrication

This course was developed to be a part of the new Tribology Minor and Auburn University. It covers the field of lubrication more thoroughly than 5230 and includes more advanced topics such as boundary film lubrication, elasto-hydrodynamic lubrication, and compressible fluid (gas) bearings. Students are taught the theory and techniques for the design and modeling of the different regimes of lubrication between surfaces and machine components in order to control friction and wear. Students will be taught how to classify the different regimes of lubrication and how mechanics and chemistry affect each of them differently.

MECH5270: Metalworking and Manufacturing Tribology
Dr. Jackson helped to create this course, but it is actually usually taught by Dr. Lewis Payton. The course includes the theory and optimization techniques for tool life and surface finish considering friction, wear and lubrication in manufacturing processes including both metalworking fluids and hard/dry machining. Students will understand the basic concepts of friction, wear, and tool life prediction. They will become familiar with all the modern manufacturing processes used throughout the southeastern United States in the marine, aerospace and automotive industries. Heavy emphasis will be placed on use of dry cutting, hard turning and water based additives as environmentally friendly alternatives to traditional metal working fluids. Students will learn the various predictive models for tool wear and apply them to case studies.

MECH 5/6970-009 – Multiscale Contact Mechanics
Dr. Jackson designed this course to give students a thorough understanding of contact mechanics while also incorporating very recent findings and methodologies. For instance, the course is organized to cover the field of contact mechanics over many different length scales. The scales covered by the course span from the macroscale for large machine components such as bearings and gears, all the way down to nanoscale contact which governs friction and is also important for the growing areas of Micro Electro Mechanical Systems (MEMS) and nanotechnology. Students are taught contact theories based on both continuum mechanics and atomistic simulations. It also includes an individual project on modeling a real contact situation.

MECH 7970-009 – Multi-physics Modeling: Students learn the theory and techniques for considering coupled thermal, mechanical, and electrical fields in the modeling and design of components such as MEMS, electronics, and connectors. Learn the fundamental techniques used to simultaneously solve the equations and also how to use commercial multiphysics finite element software. Includes a group design project on modeling a component using the software.

Service

University Service

Mechanical Engineering Faculty Search Committee (2015-)
Founding Member, College Engineering Faculty Research Colloquium (2014-)
Mechanical Engineering Graduate Program Committee (2010-)
Tribology and Lubrication Science Minor Director (2012-)
Manufacturing and Design Stem Committee (2004-)
MECH 3230 Course Coordinator (2009-)
STLE Faculty Advisor (2012-)
College of Engineering Undergraduate Research Fellowship Selection Comm. (2014)
Member, Mech. Eng. E –Day Planning Committee (2006-2014)
ASME Faculty Advisor (2006-2014)
Auburn Univ. Mentor Grant Selection Committee (2006, 2007)

Professional Service

Dr. Jackson has served in many positions for professional organizations such the American Society of Mechanical Engineers (ASME), the Society of Tribologists and Lubrication Engineers (STLE) and the Institute of Electrical and Electronics Engineers (IEEE).

Dr. Jackson recently joined the Nomination and Oversight Committee of the ASME Tribology Division after completing his role as Chair of the Tribology Division of the American Society of Mechanical Engineers (ASME). His term was 2011-2013. This is the highest position within the division. This position included organizing international conferences, supervising the ASME Journal of Tribology, division awards, finances, and other activities. Dr. Jackson also served as the Secretary (2010) and Education Chair (2009) for the committee. Recently, he helped to create an agreement with ASME and the organizers of the 2013 World Tribology Congress in Torino, Italy. He currently serves on the IEEE Holm Technical Program Committee. In addition, he organized a Contact Mechanics Symposium at the Summer Applied Mechanics/SES conference in the Summer of 2013.

Dr. Jackson has recently accepted a position on the Editorial Board of the STLE publication Tribology and Lubrication Technology. This is in additional to him serving as an Associate Editor for the ASME Journal of Tribology.

In 2007 he was asked by the president of STLE to chair the Committee for Technical Committees and Industrial Boards. This committee is designed to lead and guide the many different technical committees within STLE. The mechanical engineering students also asked him to serve as the Faculty Advisor for ASME. He also served as the Chair of the Chattahoochee Section of ASME, which encompasses Columbus, GA and Montgomery.

Other held positions and service:
Professional
Holm Conference on Electrical Contacts Prize Paper committee (2015-)
STLE Annual Meeting Conference Planning Committee (2015-)
Technical Editor, STLE Tribology and Lubrication Technology (2014-)
Nomination and Oversight Committee, ASME Tribology Division (2014-)

Chair, Executive Committee of the ASME Tribology Division, (2011-2013)
Secretary, Executive Committee of the ASME Tribology Division (2010-2011)
Education Chair, Executive Committee of the ASME Tribology Division (2008-2010)
Associate Editor ASME Journal of Tribology (2010-)
Founding Member of STLE Surface Engineering Tech. Cmte. (2005-2015)
Chair, PSC, STLE Surface Engineering Technical Committee (2007, 2011-2015)
Chair, STLE Awards Committee (2004-2008)
Chair, ASME Tribology Division Contact Mechanics Committee (2012-2013)
Chair, STLE Steering Cmte. for Tech. Cmtes. and Ind. Boards (STLE) (2007-2009)
Chair, ASME Chattahoochee Section (2006-2008)
IEEE Holm Technical Program Committee (2009-)
Vice Chair, ASME Chattahoochee Section (2009-2010)
ASME 2007 Student Leadership Seminar
Officer, ASME Nanotribology and Micro-/Nano-Systems Committee (2006-2008)
ASME Tribology Division Membership Committee (2005-2007)

Conferences
2015 IEEE Holm Conference, Connectors Session, Chair
Session Chair, 2015 STLE Annual Meeting
Session Chair, Advanced Methods II, 2014 STLE Tribology Frontiers Conference
Session Chair, Macro Scales II, 2014 STLE Tribology Frontiers Conference
Session Chair, The 60th IEEE Holm Conference on Electrical Contacts
Chair, Contact Mechanics Symposium, SES/ASME Applied Mechanics Summer Conference
Session Chair, MEMS, The 59th IEEE Holm Conference on Electrical Contacts
Session Chair, Fundamentals, The 58th IEEE Holm Conference on Electrical Contacts
Tribology Division Chair, Awards Luncheon, ASME/STLE 2012 International Joint Tribology *Conference*, Denver, Colorado, USA, Oct. 7-10, 2012.
Session Chair, Contact Mechanics, 2011 STLE Annual Meeting
Vice Chair, BioTribology Session, 2011 STLE Annual Meeting
Contact Mechanics Joint Session (STLE Materials Technical Committee), 2011
Co-chair of Session at the 56th IEEE Holm Conference
Presented Awards at the International Joint Tribology Conference Awards Luncheon on behalf of ASME
Chair, Contact Mechanics I, 2009 International Joint Tribology Conference
Chair, Surface Engineering I, 2008 STLE Annual Meeting
Vice Chair, Surface Engineering III, 2008 STLE Annual Meeting
Track Co-Chair, Nanotribology, 2008 International Joint Tribology Conference
Chair, Nanotribology III - Tribofilms and Coatings, 2008 International Joint Tribology Conference
Track Co-Chair, Nanotribology, ASME/STLE International Joint Tribology Conference, 2007.
Chair, Surface Engineering, 2006 STLE Annual Meeting

Judging
Judge, 2015 Graduate Engineering Research Showcase
Judge, 2015 Elements of Mechanical Engineering Conference
Judge, 2014 Graduate Engineering Research Showcase

Judge, 2014 Elements of Mechanical Engineering Conference
Judge, 2013 Graduate Engineering Research Showcase
Judge, 2013 Graduate Scholars Forum
Judge, 2013 IEEE Holm Young Investigator Award
Judge, 2012 Graduate Engineering Research Showcase
Judge, 2010 Undergraduate Research Forum
Judge, 2007 South's BEST Regional Robotics Championship
Judge, 2007 Undergraduate Research Forum
Judge, 2006 Graduate Research Forum
Judge, 2006 ASME Tribology Division Student Paper Competition

Proposal Reviewer
National Science Foundation
Department of Energy
Louisiana EPSCoR
Binational Research Foundation
Israel Science Foundation
University of Wisconsin-Milwaukee

Journal Reviewer
Reviewer of over 175 papers for the following journals:

- *Nonlinear Dynamics*
- *Materials Design*
- *Fractals*
- *Journal of Adhesion Science and Technology*
- *Mechanics of Advanced Materials and Structures*
- *Applied Surface Science*
- *Philosophical Magazine*
- *Acta Mechanica*
- *IEEE Transactions on Components and Packaging Technologies*
- *International Journal of Solids and Structures*
- *ASME Journal of Vibrations and Acoustics*
- *ASME Journal of Tribology*
- *ASME Journal of Applied Mechanics*
- *Powder Technology*
- *STLE Tribology Transactions*
- *IMechE Journal of Engineering Tribology – Part J*
- *Journal of Colloid and Interface Science*
- *Tribology Letters*
- *Wear*
- *Computers and Structures*
- *Transactions on Mechatronics*
- *Tribology International*
- *Surface and Coatings Technology*

Reviewer of Book Chapter on “Mechanical characterization and properties of DLC films”