LYNDON SCOTT STEPHENS, Ph.D., P.E.
Chair and Professor, Department of Mechanical Engineering
Fellow, American Society of Mechanical Engineers
Director of the Bearings and Seals Laboratory

EDUCATION

Doctor of Philosophy, Mechanical and Aerospace Engineering, August, 1995
University of Virginia, Charlottesville, Virginia
Dissertation: A High Speed Machining Spindle on Magnetic Bearings

Master of Science, Mechanical Engineering, August, 1989
University of Kentucky, Lexington, Kentucky

Bachelor of Science, Mechanical Engineering, May, 1987
University of Kentucky, Lexington, Kentucky

ACADEMIC APPOINTMENTS

University of Kentucky, Department of Mechanical Engineering, Lexington, KY

2009-2015	Department Chair
2006-Present	Professor
1999-Present	Director, Bearings and Seals Laboratory
2009-2014	Engineering Alumni Association Professor
2006-2009	Director of Graduate Studies
2004-2009	WKU/UK Degree Program Joint Program Faculty
2002-2006	Associate Professor
1999-2002	Assistant Professor

Louisiana State University, Department of Mechanical Engineering, Baton Rouge, LA

1995-1998	Assistant Professor

SELECTED AWARDS AND HONORS

RESEARCH

- 2014 Fellow American Society of Mechanical Engineers
- 2014 Recipient of the STLE Frank P. Bussick Award for Best Journal Paper on Sealing Systems
- 2011 Recipient of the STLE Frank P. Bussick Award for Best Journal Paper on Sealing Systems
- 2007 Recipient of the Wethington Research Award at the University of Kentucky
- 2006 Recipient of the Wethington Research Award at the University of Kentucky
- 2006 Recipient of the STLE Frank P. Bussick Award for Best Journal Paper on Sealing Systems
- 2003-2009, Associate Technical Editor, ASME Journal of Tribology
- 2006 Research made cover of IEEE Transactions on Magnetics, Vol. 42, Issue 7
- 2005 Guest Editor, IEEE/ASME Transactions on Mecahtronics, Focused Issue on Magnetic Bearings
- 2004 Editor, Proceedings of the 9th International Symposium on Magnetic Bearings, August 2004
- 2004 Co-Chair, 9th International Symposium on Magnetic Bearings, Lexington, KY
- 2002 Vanguard Chair of Rotordynamics, ASME/IGTI Structures and Dynamics Committee/Conference
- 2001 National Science Foundation Award, Experimental Investigation of Thrust Surfaces with Deterministic Micro Asperities, Tribology Group

TEACHING AND ADVISING

- 2010 Faculty Advsior for North American Solar Challenge: Won Adversity Award
- 2009 Faculty Advisor for Formula Sun Grand Prix Solar Car Race: Finished in 2nd Place
- 2008 Faculty Advisor for North American Solar Challenge

- 2005 Faculty Advisor for North American Solar Challenge
- 2003 Faculty Advisor American Solar Challenge Sportsmanship Award to UK Solar Car Team
- 2001 Outstanding Faculty (Teaching) Award, American Society of Mechanical Engineers (ASME) Student Section
- Faculty Advisor to Ben Burns Award Recipients for Best Senior Design Project, Fall 1997
- Faculty Advisor to Ben Burns Award Recipients for Best Senior Design Project, Spring 1996
- ASME Student Chapter, Best Teacher Award Nominee, Louisiana State University, Fall, 1995

SELECTED PUBLICATIONS

[1] Wenk, JF, Stephens, LS, Lattime, S.B., Weatherly, D., "A multi-scale finite element contact model using measured surface roughness for a radial lip seal" pp 288-301, Tribology International, vol 97

[2] W.J. Leachman, H. Li, T.J. Flynn, L.S. Stephens, and C.A. Trinkle†. "Statistical Analysis of Wear of Biplanar Deterministically-Arrayed Surfaces for Load Bearing Applications," WEAR, Vol. 311, Issues 1-2, pp. 137-148, 2014.

[3] H. Li, T.J. Flynn, J. Nation, J. Kershaw, L.S. Stephens and C.A. Trinkle, "Photpatternable NdFeB Polymer Micromangets for Microfluidics and Microrobotcs Applications.' Journal of Micromechanics and Microengineering, 23 (065002), 2013.

[4] Wei, L., Wenk, J. and Stephens, L.S., "Experimental Benchmarking of the Numerical Model of a Radial Lip Seal with a Surface Textured Shaft," Tribology Transactions, v. 56, issue 1, January 2013.

[5] Morgan, C., Huber, J. and Stephens, L.S. "PCD Grinding of Brittle Materials for 3-D Shapes", Society of Manufacturing Engineering Meeting, Charlotte , NC., April 2011

[6] Kanakasabai, V., Warren, K.H. and Stephens, L.S., "Surface Analysis of the Elastomer in Lip Seals Run Against Shafts Manufactured with Micro-Cavity Patterns," Invited Paper for Special Issue on Surface Textures, Proc. Of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology, Vol 224, n 8, p 723-736, January 2011

[7] Morgan, C.J. and Stephens, L.S., "Fabrication of Precision Microstructures", SME MicroManufacturing Conferences and Exhibits, April 2009, Minneapolis, MN

[8] Ren, Z. and Stephens, L.S., "Laser Tracking and Pointing Using a Completely Electromagnetically Suspended Precision Actuator", Journal of Guidance, Control and Dynamics, Vol 25, No. 5, pp. 1235-1239, 2006

[9] Schneider, D.S. and Stephens, L.S., "An Experimental Study on the Impact of Interface Temperature on Thermally Induced Wear Transitions in Dry Sliding", ASME Journal of Tribology, Vol. 128, No. 3, July, 2006, pp. 460-468

[10] Stephens, L.S., Siripuram, R., Hayden, M., and McCartt, B., "Deterministic Micro Asperities on Bearings and Seals Using a Modified LIGA MEMs Process," ASME Journal of Engineering for Gas Turbines and Power, Vol. 126, No. 1, January, 2004, pp. 147-154

SELECTED PATENTS & DISCLOSURES (Broader Impacts)

[1] Three-Dimensional Microscale Polymer Fabrication Using Aligned-Mask Micromolding." UK Inventors: C.A. Trinkle, L.S. Stephens. Submitted to University of Kentucky Intellectual Property Development Office, 2013

[2] Three-Dimensional Microscale Polymer Fabrication Using Integrated-Mask Micromolding." UK Inventors: C.A. Trinkle, L.S. Stephens, T. Henninger. Submitted to University of Kentucky Intellectual Property Development Office, 2013

[3] Stephens, L.S., "Seal Assembly for Machinery Housing", United States Patent #7,066,671, June, 2006

[4] Stephens, L.S. and Kelly, K.W., "Bearings and Mechanical Seals Enhanced with Microstructures, Auxiliary Claims" United States Patent Office, United States Patent #6,280,090, August 28, 2001

[5] Stephens, L.S. and Kelly, K.W., "Bearings and Mechanical Seals Enhanced with Microstructures," United States Patent #6,149,160, November 21, 2000

[6] Rouch, K.E., Tewani, S.G., Walcott, B.L., Massa, T.R., Stephenson, R.W., Stephens, L.S, "Active Vibration Control Device", United States Patent Office, Patent Number: 5,170,103, December 8, 1992.

PHD Advisor: Carl Knospe, Univeristy of Virginia
Masters Advisor: Keith Rouch, University of Kentucky