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EDUCATION

- Ph.D., Engineering Mechanics, University of Wisconsin, 1985
- M.S., Engineering Mechanics, University of Wisconsin, 1981
- B.S., Applied Math and Physics, University of Wisconsin, 1980

EXPERIENCE RECORD

- 2008-Present Department Chair, Mechanical Engineering, Auburn University
- 2002-2008 Director, NSF Center for Advanced Vehicle Electronics (CAVE)
- 2001-Present Quina Distinguished Professor, Mechanical Engineering, Auburn University
- 1990-2000 Associate Professor, Mechanical Engineering, Auburn University
- 1985-1990 Assistant Professor, Mechanical Engineering, Auburn University
- 1980-1985 Graduate Assistant, Engineering Mechanics, University of Wisconsin

PROFESSIONAL INVOLVEMENT

- Member ASME, IEEE, IMAPS, SMTA, TAPPI, SEM
- Chairman, ASME Electronic and Photonic Packaging Division, 2002-03
- Chairman, SEM Electronic Packaging Division, 1999-2003
- Chairman, TAPPI International Paper Physics Committee, 1999-2001
- General Chairman, 2003 International Paper Physics Conference, Victoria, British Columbia, Canada, September 7-12, 2003
- General Chairman, 4th Symposium on Experimental/Numerical Mechanics in Electronic Packaging, Orlando, FL, June 5-8, 2000
- Program Chairman, 2000 International Paper Physics Conference, Grenoble, France, September 11-15, 2000
- Technical Program Chair, InterPACK ‘07 Conference, Vancouver, Canada, July 8-12, 2007
- General Chair, InterPACK ‘09 Conference, San Francisco, CA, July 19-23, 2009

HONORS AND AWARDS

- Best Poster of Conference Award, InterPACK ’07, Vancouver, BC, Canada, 2007
- Best Paper of Conference Award, ECTC 2005, Orlando, FL, June 1-3, 2005
- Best Paper of Conference Award, IMAPS 2002, Denver, CO, September 4-6, 2002
- Senior Faculty Research Award, Auburn University Alumni Engineering Council, 2001
- Best Paper of Conference Award, 1999 International Conference on Multichip Modules and High Density Packaging, Denver, CO, April 6-9, 1999
- Birdsong Superior Teaching Award, College of Engineering, Auburn University, 1994

RESEARCH INTERESTS AND SUMMARY

- Solid Mechanics, Stress and Strain Analysis, Experimental Mechanics, Advanced and Composite Materials, Finite Element Analysis and Computational Mechanics
- Electronic Packaging, Electronics Reliability, Silicon Sensors, Test Chips, Solder Material Behavior and Aging, Underfill Material Behavior, Solder Joint Reliability
- Mechanics of Paper and Wood, Paper Physics

EDUCATION INTERESTS AND SUMMARY

- WWW Based Instruction
- Courses in Mechanics of Materials, Electronic Packaging, and Paper Mechanics

REPRESENTATIVE PUBLICATIONS

- Bittle, D. A., Suhling, J. C., Beaty, R. E., Johnson, R. W., and Jaeger, R. C., "Piezoresistive Stress Sensors for Structural Analysis of Electronic Packages," *Journal of Electronic Packaging*, Vol 113(3), pp. 203-215, 1991.
- Jaeger, R. C., Suhling, J. C., Carey, M. T. and Johnson, R. W., "Off-Axis Piezoresistive Sensors for Measurement of Stress in Electronic Packaging," *IEEE Transactions on Components, Hybrids, and Manufacturing Technology*, Vol. 16(8), pp. 925-931, 1993.
- Jaeger, R. C., Suhling, J. C. and Ramani, R., "Errors Associated with the Design, Calibration of Piezoresistive Stress Sensors in (100) Silicon," *IEEE Transactions on Components, Packaging, and Manufacturing Technology*, Vol. 17(1), pp. 97-107, 1994.
- Zou, Y., Suhling, J. C., Johnson, R. W., Jaeger, R. C., and Mian, A. K. M., "In-Situ Stress State Measurements During Chip-on-Board Assembly," *IEEE Transactions on Electronics Packaging Manufacturing*, Vol. 22(1), pp. 38-52, 1999.
- Jaeger, R. C., Suhling, J. C., Ramani, R., Bradley, A. T., Xu, J., “CMOS Stress Sensors on (100) Silicon,” *IEEE Journal of Solid State Circuits*, Vol. 35(1), pp. 85-95, 2000.
- Suhling, J. C., and Jaeger, R. C., “Silicon Piezoresistive Stress Sensors and Their Application in Electronic Packaging,” *IEEE Sensors Journal*, Vol. 1(1), pp. 14-30, 2001.
- Suhling, J. C., Gale, H. S., Johnson, R. W., Islam, M. N., Shete, T., Lall, P., Bozack, M. J., Evans, J. L., Seto, P., Gupta, T., and Thompson, J. R., “Thermal Cycling Reliability of Lead Free Chip Resistor Solder Joints,” *Soldering and Surface Mount Technology*, Vol. 16(2), pp. 77-87, 2004.
- Rahim, M. K., Suhling, J. C., Copeland, D. S., Islam, M. S., Jaeger, R. C., Lall, P., Johnson, R. W., “Die Stress Characterization in Flip-Chip Assemblies,” *IEEE Transactions on Components and Packaging Technologies*, Vol. 28(3), pp. 415-429, 2005.
- Islam, M. S., Suhling, J. C., and Lall, P., “Measurement of the Temperature Dependent Constitutive Behavior of Underfill Encapsulants,” *IEEE Transactions on Components and Packaging Technologies*, Vol. 28(3), pp. 467-476, 2005.
- Mian, A. K. M., Suhling, J. C., and Jaeger, R. C., “The van der Pauw Stress Sensor,” *IEEE Sensors Journal*, Vol. 6(2), pp. 340-356, 2006.
- Lall, P., Hande, M., Bhat, C., Islam, N, Suhling, J., and Lee, J., “Feature Extraction and Damage-Precursors for Prognostication of Lead-Free Electronics,” *Microelectronics Reliability*, Vol. 47(4), pp. 1907-1920, 2007.
- Suhling, J. C. and Lall, P., “Electronic Packaging Applications,” Chapter 36, *Handbook of Experimental Solid Mechanics*, Springer, pp. 1015-1044, 2008.
- Cho, C. H., Jaeger, R. C., and Suhling, J. C., “Characterization of the Temperature Dependence of the Piezoresistive Coefficients of Silicon from -150 C to +125 C,” *IEEE Sensors Journal*, Vol. 8(8), pp. 1455-1468, 2008.

RESEARCH SUMMARY

- Dr. Suhling's primary research areas are electronic packaging reliability and the mechanics of paper. He has advised over 50 graduate students at Auburn University. Dr. Suhling has authored over 300 technical publications and presentations. He and his co-workers have attracted over $20,000,000 in externally funded research projects to Auburn University.