

RECENT CONFERENCE PROCEEDINGS – Professor George G. Adams

- Y.-C. Wu and G.G. Adams, “Plastic Yield Conditions for Adhesive Contacts,” *Proceedings of the 2008 ASME International Mechanical Engineering Congress and Exhibition*, October 31-November 6, 2008, Boston, MA, IMECE2008-67026.
- G.G. Adams, P. Nagappan, and N.E. McGruer, “Continuum Modeling and Analysis of the Frictional Interaction Between a CNT and a Substrate During Dragging,” *Proceedings of the 2008 ASME International Mechanical Engineering Congress and Exhibition*, October 31-November 6, 2008, Boston, MA, IMECE2008-68884.
- G.G. Adams, “The Mechanics of Adhesion – A Tutorial,” *Proceedings of the STLE/ASME International Joint Tribology Conference*, October 20-22, 2008, Miami, FL, IJTC2008-71247.
- G.G. Adams, “The Mechanics of Adhesion – Current and Future Trends,” *Proceedings of the STLE/ASME International Joint Tribology Conference*, October 20-22, 2008, Miami, FL, IJTC2008-71248.
- L. Chen, Y. Du, N.E. McGruer, and G.G. Adams, “Rate-Dependent Pull-Off Force – An Experimental Approach to Identify the Separation Mode in Microcontacts,” *Solid State Sensors, Actuators, and Microsystems Workshop*, Hilton Head island, South Carolina, June 1-5, 2008, pp. 186-189.
- Andy Pamp, George G. Adams, “Effect of Adhesion on Wafer Separation Due to Trapped Particles,” *Proceedings of the 2007 STLE/ASME International Joint Tribology Conference*, October 22-24, 2007, San Diego, California, USA, CD-ROM IJTC2007-44157.
- George G. Adams, Nicol E. McGruer, Lei Chen, Yan Du, and Z.J. (Jim) Guo, “Contact Failure Mechanisms in Ohmic-Type MEMS Switches,” *Proceedings of the 2007 STLE/ASME International Joint Tribology Conference*, October 22-24, 2007, San Diego, California, USA, CD-ROM IJTC2007-44265.
- Yan Du, George G. Adams, Nicol E. McGruer, “A Study of the Importance of Three Key Parameters on the Separation Modes of Adhering Microcontacts,” *Proceedings of the 2007 STLE/ASME International Joint Tribology Conference*, October 22-24, 2007, San Diego, California, USA, CD-ROM IJTC2007-44151.
- Lei Chen, Yan Du, Nicol E. McGruer, George G. Adams, “Ductile Separation and its Role in the Evolution of Gold Contacts,” *Proceedings of the 2007 STLE/ASME International Joint Tribology Conference*, October 22-24, 2007, San Diego, California, USA, CD-ROM IJTC2007-44152.
- G.G. Adams, Y. Du., L. Chen and N.E. McGruer, “An Investigation of Adhesion in Microcontacts – Ductile and Brittle Separation.” *Presented at the United States National Congress on Computational Mechanics*, July 22-26, 2007, San Francisco, CA.
- Z. J. Guo, N. E. McGruer, and G. G. Adams, “Modeling and Measurement of the Dynamic Performance of an Ohmic Contact-Type RF MEMS Switch,” *Solid-State Sensors, Actuators and Microsystems Conference, TRANSDUCERS’07*, June 10-14, 2007, Lyon, France, pp. 651-654.

- P.M. Nieva, Adams, G.G., McGruer, N.E., “Design and Modeling of a Multifunctional MEMS Fabry-Perot Sensor for the Simultaneous Measurement of Displacement, Pressure and Temperature,” *Proceedings of SPIE - The International Society for Optical Engineering*, v 6529 PART 2, Sensors and Smart Structures Technologies for Civil, Mechanical, and Aerospace Systems 2007, 2007, p. 65292D.
- Y. Du, L. Chen, N.E. McGruer, G.G. Adams, and I. Etsion, “An Elastic-Plastic Finite Element Model of Asperity Contact With Adhesion,” *Proceedings 30th Annual Meeting of the Adhesion Society*, 2007, pp. 476-478.
- Y. Du, L. Chen, N.E. McGruer, G.G. Adams, and I. Etsion, “A Finite Element Model of Asperity Contact With Adhesion and Plasticity,” *Proceedings of IJTC2006 STLE/ASME International Joint Tribology Conference*, October 22-25, 2006, San Antonio, TX, USA, CD-ROM, IJTC2006-12295.
- A. Pamp and G.G. Adams, “Deformation of Bowed Silicon Wafers Due To Applied Pressure and Adhesion,” *Proceedings of IJTC2006 STLE/ASME International Joint Tribology Conference*, October 22-25, 2006, San Antonio, TX, USA, CD-ROM, IJTC2006-12279.
- Eid and G.G. Adams, “An Elastic-Plastic Finite Element Analysis of Interacting Asperity Contacts,” *Proceedings of IJTC2006 STLE/ASME International Joint Tribology Conference*, October 22-25, 2006, San Antonio, TX, USA, CD-ROM, IJTC2006-12296.
- P.M. Nieva, N.E. McGruer, and G.G. Adams, “MEMS-Based Fabry-Perot Vibration Sensor for Harsh Environments,” *Smart Structures and Materials 2006: Sensors and Smart Structures Technologies for Civil, Mechanical, and Aerospace Systems, Proceedings of the SPIE*, Vol. 6174, 617426, (2006).
- P.M. Nieva, N.E. McGruer, and G.G. Adams, “Air Viscous Damping Effects in Vibrating Microbeams,” *Smart Structures and Materials 2006: Damping and Isolation, Proceedings of the SPIE*, Vol. 6169, 61690N, (2006).
- P.M. Nieva, N.E. McGruer, and G.G. Adams, “A Multipurpose Optical MEMS Sensor for Harsh Environments,” *NSTI-Nanotech 2006*, Vol. 3, 2006, pp. 419-422.
- N.E. McGruer, G.G. Adams, L. Chen, J. Guo, and Y. Du, “Mechanical, Thermal, and Material Influences on Ohmic-Contact-Type MEMS Switch Operation,” *IEEE International Conference on MEMS (MEMS 2006)*, Istanbul, Turkey, January, 22-26, 2006, pp. 230-233.
- P.J. Ryan, G.G. Adams, N.E. McGruer, and S. Muftu, “Bending of Bridge Structures Due to Residual Stresses at an Interface,” *2005 MRS Fall Meeting*, Abstract Y3.5.
- P.J. Ryan, G.G. Adams, N.E. McGruer, and S. Muftu, “An AFM-Based Scanning Method for Mechanical Testing of Nanoscale Cantilevers,” *2005 MRS Fall Meeting*, Abstract NN9.7.
- L. Chen, N.E. McGruer, G.G. Adams, R. Coutu, K. Leedy, “An SPM-Based System for Contact Reliability Characterization,” *Proceedings of the 52nd National Symposium of the AVS*, Session MN-MoM6, 2005.
- G.G. Adams, “Asperity-Based Models of Micro-Scale Friction,” *Proceedings of WTC2005, World Tribology Congress III*, paper WTC2005-64386 on CD-ROM. **Keynote address.**

- A.O. Sergici, G.G. Adams, and S. Muftu, “Adhesion in the Contact of a Spherical Indenter With a Layered Medium,” *Proceedings of WTC2005, World Tribology Congress III*, paper WTC2005-63382 on CD-ROM.
- L. Chen, N.E. McGruer, and G.G. Adams, “Contact Evolution in a Micromechanical Switch,” *Proceedings of WTC2005, World Tribology Congress III*, paper WTC2005-63970 on CD-ROM.
- J. Johnson, G.G. Adams, and N.E. McGruer, “Determination of Intermodulation Distortion in a MEMS Microswitch,” *International Microwave Symposium, 2005 IEEE MTT-S*, 4 pages on CD-ROM.
- S. Majumder, N.E. McGruer, and G.G. Adams, “Adhesion and Contact Resistance in an Electrostatic MEMS Microswitch,” *18th IEEE International Conference on Micro Electro Mechanical Systems, MEMS 2005*, pp. 215-218.
- O.T. Sari, G.G. Adams, and S. Müftü, “The Sliding and Rolling of a Cylinder at the Nano-Scale,” *Proceedings of TRIB2004, 2004 ASME/STLE International Joint Tribology Conference*, CD ROM, 6 pages, Paper TRIB2004-64347.
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- G.G. Adams, S. Müftü, and N. Mohd Azhar, “Scale-Dependence of the Coefficient of Friction,” *Proceedings 26th Annual Meeting of the Adhesion Society*, 2003, pp. 528-530.
- O.T. Sari, G.G. Adams, and S. Müftü, “Sliding and Rolling in Particle Adhesion on a Substrate,” *Proceedings 26th Annual Meeting of the Adhesion Society*, 2003, pp. 531-533.
- G.G. Adams and S. Müftü, “Asymmetric Asperity Height Distributions in a Scale-Dependent Model for Contact and Friction,” *2003 STLE/ASME International Joint Tribology Conference*, 2003, paper # 2003-Trib-258, 6 pages on CD-ROM.
- S. Majumder, N. McGruer, and G.G. Adams, “Contact Resistance and Adhesion in a MEMS Microswitch,” *2003 STLE/ASME International Joint Tribology Conference*, paper # 2003-Trib-270, 6 pages on CD-ROM.
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- T.Q. Truong, T.G. Barnes, X. Lu, G.G. Adams, and N.E. McGruer, “Design, Analysis, Fabrication, And Testing of a MEMS Contact/Bending Sensor With Improved Dynamic Range,” Micro-Electro-Mechanical Systems, 1999 ASME International Congress and Exposition, MEMS-Vol. 1, 1999, pp. 201-208.
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