

BIOGRAPHICAL DATA
James Eliot Morris



Professor Emeritus of Electrical & Computer Engineering
Portland State University, PO Box 751, Portland OR 97207-0751
(1900 SW 4th Avenue, Suite 160, Portland OR 97201)
Phone: (503) 725-9588
E-mail: j.e.morris@ieee.org jmorris@pdx.edu

IEEE Life Fellow (Fellow 2000):
"For Leadership in the Development of Electronics Packaging."

Registered Professional Engineer, New York (1985-)

Doctor Honoris Causa (2015), POLITEHNICA University of Bucharest

PERSONAL

Date of Birth: October 27, 1944
Place of Birth: Christchurch, New Zealand
Citizenship: U.S.A.
Family: Married; 3 daughters, 4 grandchildren

EDUCATION

B.Sc - 1965 Physics, University of Auckland, New Zealand
M.Sc - 1967 Radiophysics (1st class honors), University of Auckland, New Zealand
Ph.D. - 1971 Electrical Engineering, University of Saskatchewan, Saskatoon, Canada

CAREER SUMMARY

Department of Electrical & Computer Engineering, Portland State University, Portland, Oregon
Professor 2001-2015; Chair 2001-2004; Professor Emeritus 2016- ; Adjunct Professor 2016-2018
Department of Electrical Engineering, State University of New York at Binghamton, New York
Associate Professor 1984-1988; Professor 1988-2001; Chair 1989-1995; Emeritus 2001-
Director, Institute for Research in Electronics Packaging 1988-1989
Department of Electrical Engineering, South Dakota School of Mines and Technology, Rapid City, S.D.
Associate Professor 1981-1984
Department of Physics, Victoria University of Wellington, New Zealand
Lecturer 1972-1973, Senior Lecturer 1974-1981
Department of Electrical Engineering, University of Saskatchewan, Saskatoon, Canada
Senior Technician (digital systems) 1967, Ph.D. Research (thin films) 1967-1971
Lecturer 1969-1971, Post-doctoral Fellow 1971
Department of Physics, University of Auckland, Auckland, New Zealand
Laboratory demonstrator 1964-1966, M.Sc Research (tunnel diodes) 1965-1967

Visiting Positions

2011 (Aug-Sept) Loughborough University, UK (Royal Academy of Engineering Distinguished Visiting Fellow)
2008-2009 University of Greenwich, London (June-Sept); Chalmers University, Gothenburg (Oct-Dec);
Dresden U. of Technology (Jan-Feb); University of Canterbury, Christchurch, NZ
(Erskine Fellow, Feb-Apr); Helsinki U. of Technology (Nokia-Fulbright Fellow, April-Sept.)
2005-2008 Adjunct Professor, Shanghai University
2003-2006 Guest Professor, Shanghai Jiao Tong University
2000 (July) Visiting Professor, IXL, University of Bordeaux, France.
1997 (Jan-Aug) Visiting Professor, University of Maryland, (CALCE Electronic Packaging Research Center)
1996 (June-Dec) Guest Professor, Chemnitz University of Technology, Germany (Microtechnology Center)
1978 (June-Dec) Sabbatical, Physics Dept, Loughborough University of Technology, U.K.

Industrial Experience

1981 (July-Aug) Delphi Engineering, Auckland, NZ
1984 (July-Aug) IBM, Endicott NY
1985 (July-Aug) IBM, Endicott NY
Consulting (see below)

TEACHING

General Physics (recitations, laboratories)	100	UofA, VUW
General Engineering	100	SUNY
Microprocessors	100	SDSMT
Thermodynamics (recitation)	200	UofS
Circuits	200	VUW; SUNY; PSU
Digital Systems (incl. microprocessors)	300	VUW, SUNY
Electronics	200 300 400	SDSMT VUW, SUNY, PSU SUNY
Semiconductor Devices	300 400 500	VUW, SUNY VUW, SDSMT, SUNY SDSMT, SUNY, PSU
Technical Communications, Seminar, Professional Development	300, 400	SUNY
Electronics Laboratory	200, 300 400	SUNY, PSU, VUW VUW, UofS
Electromagnetic Fields and Waves	300, 500	SDSMT
Transmission Lines	300	SDSMT
Comprehensive EE survey courses incl. lab	200/300/400	UofS, PSU
Grad Communications, Controls, Electronics, Devices	400	VUW
Engineering Design	400	UofS, SDSMT, SUNY
Electronics Packaging	300/400 Grad 500/Internet	SUNY TU-Chem, U.Md SUNY, PSU
Electrical Engineering Materials	500, 600	SDSMT
Semiconductor Device Processing	400/500/ Internet	SUNY, PSU
Engineering Mathematics	500	SUNY
Thin Films	500	SUNY
Thin/Thick Film Labs	500	SUNY
Research Seminar	500	SUNY, PSU
Nanoelectronics	400/500	PSU
Nanotechnology (NSF-funded Gen Ed writing intensive lecture/lab course)	300	PSU
Nanotechnology Lab (NSF-funded lab course)	400/500	PSU

Victoria University of Wellington: curricular responsibility for the Department's electronics courses; developed post-graduate Co-op Diploma of Applied Science; responsible for 300 level lab administration.

CONTINUING EDUCATION, ETC

VUW: Organized a one-day seminar (largest ever at VUW) and technical exhibition in 1980 for lay audience on Microprocessors. An article based on the seminar was reproduced in 3 newspapers and widely quoted in others. 3 national radio interviews followed. Seminar was repeated by invitation in 2 other cities

SUNY Continuing Education Short Courses: Sensors & Sensing Systems; MOS Devices; Thin Films; Electronics (Raymond Corporation); Controls Symposium 1988, 1989.

Annual SUNY Symposia in Electronics Packaging: 1989, 1990, 1991, 1993.

SUNY programs for high school students: Saturday Seminars for Gifted Students: 1986 (inaugural presentation), 1987;

SUNY STEP II Program: Summer 1988, 1989; NSF Summer Research: 1995.

Research Workshops, Electrical Engineering Dept., National Cheng Kung University, Tainan, Taiwan:

(Thin Film/Packaging Workshop, 1991; Resonant Tunnel Diode Workshop, 1993)

Electronics Packaging Short Courses:

General (2-day): Stockholm '96; Singapore '96; Taiwan '97; Hong Kong '97.

Electrical Modeling: Athens '96, Gothenburg '00, '01.

Elec. Cond. Adhes: Munich '96; San Jose (ECTC) '97, Norrkoping '97, Binghamton '98, Paris '99, Taiwan '99, Gothenburg '99, '00, Hong Kong '99, '02, Tokyo '00, Bordeaux '01, Berlin '01, Shanghai '02, '04, '05, '07, Dresden '06, Reno (ECTC) '07; Berlin '07, Vestfold '08, London (ESTC) '08, Tampere '09, Wuhan '10.

Nanopackaging: Dresden '09, Helsinki '09 & '14 (ESTC), Genoa (NANO) '09, Tampere '09, Vestfold (IMAPS-Nordic) '09, Las Vegas (ECTC) '10, Wuhan '10, Raleigh (IMAPS) '10, Brighton (EMPC) '11, Xiamen (APM) '11, Grenoble '14, Wuxi '16, Singapore (EPTC) '16 & Nanoelectronics: Shanghai '06.

PSU Professional Engineering Review (Electronics): 2005- 2008, 2010, 2012

SELECTED GUEST RESEARCH LECTURES, SEMINARS PRESENTED

International

Chalmers University of Technology, Sweden (6-hour series 1977; nanopackaging 2008)
Universite d'Aix-Marseille/CNRS, France (6-hour seminar series in French, published internally.) 1977
EE, Imperial College, London
Microelec. Institute, Fudan University, Shanghai, PRC;
Physics & EE, Loughborough University, UK
IVF Research Report Meeting, Philips, Eindhoven.
TU-Wroclaw, Poland;
Institut Zeitschrift Mikrotechnologien-Berlin; Germany
Physics, University of Auckland, New Zealand
...Shanghai JiaoTong University, Shanghai
CPMT, Tsinghua University, Beijing
TU-Dresden (6-lecture nanopackaging 2009)
Loughborough University, UK
University of Oulu, Finland
Vestfold University College, Norway
Victoria UW (MacDiarmid Institute/IEEE) NZ
Maritime University of Constanta, Romania
TU-Cluj-Napoca, Cluj, Romania
E&EE, Salford University, U.K.
Shantou University, PRChina
Technische Universitat Dresden, Germany,
Technische Universitat Chemnitz, Germany,
Polymer Physics, Charles University, Prague;
EE, City University of Hong Kong.
Helsinki University of Technology
Shanghai University, Shanghai
Vestland Forsking, Sogndal, Norway
University of Birmingham, UK
University of Greenwich, UK
Tampere University of Technology, Finland
Hong Kong University of Science & Technology
University of Canterbury, NZ
Politehnica University of Bucharest

Industry

David Sarnoff Research Center, Princeton, NJ
General Motors Institute, Flint, MI
Rockwell International Labs, Thousand Oaks, CA
Solar Energy Research Institute, Golden, CO
Japanese industrial reps (at U. of Tokyo RCAST)
CPMT Chapters: SCV, Oregon, Sweden, Finland, etc
Corning Research Labs, Corning, NY
Dupont Research, Wilmington, DE
Sandia Lab, Albuquerque, NM
Xerox Research Labs, Webster, NY
AMD, Dresden
Henkel Corporation, Yangtai, China

Universities

Physics, University of Texas, El Paso, TX
EE, University of Alberta, Canada
Physics & Engineering, Mankato State University
EE, University of New Mexico, Albuquerque, NM
EET, Broome Community College, Binghamton, NY
EECS, Oregon State University, Corvallis, OR
Metallurgy, Ohio State Univ, Columbus, OH
EE, University of British Columbia, Canada
EE, Montana State University, Bozeman, MN
EE, University of California, Davis, CA
Physics: SUNY-Cortland; SUNY-Albany, NY
CSU-San Diego, Lawrence U MI, Wayne State MI

THESES

- "Inductive effects in tunnel diode switching circuits and a study of some tunnel diode monostable pulse generators," M.Sc. thesis, University of Auckland, 1967.
- "A study of discontinuous thin gold films and Au-SiO cermets," Ph.D. dissertation, University of Saskatchewan, 1971.

EDITED BOOKS

- "Electronics Packaging Forum: Volume 1" (Van Nostrand Reinhold) June 1990.
- "Electronics Packaging Forum: Volume 2" (Van Nostrand Reinhold) December 1990.
(Vols 1 & 2 now available in one volume from Springer)
- "Electronics Packaging Forum: Multichip Module Technology Issues" (IEEE Press) January 1994.
(Out of print)
- "Nanopackaging: Nanotechnologies in Electronics Packaging" (Springer) October 2008. [Chinese translation (2013)] Second edition (2016) in preparation.
- "Graphene, Carbon Nanotubes, and Nanostructures," (CRC Press) with K. Iniewski, 2013
- "Nanoelectronic Device Applications Handbook," (CRC Press) with K. Iniewski, 2013

AUTHORED BOOKS

- Johan Liu, Jussi Sarkka, Per-Erik Tegehall, Olli Salmela, J.E. Morris, & Christina Andersson, "Reliability of Microtechnology: Interconnects, Devices and Systems," (Springer) 2011 [Chinese translation (2013)]
- J. E. Morris, "Electrically Conductive Adhesives" (Springer) in preparation; under contract.

BOOK CHAPTERS

1. J. E. Morris, H. Anderson and R. Smith, "Retrofit Feedback Control of A/F Ratio and Ignition Timing for Fuel Economy," SAE Paper 820389 in Publication P-104 "Electronic Engine Management and Driveline Controls,"
2. J. E. Morris and Thomas Chih-Chien Chen "PLL Sensing for Engine Diagnostics and Control," SAE Paper 850494 in Publication SP-618, "Sensors and Actuators 1985," (SAE, Warrendale, PA.)
3. J. E. Morris and Li-Chi "Improved Intra-cylinder Pressure Sensor," SAE Paper 850374 in Publication SP-618, "Sensors and Actuators 1985," (SAE, Warrendale, PA)
4. J. E. Morris, "Light Emitting Diodes," in "Electrical Engineering Handbook," R. Dorf (editor)
Chapter 77.1 in Section 77 (Digital Displays), 1st edition, 1993, pp. 1763-1772 (CRC Press) Chapter 83.1 in Section 83 (Digital Displays), 2nd edition, 1997, pp. 1915-1924 (CRC Press & IEEE Press)
5. J. E. Morris, "Liquid Crystal Displays," in "Electrical Engineering Handbook," R. Dorf (editor)
Chapter 77.2 in Section 77 (Digital Displays), 1st edition, 1993, pp. 1772-1778 (CRC Press) Chapter 83.2 in Section 83 (Digital Displays), 2nd edition, 1997, pp. 1924-1930 (CRC Press & IEEE Press)
6. J. H. Das and J. E. Morris, "Diffusion and Gettering Simulations of Ion Implanted Copper in Polyimide," in "Metallized Plastics 2," K. L. Mittal (editor) Plenum, New York (1991) pp114-161.
7. J. E. Morris & J. H. Das "Diffusion and Aggregation of Copper in Polymers," in "Electronics Packaging Forum, Vol. 3," J. E. Morris (editor) IEEE Press (1994) pp. 41-71.
8. J. E. Morris, A. Mello & C. J. Adkins, "Electrical Conduction in Granular Metal Thin Films," in "Physical Phenomena in Granular Materials," G. D. Cody, T. H. Geballe & Ping Sheng (editors) Materials Research Society (1990) pp 181-186.
9. J. E. Morris, A. Kiesow, M. Hong, and F. Wu, "The effect of hydrogen absorption on the electrical conduction of discontinuous palladium thin films," in "Metal/Non-Metal Microsystems: Physics, Technology & Applications" B.Licznanski & A.Dziedzic (editors,) pp 245-248, SPIE International Society for Optical Engineering Vol. 2780.

10. J.E. Morris, "Electrical conduction in discontinuous thin metal films," in "Metal/Non-Metal Microsystems: Physics, Technology & Applications" B.Licznerski & A.Dziedzic (editors) pp 64-714, SPIE International Society for Optical Engineering Vol. 2780).
11. J. E. Morris, "Chapter 3: Electrical Conduction in Electrically Conductive Adhesives" in "Electrically Conductive Adhesives: A Comprehensive Review" J. Liu editor, Electrochemical Press, UK, (1999) pp. 37-77.
12. Li Li & J. E. Morris, "Chapter 5: Modeling Cure Schedules for Electrically Conductive Adhesives" in "Electrically Conductive Adhesives: A Comprehensive Review" J. Liu editor, Electrochemical Press, UK, (1999) pp. 99-116.
13. J. E. Morris & R. R. Tummala, "Chapter 2: The Role of Packaging in Microelectronics," in "Fundamentals of Microsystems Packaging," R. R. Tummala (editor), McGraw-Hill, 2001.
14. J. E. Morris, "Single Electron Transistors", in "Electrical Engineering Handbook," R. Dorf (editor) (3rd edition: "Electronics, Power Electronics, Optoelectronics, Microwaves, Electromagnetics, and Radar,") (CRC/Taylor & Francis.) 2006, pp. 3.53 - 3.64.
15. J. E. Morris, C. Radehaus, M. Hietschold, A. Kiesow, & F. Wu, "Single Electron Transistors & Discontinuous Thin Films" in "The World of Electronic Packaging and System Integration," B. Michel & R. Aschenbrenner (editors,) dpp goldenbogen, 2004, pp. 84-93.
16. J. E. Morris & J. Liu, "Chapter 20: Electrically Conductive Adhesives: A Research Status Review" in Micro-and Opto-Electronic Materials and Structures: Physics, Mechanics, Design, Reliability, Packaging," E. Suhir, Y. C. Lee, & C-P. Wong (editors) Springer US, 2007, pp. 527-570.
17. J.E. Morris, "Chapter 1: Nanopackaging: Nanotechnologies and Electronics Packaging," in "Nanopackaging: Nanotechnologies and Electronics Packaging," J.E. Morris (editor) Springer US, 2008.
18. J.E. Morris, "Chapter 5: Nanoparticle Properties" in "Nanopackaging: Nanotechnologies in Electronics Packaging" J.E. Morris (editor), Springer US, 2008.
19. F. Wu & J.E. Morris, "Chapter 8: Nanoscale Resistor Technology" in "Nanopackaging: Nanotechnologies and Electronics Packaging," J.E. Morris (editor) Springer US, 2008.
20. Xudong Wang, Z.L. Wang, Hongjin Jiang, Linbo Zhu, C.P. Wong, & James E. Morris, "Nanomaterials and Nanopackaging," in "Materials for Advanced Packaging" Daniel Lu & C.P. Wong (editors), Springer, 2009.
21. J.E. Morris & J. Lee, "Drop Test Performance of Isotropic Electrically Conductive Adhesives," in "Electrically Conductive Adhesives," R. Gomatam & K.L. Mittal (editors), VSP (2008), pp.185-202.
22. J.E. Morris, "Nanopackaging – Nanotechnologies for Microelectronics Packaging Reliability, in "Smart System Integration and Reliability," Bernd Michel & Klaus-Dieter Lang (editors), Goldenbogen Verlag, Dresden, (2010), pp. 164-178.
23. J.E. Morris, "Isotropic Conductive Adhesives" in "Advanced Adhesives in Electronics: Materials, properties, and applications," M.O. Alam & C. Bailey (editors) Woodhead, 2011, pp. 105-136.
24. J.E. Morris, "Nanopackaging," in "Nanoelectronics: Fabrication, Interconnects, and Device Structures," Kris Iniewski (editor), 2011, pp. 509-524.
25. James E. Morris & Liang Wang, "Isotropic Conductive Adhesive Interconnect Technology for Electronics Packaging Applications," in "Adhesion in Microelectronics," T. Ahsan & K. Mittal (editors) Scrivener, (2014) pp. 173-210.

REFEREED JOURNAL PUBLICATIONS

1. ____, Z.C. Tan & J.B. Earnshaw, "Inductive effects on capacitive loading of a tunnel diode," *Nuclear Instruments & Methods* 66, p. 246-252 (1968).
2. ____, "Calculation of activation energy in discontinuous thin metal films" *J. Appl. Phys.* 39, p. 6107-6109 (1968)
3. ____, "Resistance changes of discontinuous thin gold films in air," *Thin Solid Films* 5, p. 339-353 (1970).
4. ____, and A.D. Booth, "Rate control for vacuum co-deposition of thin film cermets," *Radio & Electronic Engineering*, 41, pp. 163-171, (1971).
5. ____, "Charge activation theory of conduction in discontinuous thin metal films," *J. Vac. Sci. & Tech.* 9, p. 437-441 (1972)
6. ____, "The influence of soda-lime substrate ion drift on the resistance of discontinuous thin gold films," *J. Vac. Sci. & Tech.* 9, p. 1039-1040 (1972).
7. ____, "Post-deposition resistance changes in cermet and discontinuous thin films," *Vacuum* 22, p. 153-155 (1972).
8. ____, "Effects of charge on the structure of discontinuous thin gold films," *Metallography* 5, p. 41-58 (1972).
9. ____, and M. O'Kranczy, "Resistance increase of discontinuous gold films by substrate absorption of oxygen," *Thin Solid Films* 10, p. 319-320 (1972).
10. ____, "Non-ohmic properties of discontinuous thin metal films," *Thin Solid Films* 11, p. 81-89 (1972).
11. ____, "The effect of strain on the electrical properties of discontinuous thin metal films," *Thin Solid Films* 11 p.259-272 (1972).
12. ____, "Structure and electrical properties of Au-SiO thin film cermets," *Thin Solid Films* 11, p. 299-311 (1972)
13. ____, and V. H. Meyer, "Stress effects in carbon coated copper grids for support of thin film specimens during electron microscopy," *Metallographic Rev.* 1, p. 38 (1972).
14. ____, and V. H. Meyer, "Electrostatic drift with transmission electron microscopy of cermet thin films," *Metallography* 8, p. 293-296 (1975).
15. ____, and T.G.L. Shirtcliffe, "Diploma of Applied Physics," *N.Z. Sci. Rev.* 32, p. 79-83 (1975)
16. ____, "The post-deposition resistance increase in discontinuous metal films," *Thin Solid Films* 28, p. L21-L23 (1975).
17. ____, "Contact angle contribution to the negative TCR of discontinuous metal films," *Thin Solid Films* 29, p. L9-L12 (1975).
18. ____, "Self-Heating effects in discontinuous metal films," *Thin Solid Films* 35, p. 165-168 (1975).
19. ____, "A.C. properties of discontinuous metal thin films," *Thin Solid Films* 36, p. 29-32 (1976)
20. ____, A. Mitchell and J. Robins, "A thick film hybrid power amplifier," *N.Z. Electron* 3, p. N2 10-12 (1976).
21. ____, and T. J. Coutts, "Electrical conduction in discontinuous metal films; a discussion," *Thin Solid Films* 47, p. 3-65 (1977). [invited review].
22. ____, "Active filter using Norton op amp gyrators," *Electronic Engineering*, p. 17-19 (June 1978).

23. ____, C. Bishop, M. Ridge and R. Howson, "Structural investigation of indium oxide thin films on PET," *Thin Solid Films* 62, p. 19-23 (1979).
24. ____, M. Ridge, C. Bishop & R. Howson, "Temperature dependence of Hall mobility in indium/tin oxide thin films," *J. Appl. Phys.* 51, p. 1847-1849 (1980).
25. ____, H. Anderson & R. Smith, "Retrofit Feedback Control of A/F Ratio and Ignition Timing for Fuel Economy," SAE Paper 820389 in SAE Transactions 91 (1982).
26. D. Evans, B. Hall, & ____, "Microcomputer Control of Thin Film Deposition Rate," *J. Phys. E: Sci. Instrum.*, 16 (1983) 544-548.
27. R. Smith, H. Anderson, & ____, "Data Acquisition and Analysis in a Vehicle with a Commodore PET," *J. Phys. E: Sci. Instrum.* 15 (1982) 1114-1118.
28. G. O. Svarstad, L. D. Feisel, & ____, "Discontinuous film Resistance at Saturation Thickness ts," *Thin Solid Films* 99 (1982) 379-384.
29. ____, & Thomas Chih-Chien Chen "PLL Sensing for Engine Diagnostics and Control," SAE Paper 850494 in SAE Transactions 94 (3) (1985) pp. 666-679.
30. ____, & Li-Chi "Improved Intra-cylinder Pressure Sensor," SAE Paper 850374 in SAE Transactions 94(3) (1985) pp. 137-146.
31. ____, "Intra-Cylinder Combustion Pressure Sensing," SAE Paper 870816 in SAE Transactions 96 (1987) pp.
32. ____, "GRE Policies in Electrical Engineering," *Engineering Education* 78 (1987) pp 125-129.
33. J. H. Das and ____, "Diffusion and Self-Gettering of Ion-Implanted Copper in Polyimide," *J. Appl. Phys* 66 (12) (1989) pp 5816 - 5820.
34. ____, "AC Effects in Asymmetric Discontinuous Metal Films," *Thin Solid Films* 193/194 (1990) 110-116.
35. W. Moussa and ____, "Effects of Non-Ideal Switches in PWM Switching Converters" *International J. Electronics* 38 (4) Jan 1992 pp 485-512.
36. ____ and J. Das "Metal Diffusion in Polymers," *IEEE Trans. CPMT-B:Adv. Pkg.* 17 (1994) pp 620-625.
37. ____ and F. Wu, "The Effects of Hydrogen Absorption on the Resistance of Discontinuous Palladium Films" *Thin Solid Films* 246 (1994) pp 17-23.
38. Li Li, H. Kim, C. Lizzul, I. Sacolick, and ____, "Electrical, Mechanical, Structural and Processing Properties of Electrically Conductive Adhesives" *IEEE Trans. CPMT - 16* (1993) pp 843-851.
39. C-Y Huang, ____, Y-K Su and T.H. Kuo, "New Method of Modeling a Multipeak Resonant Tunnelling Diode," *Electronics Letters* 30 (1994) pp 1012-1013.
40. C-Y Huang ____, and Y-K Su, "An improved multi-peak resonant tunneling diode model for 9-state RTD memory simulation," *IEEE Trans. Electron Devices*, 42(9) Sept 1995, pp. 1705-1707.
41. Li Li, and ____, "Structure and selection models for anisotropic conductive adhesive films," *J. Electronics Manufacturing*, 5(1) March 1995, pp. 9-17.
42. ____, A. Kiesow, M. Hong, and F. Wu, "The effect of hydrogen absorption on the electrical conduction of discontinuous palladium thin films," *Int. J. Electronics* 81(4) Oct., 1996 pp.441-447.

43. Li Li and _____, "Electrical Conduction Models for Isotropically Conductive Adhesives," J. Electronics Manufacturing 5(4) Jan 1996, pp.289-298.
44. D. Klosterman, L. Li, and _____, "Materials Characterization, Conduction Development, and Curing Effects on Reliability of Isotropically Conductive Adhesives," IEEE Trans. CPMT Part A, 21(1) March 1998, pp. 23-31.
45. Li Li and _____, "Electrical Conduction Models for Isotropic Electrically Conductive Adhesives." IEEE Transactions on Components, Packaging & Manuf. Technol. CPMT:A-20(1). March 1997, pp. 3-8.
46. _____, S. Youssof, and X. Feng, "Electrically Conductive Adhesives for Pin-Through-Hole Applications." J. Electronics Manuf. 6(3) Sept 1996, pp.219-230.
47. _____, "Recent progress in discontinuous thin metal film devices", Vacuum 50(1-2) May/June 1998, pp. 107-113.
48. C. Y. Huang, _____, and Y. K. Su, "Generalized formula for the stability and instability criteria of current-voltage characteristics measurements in the negative differential conductance region of a resonant tunneling diode", J. Appl. Phys., 82(5), 1 Sept 1997, pp 2690-2696.
49. F. Wu and _____, "Modeling conduction in asymmetrical discontinuous thin metal films" Thin Solid Films 317 April, 1998, pp. 178-182.
50. Li Li and _____, "An Introduction to Electrically Conductive Adhesives," Int. J. Microelectronic Packaging, 1(3) 1998, pp. 159-175.
51. A. Kiesow, _____, C. Radehaus, & A. Heilmann "Switching behavior of plasma polymer films containing silver nanoparticles," J. Appl. Phys. 94 (2003) pp. 6988-6990.
52. Dou G.B., Chan Y.C., _____, & Whalley D.C., "RLC Effects in Fine Pitch Anisotropic Conductive Film Connections", Soldering & Surface Mount Technology, 18(1), 2006, pp. 12-15.
53. _____, "Isotropic conductive adhesives: Future trends, possibilities, and risks," Microelectronics Reliability, 47(2/3) (2007) pp. 328-330.
54. Xia Zhang, Johan Liu, Peng Cai, Camilla Kärfelt, Xu Wang, _____ & Herbert Zirath, "Millimeter-wave Ultra-wideband Bandpass Filter Based on Liquid Crystal Polymer Substrates for Automotive Radar Systems", J. Microwave & Optical Technology Letters, 50(9) (2008) pp. 2276-2280.
55. Xia Zhang, Dan Kuylenstierna, Johan Liu, Peng Cai, Cristina Andersson, _____, & Herbert Zirath, "Design of 50-70 GHz Planar Wideband Bandpass Filter on Liquid Crystal Polymer Substrate", J. Infrared, Millimeter, & Terahertz Waves, 30(2) Feb 2009
56. _____ & J. Lee, "Drop Test Performance of Isotropic Electrically Conductive Adhesives," (invited) J. Adhesion Science & Technology, 22 (2008) 1699-1716.
57. J. Lee, C. S. Cho, & _____, "Electrical and reliability properties of isotropic conductive adhesives on immersion silver printed circuit boards," Microsystem Technologies, 15(1) Jan 2009, pp. 145-149.
58. _____, "Reliability testing of nano-particle system packaging," Microsystem Technologies, 15(1) Jan 2009, pp. 139-143.
59. Xia Zhang, Xiaorong Yan, Johan Liu, Jian Yang, & _____, "Design of printed monopole antennas on flexible liquid crystal polymer substrates," J. Infrared, Millimeter, & Terahertz Waves 34(4) (2010) pp. 469-480.
60. Xia Zhang, Xiaorong Yan, Johan Liu, Jian Yang, & _____, "Design of printed monopole antennas with extremely wide bandwidth on liquid crystal polymer substrates," (submitted to Electronics Letters, Aug 2009.)

61. T. Tilford, M. Ferenets, _____, A. K. Parrott, A. Krumme, M. P. Y. Desmulliez & C. Bailey, "Application of Particle Swarm Optimisation to evaluation of Polymer Cure Kinetics Models," *Journal of Algorithms and Computational Technology*, Vol. 4, No. 1 (2010) pp. 121-146.
1. Ephraim Suhir, James E. Morris, Liang Wang, Sung Yi, "Could dynamic strength of a bonding material in an electronic device be assessed from static shear-off test data?" *J Mater Sci: Mater Electron* 27(7) (2016) 27:6697-6702, DOI 10.1007/s10854-016-4617-z

REFEREED CONFERENCE PUBLICATIONS

1. _____, "Charge activation theory of conduction in discontinuous thin metal films," *Proc. 5th International Vacuum Congress*, Boston, 1971 (AVS).
2. _____, "A.C. properties of discontinuous metal thin films," *Proc. 3rd International Conference on Thin Films*, Budapest, 1975.
3. _____, "Microelectronics at SUNY-Binghamton," *Proc. 7th Biennial University/Government/Industry Microelectronics Symposium*, RIT Rochester, NY, June 1987, pp 51-66, IEEE Press (1987)
4. _____, and G. L. Sackman, "Graduate Laboratory Courses," *Proc. 17th Annual Frontiers in Education Conference*, RHIT, Terre Haute, IN, October 1987, pp 641-644, IEEE Press (1987).
5. _____, "Graduate Laboratory Courses in Microelectronics," *Proc. 18th Annual Frontiers in Education Conference*, UC-Santa Barbara, CA, Oct. 1988 *Proc. 18th FIE*, pp 343-345 (1988) IEEE Press.
6. _____, J. H. Das and _____, "Diffusion and Self-Gettering of Ion-Implanted Copper in Polyimide," (Invited paper) *Proc. 2nd International Conference on Solid State & Integrated Circuit Technology*, Beijing, 1989.
7. P. Burch, J. Clum, C. Kuhl, _____, and R. Quest, "A Step Towards Increased Diversity in the Engineering Student Population: the Science and Technology Entry Program at SUNY-Binghamton," *Proc. 19th Annual Frontiers in Education Conference*, SUNY-Binghamton, Binghamton, New York, Oct. 1989, 2-6 IEEE Press 87CH2737-5 (1989).
8. _____, and J. H. Das, "RBS Analysis of the Temperature Dependence of Diffusion and Self-Gettering of Ion-Implanted Copper in Polyimide," *Technical Digest, 1st International Conference on VLSI & CAD*, Seoul, Korea, Oct. 17-20, 1989, pp 534-537.
9. _____, "AC Effects in Asymmetric Discontinuous Metal Films," *Proc. 8th International Conference Thin Films*, Vol. II, ICTF-8, San Diego, April 1990.
10. J. H. Das and _____, "Profile Dependent Diffusion with Simulation of Ion-Implanted Copper in Polyimide," Presented at 177th Electrochemical Soc. Meeting, Montreal, 1990. Extended abstract *J. Electrochem Soc.*
11. J. H. Das and _____, "Thermal Stability of Sputter Deposited Copper on Polymers" (Invited) *Proc. International Conference Materials & Process Charac. for VLSI*, Shanghai, 1991, pp 359-362.
12. W. Moussa and _____, "DC and AC Characteristics for Zero Voltage Switching PWM Converters," *Proc. IEEE Power Electronics Specialist Conference*, Toledo, Spain, June 29 - July 4, 1992, pp236-242.
13. Li Li, H. Kim, C. Lizzul, I. Sacolick, and _____, "Electrical, Mechanical, Structural and Processing Properties of Electrically Conductive Adhesives" *Proceedings 43rd Electronic Component Technology Conference*, Orlando, FL, June 1993 pp 311-319 (1993) IEEE Press; (Paper won the first IEEE/Motorola Graduate Fellowship in Electronics Packaging for Li Li);
14. Li Li, _____, J. Liu, Z. Lai, L. Ljungkrona, & C. Li "Reliability and Failure Mechanism of Isotropically Conductive Adhesive Joints," *Proc. 45th Electronic Component Technology Conference*, Las Vegas, NV, May 1995, pp 114-120.

15. _____, A. Kiesow, M. Hong, and F. Wu, "The effect of hydrogen absorption on the electrical conduction of discontinuous palladium thin films," Proc. 5th International Workshop on the Electronic Properties of Metal/Non-Metal Systems, Polanica-Zdroj, Poland, 11-14 September 1995
16. _____, "Electrical conduction in discontinuous thin metal films", (Invited paper) Proc. 5th International Workshop on the Electronic Properties of Metal/Non-Metal Systems, Polanica-Zdroj, Poland, 11-14 September 1995.
17. Li Li and _____, "Electrical Conduction Models for Isotropically Conductive Adhesives," Proc. International Seminar: Latest Achievements in Conductive Adhesive Joining in Electronics Packaging, Sept 1995, Eindhoven, the Netherlands, pp. 31-44. (ISBN 91-630-3729-7)
18. Li Li, D. Klosterman, and _____, "Failure and reliability of electrically conductive adhesives" Proc. 46th IEEE Electronic Component & Technology Conference, May 1996, Orlando, FL, pp. 571-577.
19. F. Wu and _____, "Modeling conduction in asymmetrical discontinuous thin metal films" Proc. 10th International Conference on Thin Films, Salamanca, 1996;
20. _____, S. Youssof, and X. Feng, "Electrically Conductive Adhesives for Pin-Through-Hole Applications." Proc. 2nd International Conference on Adhesive Joining & Coating Technology in Electronics Manufacturing, June 3-5 1996, (Adhesives in Electronics '96,) Stockholm,.(ISSN 1103-7288) pp 18-29.
21. Li Li and _____, "Electrical Conduction Models for Isotropic Electrically Conductive Adhesives." Proc. 2nd International Conference on Adhesive Joining & Coating Technology in Electronics Manufacturing, June 3-5 1996, (Adhesives in Electronics '96,) Stockholm,.(ISSN 1103-7288) pp 126-132
22. _____, "Recent progress in discontinuous thin metal film devices", (Invited paper) 6th International Workshop on the Electronic Properties of Metal/Non-Metal Systems, Prague, 8-11 September 1997.
23. _____, F.P. McCluskey, M. Osterman, R. Mak, & H. Lo, "Electrical performance modeling for the CALCE CADMP-II electronics package reliability software", Proc. 1998 Pan-Pacific Microelectronics Symposium, pp. 87-92, (SMTA, Edina MN), Mauna Lani, February 10-13, 1998.
24. _____, F.P. McCluskey, M. Osterman, R. Mak, & H. Lo., "Electrical performance modeling for the CALCE CADMP-II electronics package reliability software", Proc. 2nd International Conference on Emerging Microelectronics & Interconnection Technologies (EMIT'98), pp. 246-252, (IMAPS-India,) Bangalore, February 16-20, 1998.
25. _____, "Electrically Conductive Adhesives", Proc. 1998 Pan-Pacific Microelectronics Symposium, pp. 495-500, (SMTA, Edina MN), Mauna Lani, February 10-13, 1998.
26. _____, "Electrically Conductive Adhesives", (invited paper), Proc. 2nd International Conference on Emerging Microelectronics & Interconnection Technologies (EMIT'98), pp. 192-197, (IMAPS-India), Bangalore, February 16-20, 1998.
27. _____ and F.P. McCluskey, "A multidisciplinary sophomore course in electronic packaging", Proc. 48th IEEE Electronic Components and Technology Conference (ECTC'98), pp 535-540, Seattle, May 1998.
28. P. McCluskey, _____, V. Verneker, P. Kondracki, and D. Finello, "Models of electrical conduction in nanoparticle filled polymers", Proc. 3rd International Conference on Adhesive Joining & Coating Technology in Electronics Manufacturing (Adhesives'98), pp 84-89, Binghamton NY, 27-30th September, 1998.
29. _____, "Electrically Conductive Adhesives: Fundamental Understanding and Problems" Proc. 3rd IEMT/IMC Symposium, Japan, April 21-23, 1999, pp. 5-12 (Invited/Keynote Presentation)

30. F. P. McCluskey and _____, "Multi-university, multi-disciplinary distance learning experiment in electronic packaging education," Proc. 49th IEEE Electronic Components and Technology Conference (ECTC'99) San Diego, June 1-3, 1999, pp. - (CD-ROM file s25p4.pdf).
31. _____, "Electronics Technology Courses by Internet," Proc. 22nd International Spring Seminar on Electronics Technology, Freital, Germany, 18-20 May, 1999, pp. 56-61; Proc. International Symposium on Electronic Packaging, Shanghai, June 28-30, 1999; Proc. SIITME'99, Bucharest, September 24-26, 1999, pp. 1-9.
32. _____, W. Piotrowski, and P. Shea, "Internet Delivery of a Multidisciplinary Course in Electronics Packaging," Proc. Interpack'99 (the Inter-society Electronic Packaging Conference), Hawaii, June 14-18, 1999, pp. 2151-2158, (ASME.)
33. _____, "Electrical Conduction Models for Electrically Conductive Adhesives," Presented at Interpack'99 (the Inter-society Electronic Packaging Conference), Hawaii, June 14-18, 1999; (written paper omitted from Proceedings in error;)
34. _____, "Electrical Conduction Models for Electrically Conductive Adhesives," Proc. International Symposium on Electronic Packaging, Shanghai, June 28-30, 1999;
35. _____, "Electrical Conduction Models for Electrically Conductive Adhesives," Proc. 2nd IEEE International Symposium on Polymeric Electronics Packaging, Gothenburg, Sweden, October 25-27, 1999, pp. 35-44.
36. _____, C. Cook, M. Armann, A. Kleye, & P. Fruehauf, "Recent Results of ICA Testing," Proc. 2nd IEEE International Symposium on Polymeric Electronics Packaging, Gothenburg, Sweden, October 25-27, 1999, pp. 15-26.
37. _____, "Internet Course Developments in Electronics Packaging in USA" Proc. 2nd IEEE International Symposium on Polymeric Electronics Packaging, Gothenburg, Sweden, October 25-27, 1999, pp. 73-80.
38. J. Liu & _____ "State of the Art in Electrically Conductive Adhesive Joining," Proc. 1999 Workshop on Polymeric Materials in Microelectronics & Photonics Applications (POLY'99), Paris, December, 1999, EEP-Vol. 27, ASME, (1999), pp. 259-281.
39. _____ & B. Sammakia, "Current and Future Research in Electronics Packaging at Binghamton University" Proc. Government Microcircuit Applications Conference (GOMAC), March 20-24, 2000, Anaheim (invited).
40. J. Liu & _____ "An Internet Course on Conductive Adhesives for Electronics Packaging" Proc. 50th IEEE Electronic Components & Technology Conference, Las Vegas, May 2000, pp. 1016-1020.
41. _____, "A Graduate Semiconductor Processing Course on the Internet" Proc. 23rd International Spring Seminar on Electronics Technology (ISSE), Lake Ballaton, Hungary, May, 2000. (invited), pp. 23-26.
42. _____ & J. Vargas, "A First Student Encounter with Electronic Circuit CAD" Proc. 23rd International Spring Seminar on Electronics Technology (ISSE), Lake Ballaton, Hungary, May, 2000, pp. 57-59.
43. _____, "Future developments in electrically conductive adhesive technology" Proc. 3rd Microelectronics Materials Conference, Berlin April, 2000 (invited.) pp. 181-186.
44. S. Probsthain & _____, "Investigations of Plasma Cleaning on the Reliability of Electrically Conductive Adhesives," Proc. 4th International Conference on Adhesive Joining Technology in Electronics Manufacturing: Helsinki, 2000, pp. 41-45.
45. M. Heuschkel & _____, "Electric Field Effects in the Production of ICA Joints," Proc. 4th International Conference on Adhesive Joining Technology in Electronics Manufacturing: Helsinki, 2000, pp. 212-215.
46. S. MacDavitt & _____, "Effect of Cure Temperature on Impact Resistance of Conductive Adhesives," Proc. 4th International Conference on Adhesive Joining Technology in Electronics Manufacturing: Helsinki, 2000, pp.221-224.

47. J. Liu, X. Wang, & _____ "Development of an Internet Course on Electrically Conductive Adhesives with Experiments" Proc. 51st IEEE Electronic Components & Technology Conference, Orlando, 2001, s36p4.
48. _____, Falk Anderssohn, Santosh Kudtarkar, & Enrico Loos, "Reliability Studies of an Isotropic Electrically Conductive Adhesive," Proc. 1st International IEEE Conference on Polymers & Adhesives in Microelectronics & Photonics, (Polytronic 2001), Potsdam, Germany, 2001, pp. 61-69.
49. Santosh Kudtarkar & _____, "Reliability Studies of Isotropic Conductive Adhesives: Drop Test for Thermally Cycled and 85/85 Tested Samples," Proc. 8th International Symposium & Exhibition on Advanced Packaging Materials, Atlanta GA, March 3-6, 2002, pp.144-150.
50. J. Kivilahti, J. Liu, _____, T. Suga, & C-P. Wong, "Panel-Size Component Integration (PCI) with Molded Liquid Crystal Polymer (LCP) Substrates," Proc. 52nd IEEE Electronic Components & Technology Conference, San Diego, May 2002, pp. 955-961.
51. J. Liu, L. Cao, X. Wang, & _____, "Implementation of an Internet Course on Conductive Adhesives for Electronics Packaging," Proc. 52nd IEEE Electronic Components & Technology Conference, San Diego, May 2002, pp.1502-1506.
52. F. Wu & _____, "Morphology and Electrical Characteristics of Thin Aluminum Films Grown by DC Magnetron Sputtering on SiO₂ on Si(100) Substrates," 25th International Spring Seminar on Electronics Technology, Prague, May 11-14, 2002, pp. 261-265.
53. A. Kiesow, _____, C. Radehaus, & A. Heilmann, "Switching Behavior of Plasma Polymer Films Containing Silver Nanoparticles," 25th International Spring Seminar on Electronics Technology, Prague, May 11-14, 2002, pp.289-293.
54. M. Mundlein, J. Nicolics, & _____, "Reliability Investigations of Isotropic Conductive Adhesives," 25th International Spring Seminar on Electronics Technology, Prague, May 11-14, 2002, pp. 329-333.
55. F. Wu & _____, "Alternating Current Electrical Properties of Island Aluminum Thin Films on Polyimide Substrates," Proc. 2nd International IEEE Conference on Polymers & Adhesives in Microelectronics & Photonics, (Polytronic 2002), Zalaegerszeg, Hungary pp. 145-149.
56. A. Kiesow, _____, C. Radehaus, D. Katzer, & A. Heilmann, "Switching Behaviour of Plasma Polymer Thin Films Containing Metal Nanoparticles," AVS 49th International Symposium Denver 2002, Abstract booklet p. 134
57. _____, F. Anderssohn, E. Loos & J. Liu, "Low-tech studies of isotropic electrically conductive adhesives," 26th International Spring Seminar on Electronics Technology, High Tatra, Slovak Republic, May 8-11, 2003, pp. 90-94.
58. _____, F. Li, & X. Zong, "Remote course and degree delivery in China," 26th International Spring Seminar on Electronics Technology, High Tatra, Slovak Republic, May 8-11, 2003, pp. 349-351.
59. F. Wu & _____, "Characterizations of (SiO_xCr_{1-x})N_{1-y} thin film resistors for integrated passive applications", 53rd Electronic Components & Technology Conference, New Orleans, 2003, pp.161-166.
60. Guanguo Duo, Y.C. Chan, _____, & N.H.Leung "RLC Effects in Fine Pitch Anisotropic Conductive Film Connections," 53rd Electronic Components & Technology Conference, New Orleans, 2003, pp 1559-1564
61. A. Kulkarni & _____, "Reliability lifetime studies on isotropic conductive adhesives," Proc. 3rd International IEEE Conference on Polymers & Adhesives in Microelectronics & Photonics, (Polytronic 2003), Montreux, pp. 333-337.

62. F. Wu & _____, "Integrated resistor material with zero temperature coefficient of resistance and high stability", 9th IEEE International Symposium on Electronic Packaging Materials, Atlanta, March 2004, pp. 84-88.
63. P. Moeck, M. Kapilashramu, J. Lee, _____, N. D. Browning, & P. J. McCann, "Nominal PbSe nano-islands on PbTe: grown by MBE, analyzed by AFM and TEM" 27th International Spring Seminar on Electronics Technology, Sofia, May 13-16, 2004, pp. 91-95
64. _____, F. Li, & X. Zong, "Remote course and degree delivery in China," (revised), ASEE Conference, Beijing, 2004.
65. _____, F. Wu, C. Radehaus, M. Hietschold, A. Henning, K. Hofmann, & A. Kiesow, "Single Electron Transistors: Modeling and Fabrication" (Invited) 7th Internat. Confer. Solid State & Integrated Circuit Technology (ICSICT), Beijing, 19-21 Oct, 2004, pp. 634-639.
66. Johan Liu, Yu Wang, _____ & Helge Kristiansen, "Development of ontology for the anisotropic conductive adhesive interconnect technology in electronics applications," Proc. 10th International Symposium & Exhibition on Advanced Packaging Materials, Irvine CA, 2005.
67. _____ & D.W. Matson, "Resonant tunnel diode (RTD) stability," Proc. 28th International Spring Seminar on Electronics Technology, Vienna, May 13-16, 2005, pp. 6-11.
68. M. Fischer, _____, F. Li, C. Brown, M. Jeske, A. Hofmann, & X. Zong, "Remote Delivery of ECE/CS Degree Education in China" Proc. 2005 ASEE Congress, Portland, June 2005.
69. _____, J. Lee, & J. Liu, "An ontology of ICA for microsystem applications," Proc. 7th IEEE CPMT International Conference on High Density Microsystem Design, Packaging and Failure Analysis (HDP'05), Shanghai, June 2005, pp. 120-127.
70. _____, J. Lee & J. Liu, "Isotropic conductive adhesives interconnection technology for electronics packaging applications," Proc. 5th International IEEE Conference on Polymers & Adhesives in Microelectronics & Photonics (Polytronic), Wroclaw, October 2005, pp. 45-52.
71. _____, "Isotropic conductive adhesives: Future trends, possibilities, and risks," Proc. 5th International IEEE Conference on Polymers & Adhesives in Microelectronics & Photonics (Polytronic), Wroclaw, October 2005, pp. 233-234
72. _____, "Nanopackaging: Nanotechnologies and electronics packaging," Proc. 8th IEEE CPMT International Conference on High Density Microsystem Design, Packaging and Failure Analysis (HDP'06), Shanghai, June 2006.
73. _____, "Nanopackaging: Nanotechnologies and electronics packaging," Proc. 1st IEEE Electronic Systems Integration Technology Conference (ESTC'06), Dresden, September, 2006.
74. Hui She, Jeahuck Lee, & _____, "Chromium nanodot-array deposition using atomic force microscopy," Proc. 6th IEEE Conference on Nanotechnology, Cincinnati, July 16-20, 2006.
75. _____, "Nanodot Systems Reliability Issues," Proc. Smart Systems Integration Conference, Paris, March 2007.
76. _____ & Nagapoornima Rudraraju, "Nanodot Systems Reliability Issues," Proc. 2007 International Symposium on High Density Packaging & Microsystem Integration (HDP'07), Shanghai, June, 2007, pp. 33-37.
77. J. Lee, C. S. Cho, & _____, "Electrical and Reliability Properties of isotropic conductive adhesives on immersion silver printed circuit boards," Micromaterials and Nanomaterials, Vol.6 (2007), Abstracts of the MicroNanoReliability Congress, Berlin, September, 2007, p. 141.

78. N. P. Rudraraju & _____, "Reliability testing of nano-particle system packaging," *Micromaterials and Nanomaterials*, Vol.6 (2007), Abstracts of the MicroNanoReliability Congress, Berlin, September, 2007, p. 208.
79. _____, "Nanopackaging: Nanotechnologies and Electronics Packaging," (Invited,) *Micromaterials and Nanomaterials*, Vol.6 (2007), Abstracts of the MicroNanoReliability Congress, Berlin, September, 2007, p. 165.
80. _____, "Nanopackaging: Nanotechnologies and Electronics Packaging," (invited) Proc. International Microsystems, Packaging, Assembly and Circuits Technology (IMPACT) Conference, Taipei, October 2007.
81. _____, "Nanotechnology Materials for Electronics Packaging Reliability," Proc. 31st International Spring Seminar on Electronics Technology, Budapest, May, 2008 (invited keynote), Paper C013; (Abstract Proceedings pp. 118-119.)
82. Thomas Staley, Andrej Tsinovkin, & _____, "Novel solid state air pump for forced convection electronics cooling," Proc. 58th Electronic Components & Technology Conference, Orlando, 2008.
83. Xia Zhang, Dan Kuylenstierna, Johan Liu2, Peng Cai, Cristina Andersson, _____, Herbert Zirath, "A Compact V-band Planar Wideband Bandpass Filter Based on Liquid Crystal Polymer Substrates," Proc. 2nd IEEE Electronic SystemsIntegration Technology Conference, London, 2008, pp. 163-167
84. _____, "IEEE-HKN: the New International ECE Honor Society," (Keynote) Proc. 32nd International Spring Seminar on Electronics Technology, Brno, May 2009
85. _____, T.Tilford, C.Bailey, K.I.Sinclair, & M.P.Y.Desmulliez, "Polymer Cure Modeling for Microelectronics Applications," Proc. 32nd International Spring Seminar on Electronics Technology, Brno, May 2009
86. Oksana Telychkina, Bjoern Boehme, Matthias Heimann, _____, & K.-J. Wolter, "Study of Nanosilver Filled Conductive Adhesives and Pastes for Electronics Packaging," Proc. 32nd International Spring Seminar on Electronics Technology, Brno, May 2009
87. T.Tilford, K.I.Sinclair, _____, C.Bailey, & M.P.Y.Desmulliez, "Variation in dielectric properties and resulting effects during microwave processing of thermosetting polymer materials," accepted for 59th Electronic Components & Technology Conference, San Diego, 2009. (withdrawn)
88. T.Tilford, S. Pavuluri, P.R. Rajaguru, K.I.Sinclair, C.Bailey, _____, & M.P.Y.Desmulliez, "Numerical Optimisation of Polymer Curing using a Dual-Section Microwave System," Proc. 43rd Annual Symposium, (International Microwave Power Institute,) 8-10 July, 2009, pp. 129-136.
89. _____, T.Tilford, C.Bailey, M. Ferents, K.I.Sinclair, & M.P.Y.Desmulliez, "Critical Analysis of Polymer Cure Modeling for Microelectronics Applications," Proc. IMAPS-Nordic Conference, Tonsberg, Norway, September 2009
90. _____, "Nanopackaging: Nanotechnologies in Electronics Packaging," Proc. CMOS Emerging Technologies Workshop, Vancouver, Canada, September 2009.
(www.cmoset.com/2009_Vancouver_Workshop.html)
91. T. Tilford, _____, M. Ferenets, P.R. Rajaguru, S. Pavuluri, M.P.Y. Desmulliez, & C. Bailey, Numerical Analysis of Polymer Cure Kinetics in Isotropic Conductive Adhesives, Proc. 33rd International Spring Seminar on Electronics Technology, Warsaw, May 2010.
92. _____, Sini Niiranen, & Toni Mattila, Mechanical Cycling of Isotropic Conductive Adhesives, Proc. 33rd International Spring Seminar on Electronics Technology, Warsaw, May 2010.
93. T. Tilford, M. Ferenets, R. Adamietz, S. Pavuluri, _____, M.P.Y. Desmulliez, & C. Bailey, Numerical Optimisation of Microwave-Assisted Quad-Flat Package Encapsulation Processes, Proc. International Microwave Power Institute, Denver, July, 2010.

94. _____, Sini Niiranen, Toni Mattila, & Jack McCarthy, Interpretation of ICA Mechanical Cycling Data, Proc. 11th International Conference on Electronic Packaging Technology & High Density Packaging, Xi'an, August 2010.
95. T. Tilford, M. Ferenets, R. Adamietz, S. Pavuluri, _____, M.P.Y. Desmulliez, & C. Bailey, Numerical Analysis of Microwave-Assisted Underfill Cure in Ball-Grid Packages, Proc. 3rd IEEE Electronic SystemsIntegration Technology Conference, Berlin, September 2010.
96. T. Tilford, _____, M. Ferenets, P.R. Rajaguru, S. Pavuluri, M.P.Y. Desmulliez, & C. Bailey, On Model Fitting Methods for Modelling Polymer Cure Kinetics in Microelectronic Assembly Applications, Proc. 3rd IEEE Electronic SystemsIntegration Technology Conference, Berlin, September 2010.
97. Arpita Sinha, Jadran A. Mihailovic, _____, Hua Lu, & Chris Bailey, Modeling Thermal Conductivity and CTE for CNT-Cu Composites for 3-D TSV Application, Proc. IEEE Nano-Materials & Devices Conference (NMDC), Monterey, Oct., 2010.
98. Russell Ellis, Caitlin Fackrell, Thatcher Gordon, Phil Lamb, _____ & Charlie Kawasaki, Battery Recharging and Testing Swap Stations, Proc. 1st IEEE Technologies for Sustainability Conference (SusTech), Portland, August 2013, pp. 209-212.
99. _____, L. Weasel, and P. Moeck, "Comprehensive undergraduate nanotechnology education at Portland State University," Proc. 2013 National Educators Workshop, Materials in Enabling Technologies: Defining the Future, November 3-5, 2013, Tulsa, OK.
(Presentations: moeck_poster.ppt at: <http://materialeducation.org/educators/new/Archive/?year=2013>)
100. _____, Lisa Weasel, Peter Moeck and Juna Snow, "Nanotechnology Courses for General Education," (Plenary Paper) Proc. 37th International Spring Seminar on Electronics Technology (ISSE), Dresden, 7-11 May 2014, pp.463-467 (J02).
101. Liang Wang & _____, "Evaluation of the drop test of isotropic electrically conductive adhesives (ICAs) using an accelerometer," Proc. 5th Electronics System-Integration Conference (ESTC), Helsinki, 16-18th September, 2014.
102. James E. Morris, Lisa Weasel, and Peter Moeck, "Nanotechnology Courses for General Education," Proc. 122nd ASEE Annual Conference & Exposition, Seattle WA, 14-17 June 2015, Paper #13499
103. James E. Morris, "Laboratory Course in Nanotechnology," Proc. 15th IEEE International Conference on Nanotechnology (NANO 2015), Rome, Italy, July 2015.
104. Muhammad Ali, Mohammad Ahmed, Malgorzata Chrzanoska-Jeske, and James E. Morris, "Logical Effort model for CNFET circuits with CNTs variations," Proc. 15th IEEE International Conference on Nanotechnology (NANO 2015), Rome, Italy, July 2015.
105. James E. Morris, "Nanotechnology Laboratory and Nanoelectronics Simulation Courses," Proc. IEEE Nano-Materials & Devices Conference (NMDC), Anchorage AK, 13-16 September 2015.
106. James E. Morris, "Nanotechnology: Simulation and Design," Proc. IEEE Frontiers in Education (FIE) Conference, El Paso TX, 21-24 October 2015.

CONFERENCE PAPERS

1. "Conduction in discontinuous metal films," Proc. 3rd N.Z. Materials Science Conference, Christchurch NZ, 1972.
2. "A two-channel thin film deposition thickness monitor and rate controller," Proc. National Electronics Conference, Auckland NZ, 1974.
3. "Diploma of Applied Physics," N.Z. Sci. Rev. 32, p. 79-83 (1975) [with T.G.L. Shirtcliffe] Proc. National Electronics Conference, Auckland NZ, 1974.

4. "Undergraduate experiments using a Motorola MEK6800D2 kit," Proc. National Electronics Conference, Wellington NZ, 1977.
5. "Electrical conduction in discontinuous thin metal films."
6. "Deposition and optical properties of thin film cermet" [with B.H. Khoo].
7. "Electrical conduction in thick film resistors" [with A. Mitchell].
Proc. 5th N.Z. Science of Materials Conference, Wellington NZ, 1977, pp 173 - 177.
8. "Retrofit Feedback Control of A/F Ratio and Ignition Timing for Fuel Economy," [with H. Anderson and R. Smith] Presented at SAE Congress, (February 1982).
9. "Pseudo-inductive Effects and Electron-hopping in Discontinuous Metal Thin Films," [with W-K Chiu] Presented at 1984 AVS Congress, Reno, December, 1984.
10. "PLL Sensing for Engine Diagnostics and Control," [with Thomas Chih-Chien Chen] Presented at SAE Congress (February 1985).
11. "Improved Intra-cylinder Pressure Sensor," [with Li-Chi] Presented at SAE Congress (March 1985).
12. "Microelectronics at SUNY-Binghamton" Proc. 41st Annual Meeting ASEE (St. Lawrence) Buffalo 1986.
13. "Automotive Electronics," 100-104
14. "Electrical Engineering at SUNY-Binghamton" [with M. J. Batchelder] 39-44
Proc. 1985 IEEE Southern Tier Technical Conference, Binghamton, 1985.
15. "Intra-Cylinder Combustion Pressure Sensing," Invited Presentation to the Earth-Moving Industry Conference (April 1987).
16. "A Comparison between State Space Averaging and PWM Switch for Switch Mode Power Supply Analysis [with W. Moussa] 15 - 21.
17. "Steady State Analysis for an Off-Line Series Resonant Converter," [with W. Moussa]. 23 - 29.
18. "Diffusion Simulations of Copper in Polyimide," [with J. H. Das] 259 - 265.
Proc. 1990 IEEE Southern Tier Technical Conference, Binghamton, New York (1990).
19. "Electrical Conduction in Granular Metal Thin Films," [with A. Mello and C. J. Adkins,] presented at Materials Research Soc. Spring Meeting, San Francisco, April 1990.
20. "DC Model for Zero Voltage Switching Buck Converter," 42.1-42.8.
21. "Characterization of Transition Times in Voltage Switching PWM Converters" [with W. Moussa].
22. "Characterization of BJT Switching Times in PWM Converters" [with W. Moussa]. 35-42 Proc.
1991 IEEE Southern Tier Technical Conference, Binghamton, New York (1991).
23. "The Effects of Hydrogen Absorption on the Resistance of Discontinuous Palladium Films" [with F. Wu] Presented at the 9th International Conference on Thin Films, Vienna, Sept 1993.
24. "The Use of GRE Scores in Graduate Admissions and Performance,"
25. "Industry Based Senior Design Projects," [with C. Bergman] Presented at the St. Lawrence Section ASEE Conference, Binghamton, 1994.
26. "Structure and selection models for anisotropic conductive adhesive films," [with Li Li] Proc. 1st International Conference Adhesive Joining Technology in Electronics Manufacturing, Berlin, Nov, 1994 (VDI/VDE-IT)
27. "Packaging in Electronics" Proc. Kolloquium des Sonderforschungsbereiches 379 "Mikromechanische Sensor- und Aktorarrays" Technische Universitat Chemnitz-Zwickau, 4-5 Nov 1996, pp.17-20.
28. "A Decade of Electronics Packaging Courses at Binghamton University" Presented at the GA Tech Packaging Research Center Academic Conference, March 18-20, 1998, Atlanta.

29. "The Internationalization of Engineering Education" Presented at the ASEE St Lawrence Section Spring Meeting, Binghamton, April 3-4, 1998.
30. "Simultaneous Internet, videotape, and classroom delivery of a graduate electronics packaging course," presented at the 3rd Academic Electronics Packaging Workshop, GA Tech., March 17-19, 1999.
31. "Discontinuous Metal Thin Films and the Single Electron Transistor," [with C. Radehaus, M. Hietschold, A. Henning, K. Hofmann, A. Kiesow, & F. Wu] Conference on Novel Materials for Electronics Miniaturization (The Knowledge Foundation), Nov. 2-3, 2000, San Francisco, CA.
32. "The Dresden-Binghamton Student Exchange Program" (invited), presented at the Electronics Technology Institute 10th Anniversary Seminar, Dresden University of Technology, 6th Oct, 2000.
33. "Research Perspectives of Electrically Conductive Adhesives" (Keynote Presentation), TMS Spring Meeting, St Louis MO, 8-12, Oct., 2000.
34. "Electrically Conductive Adhesives" (Invited) MRS Spring Meeting, San Francisco, 16-20 April 2000.
35. "Conductive Adhesive Applications to Imprint Circuitry," [with Liye Fang,] presented at the 34th International Symposium on Microelectronics, (IMAPS) Baltimore, Oct., 9-11, 2001.
36. "Remote course and degree delivery in China," (revised), [with F. Li, & X. Zong,] CPMT Academic Conference on Packaging, Shanghai, 28-29th June, 2004.
37. "Nominal PbSe nano-islands on PbTe: grown by MBE, analyzed by AFM and TEM" (poster) [with P. Moeck, M. Kapilashramu, J. Lee, N. D. Browning, & P. J. McCann,] Nano-Breakthrough Conference, Portland, 28-29th July 2004.
38. "Nanoparticles for Nanoelectronics," (poster) [with J. Lee,] Nano-Breakthrough Conference, Portland, 28-29th July 2004.
39. "Discontinuous Metal Thin Films & Single Electron Transistor Sensors," NASA Workshop on Nanotechnology Initiative Grand Challenges: Nanotechnology in Space Exploration, Palo Alto, 24-26 August 2004. (Appendix to workshop report.)
40. "The BS/MS degrees vs. Dipl.-Ing. & the European Bologna Process: A US Perspective," 8th International Academic Conference on Electronic Packaging Education & Training, Vienna, May 2005.
41. "Chromium nanodot deposition and mechanism," [with Hui She & Jeahuck Lee,] 3rd Annual Micro Nano Breakthrough Conference, Vancouver, WA, July 24-26, 2006.
42. "Fabrication and Characterization of Nano-materials," [with N.P. Rudraraju, J. Carruthers, C. Lee, A. LaRosa, P. Moeck, J. Morris, S. Prasad, R. Solanki, S. Rananavare, E. Sanchez, C. Wamser, & M. Yan,] American Vacuum Society Annual North-west Workshop, Forest Grove OR, Sept., 2006.
43. "Chromium Nanodot-array Deposition using Atomic Force Microscopy," [with Hui She & Jeahuck Lee,] American Vacuum Society Annual North-west Workshop, Forest Grove OR, Sept., 2006.
44. "Nanopackaging: Nanotechnologies and Electronics Packaging," IMAPS Emerging Technology Workshop on Nanotechnologies for Microelectronics, Las Vegas, December 2006.
45. "Nanosensors for Electronics Packaging," IMAPS Emerging Technology Workshop on Nanotechnologies for Microelectronics, Las Vegas, December 2006.
46. "Delivery of Education in Microelectronics in China," Sino-European Workshop on Green Electronics Technology, Shanghai, June 26, 2007.

47. "IEEE-HKN: the New International ECE Honor Society," 11th International Academic Conference on Electronic Packaging Education & Training, Budapest, May 2008
48. "Nanotechnology Materials for Electronics Packaging Reliability," (Invited Keynote) International Conference on Electronic Packaging Technology & High Density Packaging (ICEPT/HDP), Shanghai, July, 2008.
49. "Polymer Cure Modeling for Microelectronics," (Invited) IEEE CPMT Scandinavian Chapter Workshop, Goteborg, October, 2008.
50. "Nanopackaging: Nanotechnologies and Electronics Packaging", (Invited) IEEE CPMT Phoenix Chapter Workshop, November, 2008.
51. "Nanopackaging: Nanotechnologies and Electronics Packaging", (Invited) IEEE CPMT Helsinki Chapter Workshop, April 21st, 2009.
52. "Trends in Green Electronics - Are the environmentally friendly alternatives good enough? Ag Nanoparticles and the Environment," (Invited), IEEE CPMT Nordic Chapter Workshop on "Green Electronics & Life Cycle Assessment," Sogndal, June 15th, 2009.
53. "Electronics nanopackaging – Source of environmental impact and health risks? CNT Health Risks and Nanotechnology Regulation," (Invited), IEEE CPMT Nordic Chapter Workshop on "Life cycle health risks and environmental impacts of nanomaterials," Sogndal, June 16th, 2009.
54. "Nanopackaging: Nanotechnologies and Electronics Packaging," keynote presentation, 6th Annual IeMRC (Innovative Electronics Manufacturing Centre) Conference, September 21st, 2011, Loughborough, UK.
55. "Nanopackaging: Nanotechnologies and Electronics Packaging," keynote presentation, 17th IEEE International Symposium for Design Technology in Electronic Packaging, October 20-23, 2011, Timisoara, Romania
56. "Nanopackaging: Nanotechnologies and Electronics Packaging," plenary presentation, International Forum on Advanced Materials and Commercialization, November 8-12th, 2011, Ningbo, China.
57. "Battery Recharging and Testing Swap Stations" OregonBEST BestFest, September 12-13th, Portland, (oral presentation by Russell Ellis & Charlie Kawasaki, [with Caitlin Fackrell, Thatcher Gordon & Phil Lamb.]
58. "Construction of a Multi-Source Thermal Evaporation Tool for Educational Purposes," [with Nicholas Sayre & Erik Sánchez]. Oregon Academy of Science annual meeting, February 22, 2014, Eugene, OR (poster).
59. "Nanopackaging: Nanotechnologies and Electronics Packaging," (invited) 14th IEEE International Conference on Nanotechnology (NANO 2014), Toronto, Canada, August 2014.
60. "Polymer Composites for Electronics Packaging Applications," keynote presentation, 20th Anniversary IEEE International Symposium for Design Technology in Electronic Packaging (SIITME), October 23-26, 2014, Bucharest, Romania.
61. "'Nanomanufacturing R&D for Electronics Packaging.," presented at the 38th International Spring Seminar on Electronics Technology, Egerszalok, Hungary, May 2015. (Plenary)
62. "Nanotechnology: Laboratory Course," 55th Oregon Science Teachers Association, Bend OR, 15-17 October, 2015.
63. "Nanotechnology: Modelling and Simulation," 55th Oregon Science Teachers Association, Bend OR, 15-17 October, 2015.
64. "Nanopackaging for a Smarter Life," 2nd IEEE Internal Forum on Research and Technologies for Society and Industry, Bologna, Italy, 7-9 September 2016.
65. "Nanoparticle Thin Films: Fabrication, Structure and Properties, IEEE Nano-Materials & Devices Conference (NMDC), Toulouse, France, 9-12 October, 2016.

TECHNICAL ARTICLES, ETC.

"Simple laboratory noise generator," *Wireless World*, p. 62 (April 1977).

"More on VCT," Electronics Today International, p. 40-45 (August 1977).

"VCT: how to build one," Electronics Today International, p. 34-39 (October 1978).

Article on effects of microprocessors in New Zealand - Dominion 19 May 1980;
also in Christchurch Press, N.Z. Herald, and NewsVUW.

"The Proof is in the Nanopackaging" IEEE Nanotechnology magazine, Dec 2008, pp. 25-27.

IEEE TRANSACTIONS: SPECIAL SECTIONS

Transactions Guest Editor, Special Sections on Electrically Conductive Adhesives, etc:

IEEE Trans. CPMT-B: Advanced Packaging, May 1995, pp. 282-333;

IEEE Trans CPMT-C: Manufacturing, October, 1996, pp. 230-269;

IEEE Trans CPMT-A, 20(1) March 1997, pp. 1-37;

IEEE Trans CPMT-A, 21(2) June 1998 (with J. Liu), pp. 206-309.

IEEE Trans. Components & Packaging Technology, 22(2) June 1999, pp. 139-228.

IEEE Trans. Electronics Packaging Manufacturing, 22(4) October 1999, (with CP Wong.)

IEEE Trans. Electronics Packaging Manufacturing, 28(4) October 2005, pp. 289-343.

IEEE Trans. Components & Packaging Technology, 28(4) December 2005, pp. 741-780

PUBLISHED RESEARCH CONTRACT REPORTS

____, "Automotive engine management systems," N.Z. Energy Research & Development Committee Report, P. 19, (August 1979).

____, "Instrumentation of Cars for Fuel Economy: NZERDC Contract 3119 Final Report," N.Z. Energy Research and Development Committee Report 70, April 1982.

____, "Instrumentation of Cars for Fuel Economy: Appendices to Report 70," N.Z. Energy Research and Development Committee Publication P51, (April 1982).

TECHNICAL DISCLOSURES, ETC.

____, "Combustion Engine Control System," N.Z. Provisional Patent Specifications 194/827 (1981) and 1/200/071 (1982).

____, "Calibration of I.C. Engine Crankshaft Reference Marker ---" SDSMT (1983).

____, "Combustion Pressure Sensor," RC Disclosure 156-D191-84, Research Corporation (1984).

____, "Sensing System for Engine Diagnostics & Control," SUNY Invention R-291 (1985).

____, "Fiber-Optic Combustion Pressure Sensor," SUNY (1986).

____ & L. Kunz, "Fiber-Optic Combustion Pressure Sensor," SUNY (1993).

"Sintered Nanoparticles for Electrical Interconnections" 3005-93577-01 08/19/14 MORJ-01 (Filed August 19, 2014)

EXTERNAL RESEARCH CONTRACTS

U of Saskatchewan

National Research Council of Canada, (1971) discontinuous thin films: c.\$25K

VUW

NZ University Grants Committee, (1972) vacuum equipment: c.\$15K

NZ Energy R&D Committee, (1978-81) automotive engine control electronics.

(The engine control project was one of the two largest research contracts ever at VUW.)

SUNY

____, "Ion Implantation into Thin Film Substrates," IBM Corporation, \$5,374 11/1/84 - 2/1/85.

____, "A Systems Study of Switched-Mode Power Supplies for Audio Applications," NYS Science & Technology Foundation, \$24,000, McIntosh Laboratories, \$15,000 1/1/86 - 12/31/86.

____, "Metal Ion Implantation and Diffusion in Polymers," IBM Corporation, \$15,002 1/1/88 - 8/31/88.

M. Chatterjee & ____ , "Optical Signal Distribution" GE, \$9,994 6/15/89 - 8/31/89.

____, "Diffusion & Aggregation of Metal from Sputtered Thin Films into Polymer Substrates, IBM Corporation, \$24,998 2/22/90 - 8/31/91.

_____. "Basic and Applied Studies of Conducting Adhesives," IEEC (NYS/NSF/Industry Consortium):
\$51,767 1/1/92-12/31/92, \$33,585 1/1/93-12/31/93.

_____. "An Internet Course on Conductive Adhesives for Electronics Packaging" NSF/IEEE (with Johan Liu, Chalmers University of Technology, Sweden) \$30,000 1/1/01-12/31/01

Also responsible for negotiating the DAAD SUNY-Binghamton/TU-Chemnitz student support program, funded at \$13.5K/year to BU plus student expenses and stipend (1998-2001).

PSU

Chemnitz exchange program (DAAD) \$11,160/year (2003-06), \$20,841/year (2006-09)

Intel \$25K course development (2004); Bonneville Power Authority c. \$10K (2004)

NSF Nanotechnology Undergraduate Education: A STE Minor with General Education, \$199,095 (2013-2014)

CURRENT RESEARCH INTERESTS

Study of structure, growth and electrical properties of discontinuous metal thin films* and cermets; AFM fabrication of single-electron transistors*; metal/polymer interface; isotropic electrically conductive adhesives*; automotive engine control sensors; switched-mode power supplies, device modeling; tunnel diodes; resonant tunnel diodes; electrical modeling in electronics packaging; nanotechnology & electronics packaging education*, nanoparticle interconnects*.

*Current projects

INDUSTRIAL & CONSULTING

Sun Microsystems (2004) Electronics packaging

Skyworks (2004) Electronics packaging

Levene, Gouldin & Thompson (1991) Industrial accident

IBM (Summers 1984, 1985; 1986-7) Thin films, ion-beam etching, plasma process modeling

Universal Instruments (1986) Electrostatic discharge (ESD) control

Control Data Corp (Summer 1983) Low temperature CMOS

Olson Engineering (1983) Engine control

Rapid City Computer Mapping Project (Summer 1982) Computer graphics

Honeywell SSED (1982) Thin films

Delphi Industries N.Z. (Aug-Oct 1981) Microprocessor applications

AWARDS

BP Energy Award Special Commendation (1980) for VUW car project.

ASEE Centennial Certificate for Service to St. Lawrence Section 1993.

IEEE CPMT Society Board of Governors Awards for Service as Treasurer, 1992, 1995.

IEEE Region I Award (1999):

"For commitment to, dedication to, and mentorship of
Electrical Engineering students at Binghamton University"

IEEE Millennium Medal, 2000

Elected IEEE Fellow (2000): "For Leadership in the Development of Electronics Packaging."

IEEE CPMT David Feldman Outstanding Contributions Award (2005):

"For his exceptional service to the IEEE and CPMT Society in various leadership roles,
and for his pioneering work in electrically conductive adhesives"

Doctor Honoris Causa (2015), POLITEHNICA University of Bucharest

PATENT

C.Y. Huang, J.E. Morris & Y-K. Su, "Method for producing a semiconductor device using a logic simulation approach to simulate a multi-peak resonant tunneling diode-based electronic circuit and a large signal multi-peak resonant tunneling diode SPICE model employed in the logic simulation approach," U.S. Patent Number 5,535,146, July, 9, 1996.

UNIVERSITY SERVICE

Portland State University

Faculty Senate (2002-2005, 2007-2010)
International Action Council (2004-2005)
University Studies Council (2003-2005, 2012- 2014)
Faculty Senate Committee on Strategic Planning 2011-12
Continuing Education Assessment Cttee, etc
Graduate Council 2010-2012

ECE Department Committees:

Curriculum: 2013-2014 (chair)
Microelectronics Area: 2004- (chair 04-10)
Undergraduate:
2005-06(chair), 2006-07, 2013-14 (chair)
Library 2004-06/2010-12(chair05-06/11-12)
Awards: 2006-07 (chair)
Promotion/Tenure:2005-07/09-10/12-13
Ad hoc Shanghai: 2006- (chair)
Graduate: 2007-2011 (Chair 2010-11)
Eta Kappa Nu adviser 2004-2008, 2011-
Graduate Seminar Coordinator (2010, 2012-)

SUNY-Binghamton (highlights only):

Faculty Senate (Spring 2001)
SUNY Freshman Mentor Program (1995-98)
Newing College Fellow (SUNY residence hall) c.1988-98
Off-Campus College Seminar (2000-01)
Graduate Council (1986-8):
Vice-chairman (1987-8) (Chairman Executive/Procedures, Committee on Committees)
Nomination Committee (1987)
Committee on Organized & Sponsored Research (1986-88) Chairman
Ad-Hoc Governance Committee (1987-88) Chairman
Materials Research Center Ad-hoc Committee (1987)
Budget Sub-committee (1985)
Faculty Senate Library Committee (1987-89) Chairman, Serials Task Force (1988-89)
University Bookstore Advisory Committee (1985-91, 1992-96)
President's Advisory Strategic Planning Committee (1993-96)
Advisory Committee on International Programs (1994-96, 1998-2001), (Chair 1995-96)
Frontiers in Education 1989 Organizing Committee (ASEE/IEEE Conference)
Electrical Engineering Department:
Graduate Adviser (1984-1987)
Undergraduate Advising (1984-1996, 1998)
Deputy Department Chairman (1986-1989)
Watson School Committees:
Graduate Studies (1985-87) Research (1986-87)
General Electric ABC Course Advisory (1984-1995)
Library (Chair and EE Library representative) (1984-87, 1997-2001)
Lab Management Committee (1989-1995)
Personnel Committees: EE (1988-2001), ME (1987-88, 1995), CS (1988-89).

Student recruiting: Community college presentations, industry, partner universities, etc., phone banks.

Program Evaluation Visits: Physics Dept, SUNY-Plattsburgh, Feb. 26-27, 1987

NY State Electricity & Gas Partners in Innovation Peer Review Committee, 1993

South Dakota School of Mines & Technology:

Campus committees: Research (Secretary 1982, Chairman 1983-84)
Computer Aided Design (Chairman) 1982-83
Materials Eng. & Sc. Ph.D. Program Advisory Council 1983-84
Committee on Graduate Studies 1983-84
Computer Hardware Advisory Committee 1983-84

Electrical Engineering Department committees:

Graduate Program (Chairman 1982-83) 1982-84 Curriculum 1982-83
Library (Chairman 1983-84) 1982-84 Equipment 1983-84

SDSM&T EE Academic Adviser: 1981-82 Sophomore, 1982-83 Junior, 1983-84 Senior

SDSM&T Faculty Adviser: KTEQ-FM student radio 1983-84 (Hold broadcaster's license)

PROFESSIONAL SERVICE

Conferences

International Conference Program/Advisory Committees:

International Conference on Adhesive Joining Technology in Electronics Manufacturing:

Berlin, 1994; Stockholm, 1996; Binghamton, 1998 (Conference Chair), Helsinki, 2000.

IEEE Conference on Polymeric Electronic Packaging (PEP): Norrkoping, 1997, Goteborg, 1999.

High Density Pkg'ng & Compon. Failure Analysis in Elec. Manuf. Sympos., (HDP) Shanghai, 1998-2007 .
(Short Course Program Chair 2006)

International Conference on Electronic Packaging Technology & High Density Packaging (ICEPT/HDP), Shanghai (2008-)

3rd Internat'l Confer. on Emerging Microelec. & Interconnect. Technologies, Bangalore, January, 2000.

IEEE Symposium & Exhibition on Advanced Packaging Materials, Braselton,
1999; (Conference Technical Co-Chair), 2000 (Conference Chair), 2001, 2003 (IMAPS)
2004 Atlanta, 2005 Irvine

7th Internat'l Workshop Electronic Properties Metal/Non-Metal Systems, Smolenice, Slovakia, 1999.

International Workshop on Reliability of Polymeric and Plastic Packaging,

2nd, Paris, Dec 1999 (Organizing Session Chair); 3rd, London, Nov 2000 (Confer Co-chair)

International Conference & Exhibition on Microelectronics Materials (Micro Mat), Berlin, April 2000.

International IEEE Spring Seminar on Electronics Technology (ISSE), annually 1999- .

Interpack'01 (the Inter-society Electronic Packaging Conference), Hawaii, July, 2001.

IEEE Conference on Polymers in Electronics & Photonics (Polytronic)

Potsdam 2001; Hungary 2002; Montreux 2003; Portland 2004 (Confer Chair); Wroclaw 2005;
Tokyo 2007; San Jose 2008

IEEE Electronic Component Technology Conference (ECTC) Program Cttees:

Materials & Processing, Education, Emerging Technologies (Chair 2006). Interconnections

IEEE Electronic Systems Integration Technology Conference (ESTC): 2006 -

Materials & Processing Program Committee (2006, 2010), Emerging Technologies (2008-)

Electronic Packaging Technology Conference (EPTC), Singapore 2006 -

Ist World Congress on MicroNanoReliability, Berlin, September 2007

International Conference Solid-State & Integrated-Circuit Technol (ICSICT), Beijing 2008, Shanghai 2010

IEEE Nanotechnology Conference (NANO), Genoa (2009), Portland (General Chair, 2011),

Birmingham (2012), Beijing (2013), Toronto (2014), Rome (2015), Sendai (2016), Pittsburgh (2017)

Electronic Materials & Processing Conference (2010)

IEEE Conference on Technologies for Sustainability, Portland (Program Chair 2013, 2014)

Session Chair (in addition to those listed above):

AUTNZ Universities into the Future Conference, Waikato, May 1981. (Research Session).

ASEE Annual Conference, Toronto, 1990. (Electronics Packaging Session).

ASEE St. Lawrence Conference, Binghamton: 1994. (Recruitment/Retention Economic Development)
1998 (International Engineering Education).

Int. Seminar: Latest Achievements in Conductive Adhesive Joining for Elec. Pkg., Eindhoven, 1995.

IEEE Conference on Polymeric Electronics Packaging: Norrkoping, 1997; Goteborg, 1999

Internat. Workshop on Electronic Properties of Metal/Non-Metal Systems: Polanica, 1995; Prague, 1997

2nd Internat. Confer. Emerging Microelec. & Interconnect. Technol., Bangalore, 1998. (IMAPS-India)

3rd IEMT/IMC Symposium, Japan, April 21-23, 1999.

Interpack'99 (the Inter-society Electronic Packaging Conference), Hawaii, June, 1999.

5th Int'l Sympos Design & Technol Elec Modules (SIITME), Bucharest 1999, Timisoara 2011), Bucharest 2014

..... and more

Professional Societies:

Institute of Electrical and Electronics Engineers (IEEE):

TAB Ad-hoc Committee on Globalization: Technical Meetings Sub-Committee (1998)

TAB Ad-hoc Committee on Branding (1999)

IEEE-USA Research & Development Policy Committee (1999-); (Education Sub-Committee)

Components, Packaging & Manufacturing Technology (CPMT) Society:

Chair, Education Liaison Committee (1989-1990)

Treasurer, (1990-1997)

(In 1990 the Society had \$100K in assets, and was losing \$50K/year;

in 1997 Society reserves exceeded \$1.6M; \$2M in March 1998.)

Elected member Board of Governors 1996-1998, 2011-2013, 2014-2016

Vice-President for Conferences (1998-2003)

Chair, Nanotechnology Technical Committee (2012- 2014)

IEEE Nanotechnology Council representative (2002-2005, 2007-2012))

Associate-Editor, IEEE Trans. on Components, Packaging, & Manufacturing Technologies

(and previously IEEE Trans. on Component & Packaging Technologies, 1998- ;

and IEEE Trans. On Electronics Packaging Manufacturing)

Distinguished Lecturer (2000-)

Co-founder Oregon Chapter, Chapter Executive (2002-)

Served as General Chair for 4 IEEE/CPMT conferences, and as Technical Chair for 2 more

Organizer & co-chair CPMT Panel Session, ECTC 2015 (Nanopackaging: Hype, Hope, or Happening)

Nanotechnology Council (CPMT Society representative 2002-05, 2007-12):

Awards Committee Chair (2010-2012)

Nanopackaging Technical Committee, founding chair 2008-2014

IEEE Nanotechnology magazine editorial board (nanopackaging column) 2008-

Vice-President of Conferences (2013-2014), Vice-President for Finance (2015-)

Distinguished Lecturer (2016-)

Education Society:

Co-founder Oregon Chapter, President (2005-06), Interim Secretary/Treasurer 2007-

Region I: Student Activities Coordinator (1986-1989) (Student Paper Contest support 1986-1988)

Region 10: Interim Student Branch Counselor, VUW (1980-81)

Other

Member (AVS) [Inactive] American Vacuum Society

Member (SAE) [Inactive] Society of Automotive Engineers (SUNY club founder, Adviser 1988-96)

Member (ASEE) American Society for Engineering Education

Member Sigma Xi* (Tri-Cities Club Vice President 1989-92, Nominating Committee 1988) [Inactive]

Member (IEPS) International Electronic Packaging Society

(Upstate NY Regional Coordinator, 1987-1989).(Society combined with ISHM as IMAPS)

Member (IMAPS) International Microelectronics and Packaging Society [formed from IEPS & ISHM]

Member Tau Beta Pi & Tau Beta Pi Alumni

Member Eta Kappa Nu (Faculty Adviser PSU 2004-2008, 2011-)

Member Fulbright Alumni (2009-)

National Electrical Engineering Department Heads Association (NEEDHA); Newsletter editor 1994-1995

Association of University Teachers of N.Z

VUW Committee 1974-76, 1978-81 Vice Chairman 1975;

National Executive 1978-81, Assistant to President 1978-79, Executive-Vice-President 1979-81

N.Z. National Electronics Development Association, Executive Committee (1981)

United University Professions: Binghamton Executive, 1994-99

Calling of the Engineer (Canada); Order of the Engineer (Watson School coordinator 1989-95)

Reviewing:

NSF & other research sponsors (Canada, Hong Kong), City U of HK (faculty, research); etc.

Faculty appointment and promotion reviews: Sweden, Norway, Finland, Hong Kong, Malaysia, France, USA, etc
Ph.D. external examiner:

U. Auckland (2), TU-Helsinki (2), Tampere University, U-Bordeaux (2 & habilitation), Nanyang U. (Singapore).

Professional Book reviews (pre-publication text development):

Prentice-Hall

"Introduction to Electronics," Horenstein, 1986-87 Second edition 1993-94

"A Practical Approach to Engineering Electronics," Mauro, 1986.

"Introduction to Integrated Circuits," Rutledge, 1987

"SPICE Tutorial Manual," Tuinenga, 1987

"Simulation with SPICE," Kinsner, 1987

"Computer-Aided Circuit Analysis Using SPICE," Banzhaf, 1988.

"Introduction to SPICE," Hines, 1988

"Analog Integrated Circuits: Design, Analysis & Applications," Socloff, 1988

"PSPICE for Electronics & Circuits,," Rashid, 1988

"Designing Electronic Circuits Using Analog IC's," Wierzba, 1989

"Integrated Electronic Devices & Circuits," Sodini & Howe, 1991

Van Nostrand Reinhold:

Electronics packaging text, Palusinski, Prince, et al, 1991

MCM book proposal -- Franzon & Doane (eds), 1991

Addison Wesley:

"Electronic Circuit Design" Savant, et al, 2e & 3e proposal 1993

IEEE Press:

"Advanced Electronic Packaging with Emphasis on Multichip Modules," Brown, 1997,

"Advanced Electronic Packaging with Emphasis on Multichip Modules," Brown, 2e, 2004.

Wiley:

"Fundamentals of Electronics," Razawi, (2006)

"Introduction to Microsystem Technology" Gerlach & Doetzel (2006)

"Electric Circuits & Circuit Components" Mazarov, Ludwig, & Bitar (2010)

Also research monograph proposals from CRC Press, etc.

Miscellaneous research journals:

IEEE Trans. Advanced Packaging., IEEE Trans. Electronics Package Manufacturing, IEEE Trans.-CPMT, IEEE Trans. Reliability of Devices & Materials, IEEE/ASM J. Electronic Materials, Electronics Letters, Applied Physics Letters, J. Polymer Science, Thin Solid Films, Adhesion & Adhesives, Solid State Electronics, Materials Transactions (Japan),

Elsevier: Applied Surface Science, CARBON, Composites Science and Technology, Journal of Alloys and Compounds, Materials Chemistry and Physics, Materials Characterization, Microelectronics Reliability, Nuclear Inst. and Methods in Physics Research – B, Organic Electronics, Sensors & Actuators: B. Chemical
etc

Editorial Boards:

Recent Patents on Electrical Engineering (Bentham Science Publishing) 2007-

International Review of Electrical Engineering (Praiseworthyprize) 2005-

Electronics (CGBI, Basel) 2011-

Editorial Advisory Boards:

Journal of Microelectronic Systems Integration, (Plenum)

International Journal of Microelectronics Packaging (Gordon & Breach) (Assembled ECA Issue v1(3).)

(Both journals no longer published)

November 2016