

CURRICULUM VITAE

Bruce C. Kim

Fellow and Life Member of IMAPS (International Manufacturing and Packaging Society)
Life Senior Member of IEEE Society

CONTACT INFORMATION

City University of New York
Electrical Engineering Department
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EDUCATION

<u>University</u>	<u>Degree</u>
Georgia Tech, 1996	Ph.D., Electrical and Computer Engineering
University of Arizona, 1985	M.S., Electrical Engineering
University of California, Irvine, 1981	B.S., Electrical Engineering

AREA OF EXPERTISE

- Biosensors, biofluidic devices, chemical nanosensors, neural probes
- Semiconductor Fabrication & Packaging, Testing
- RFIC, RF testing, RF equipment, VLSI, 3D Integrated Circuit Design, Verifications
- 3D Packaging, flip chips, wirebonding
- Nanotechnology, Nanomaterials, Nanopackaging
- IoT and Hardware Cybersecurity and Machine Learning
- MEMS, NEMS, Microfluidic devices, biomaterials

ACADEMIC APPOINTMENTS

Period:	2013 (January) - present
Organization:	City University of New York, CCNY
Title:	Professor, Department of Electrical Engineering Director of Advanced Nanotechnology Laboratory
Period:	2005 (January) – 2012 (December)
Organization:	University of Alabama, Tuscaloosa
Title:	Professor, Department of Electrical and Computer Engineering Affiliated Faculty, Tri-Campus UA Materials Science PhD Program

Visiting Professor at Seoul National University in Seoul Korea, June – November 2011 (Research Sabbatical)

Summary: Director of Nanoelectronics Design & Test Laboratory for nanotechnology sensors, sensor networks and wireless circuits. Research and teaching in mixed-signal design, VLSI, and microsystems for RF and biological sensor applications. Adjunct Faculty in Department of Electrical Engineering at Arizona State University (2005-2007)

Worked with Professor Soo Ik Chae's SoC Design Lab for automatic post-silicon debugging and testing techniques at Seoul National University in Korea.

Period: 2000 – 2005

Organization: Arizona State University, Tempe, AZ

Title: Associate Professor, Department of Electrical Engineering;
Adjunct Professor, Department of Bioengineering

Summary: Teaching and research in VLSI design, testing, and IC packaging. Research in mixed-signal and RFIC characterizations and packaging for testability. Adjunct Professor in Department of Bioengineering (2003-2007), Director of Nanosystems Design Technology Lab.

Period: 1998 - 2000

Organization: Michigan State University, East Lansing, MI

Title: Assistant Professor, Department of Electrical and Computer Engineering

Summary: Performed research and teaching in Digital and Analog microelectronics, MEMS and Packaging, Director of Microsystems Packaging Research Lab.

Period: 1996 - 1998

Organization: Tufts University, Boston, MA

Title: Assistant Professor, Department of Electrical Engineering & Computer Science

Summary: Research and teaching in Digital and analog microelectronics, MEMS and Packaging

Period: 1992 - 1996

Organization: Georgia Institute of Technology

Title: Graduate Research Assistant, School of Electrical and Computer Engineering

Summary: Research in VLSI and Microsystems fabrication and packaging areas

Period: 1987 - 1991

Organization: Georgia Tech Research Institute (GTRI)

Title: Research Engineer II, Electronics Research Laboratory

Summary: Research in Millimeter Wave Radar Transmitters and portable military communications electronics

EXPERT ENGAGEMENT

<u>Type of Matter:</u> Law Firm: Case Name: Services Provided: Disposition: Date:	<u>BioSystems in Electronic Cell Sensing</u> Jones Day, Atlanta Agilent Technologies, Inc. v. Axion BioSystems, Inc. Consulting Pending 2023 Main contact: Geoffrey Gavin and Ryan Walsh
<u>Type of Matter:</u> Law Firm: Case Name: Services Provided: Disposition: Date:	<u>Semiconductor IC Verification Software</u> Kramer Levin Naftalis & Frankel LLP Oasis Tooling, Inc. v. Siemens Industry Software, Inc Consulting Completed 2023 Main contact: Aaron Frankel
<u>Type of Matter:</u> Law Firm: Case Name: Services Provided: Disposition: Date:	<u>Semiconductor IC device design and fabrication</u> Anand & Anand (India); Latham & Watkins LLP (San Francisco, Boston) ImberaTek LLC v. Samsung Electronics Co., Ltd. Expert Report, Claim Charts, Declarations, Proprietary Device Interrogations Settled out of court 2022 Main contact: Giri Pathmanaban (L&W)
<u>Type of Matter:</u> Law Firm: Case Name: Services Provided: Disposition: Date:	<u>Wire bonding and Flip chip bonding Tools</u> Polsinelli LLP in San Francisco IPR: Anza Technology v. Toshiba Expert witness, declarations, responses, deposition Completed 2019 Main Contact: Margaux Savee
<u>Type of Matter:</u> Law Firm: Case Name: Services Provided: Disposition: Date:	<u>MEMS Probes</u> McDermott, Will&Emery, Washington D.C. FormFactor ITC Expert Witness, Deposition Settled out of court 2008 Main Contact: Anish Desai
<u>Type of Matter:</u> Law Firm: Case Name: Services Provided: Disposition: Date:	<u>MEMS Package Testing</u> Irell & Manella, LLP (Plaintiff) FormFactor v. Phicom Expert Witness, performed laboratory experiments using defendant's product, and prepared for court testimony Completed 2006 – 2007 Main Contact: Brian Ledahl
<u>Type of Matter:</u> Law Firm: Case Name: Services Provided: Disposition: Date:	<u>Electronics IC Packaging</u> Sidley Austin Brown & Wood, LLP, San Francisco Amkor v. Carsem ITC case inv. 337-TA-501 Expert Witness Consultant: Provided prior art searches, assisted with preparation of claims charts for Plaintiff, Declarations, and Deposition. Undisclosed 2004 – 2006, Main contact: Paul Anderson at Amkor

<u>Type of Matter:</u>	<u>Integrated Circuits and Packaging</u>
Law Firm:	Sidley Austin, L.L.P. (Defendant)
Case Name:	Undisclosed
Services Provided:	Expert Consultant: Provided prior art searches, assisted with preparation of claims charts and provided deposition
Disposition:	Completed
Date:	2003
<u>Type of Matter:</u>	<u>Microsystems (MEMS) Packaging</u>
Law Firm:	Finnegan, Henderson, Farabow, Garrett & Dunner, L.L.P. (Plaintiff)
Case Name:	Integrated Repeaters, switches and transceivers for ITC Investigation
Services Provided:	Expert Consultant: Provided prior art searches, assisted with preparation of claims charts, expert report, deposition
Disposition:	Undisclosed
Date:	2000-2001 Contacts: AJ Moss, Steve Anzalone

OTHER CONSULTING POSITIONS

- Samsung Techwin, Ltd., Packaging Test Consultant, 2005, 2006.
- Amkor Technology, Packaging Patent Consultant, 2004.
- Samsung Electro-Mechanical, Ltd., Package Test Consultant, June-August 2002.
- Philips Semiconductors, Analog IC Design Engineer, June-August 2001.
- Micro Module Systems, Inc, MCM Packaging Engineer, May-August 1997.

EDITORIAL EXPERIENCE

- Editor-in-Chief, Journal of Nanotechnology & nanoscience, Madridge Publishers, 2016-
- Editorial Board Member, Journal of Communications Engineering and Networks, 2016-
- Editorial Board Member, Journal of Nanotechnology: Nanomedicine & Nanobiotechnology.
- Associate Editor, IMAPS Journal of Microelectronics, 2009 – present.
- Associate Editor, IEEE Design and Test of Computers, 2004 – present.
- Associate Editor, IEEE Trans. on Advanced Packaging, CPMT (Components, Packaging and Manufacturing Technology) Society, 2004 – present.
- Editorial Board Member, associate editor, Journal of Electronic Testing (JETTA), 2005 – present.
- Editorial Board Member, Korea Test Magazine, 2008 - present
- Guest Editor, IEEE Design and Test of Computers, Special Issue on RFIC Design and Testing, Jan/Feb 2008.
- Guest Editor, IEEE Design and Test of Computers, Special Issue on Design and Test of SiP, May/June 2007.
- Editor-in-Chief, TTTC Newsletter, IEEE Computer Society, 2001 – 2008.
- Editor-in-Chief Embedded Newsletter in IEEE Design and Test of Computers, 2005 - 2008.
- Editor-in-Chief, TTTC Newsletter for JETTA, 2005 – 2008.

EXTERNAL FUNDED GRANTS AND CONTRACTS (Total: \$US 13,701,320 as PI or Co-PI)

1. KRISO Consortium, "Development of Automatic Detection System for Maritime Containers with Dangerous Cargo," Award Amount \$600,000, Role: PI, period 05/01/20 to 4/30/26.
2. Office of Naval Research, "Development of Bio-Inspired Nano-Sensors for Underwater Explosives and Hazardous Materials," Award Amount \$500,000, Role: PI, period: 02/20 to 06/22.
3. Brookhaven National lab, "EIC Detector Preamp Design & Fabrication," \$10,000, 3/1/18-6/30/20
4. PSC-CUNY Award, "Secure Cyber Hardware for IoT," \$3,500, 07/01/2019-06/30/2020
5. Army Research Office, "Nanowire Kits for Undergraduate and High School Students," \$7,500, Period 5/1/18-8/30/18.
6. Brookhaven National lab, "EIC Preamp Design," \$10,000, 3/1/18-6/30/19
7. Army Research Office, "Nanowire Kits for Undergraduate and High School Students," \$7,500, Period 5/1/18-8/30/18.
8. Army Research Office, "ZnO Nanowire Synthesis for Vapor Sensors," Amount: \$225,000, Period 7/1/16-8/30/18.
9. PSC-CUNY Award, "Design of 3D TSV Inductors," \$3,500, 07/01/2016-06/30/2017.
10. Semiconductor Research Corporation, B. Kim, "Test Techniques and Fault Models for High Voltage Devices," Amount \$84,176, Award period 11/1/13 – 10/30/15.
11. US Army Aviation and Missile Research, B. Kim (Co-PI), "Task6: Applied Nanotechnology for Military Applications," PI: S. Burkett, Amount \$50,000, Kim's share \$50,000, Award period 5/15/2013 - .09/15/2014
12. US Army Aviation and Missile Research, B. Kim (Co-PI), "Task5: Applied Nanotechnology for Military Applications," PI: S. Burkett, Amount \$100,000, Kim's share \$53,000, Award period 5/15/2012 - .09/15/2013
13. B. Kim (PI), Semiconductor Research Corporation, "Test Techniques and Fault Modeling for High Voltage Devices and Boards," Amount: \$150,000, Award period 2/1/12 – 1/30/15.
14. US Army Aviation and Missile Research, B. Kim (Co-PI), "Task3: Applied Nanotechnology for Military Applications," PI: S. Burkett, Amount \$163,000, Kim's share \$50,294, Award period 5/15/2011 - .9/15/2012
15. US Army Aviation and Missile Research, B. Kim (Co-PI), "Task 2: Applied Nanotechnology for Military Applications," PI: S. Burkett, Amount \$165,000, Kim's share: \$69,285, Award period 5/15/2010 - .09/15/2011
16. US Army Aviation and Missile Research, (co-PI) Task 1 "Applied Nanotechnology for Military Applications," PI: S. Burkett, Amount \$175,000, Kim's share: \$62,000, Award Period 10/1/2009 – 9/30/2010.
17. SRC Research Custom Program, (PI) Title: Automatic Diagnostic tool for AMS and RF Boards, Funding Agency: Semiconductor Research Corporation, Award Period 8/1/2008-7/30/2011, Award No. SRC 2008-TJ-1834, Amount Awarded \$150,000.
18. National Science Foundation, (PI) "CRI: Electronic Testing Education, Research and Training Infrastructure," Collaboration with Auburn, Tuskegee, UAH Universities in total amount of

\$1.5M; Amount awarded to PI \$173,677, Award Period 10/1/2007-9/30/2010, Award No. CNS-0708003.

19. US Army Aviation and Missile Research, (PI) "Synthesis of Nanowires for Sensor Applications," Amount \$5,000, Award Period 2/1/2009 – 9/30/2009.
20. US Army Aviation and Missile Research, (PI) "Synthesis of Nanowires for Sensor Applications," Amount \$20,000, Award Period 9/15/2007 – 9/15/2008.
21. National Science Foundation, (PI) "CPA: Testing of Nano-Interconnects in System-in-Package Substrates," Original requested amount \$377,699, Award Period 5/1/2006-4/30/2010, Award No. CCF-0541200.
22. University of Idaho/Air Force Research Lab, (Co-PI), "Low Loss Magnetic Thin Film Inductor," PI: Y.K. Hong, Award amount: \$565,684, Award Period: 9/1/06 – 7/31/09.
23. SRC Research Custom Program, (PI) Title: Automatic Program Generation Tool for Mixed-Signal Load Board, Funding Agency: Semiconductor Research Corporation, Award Period 8/1/2005-7/30/2006, Award No. SRC 1327.001, Amount Awarded \$50,000.
24. SRC Research Custom Program, (PI) "Automatic Diagnostic CAD Tool for Mixed Signal Load Board," Award Period 5/1/2004 – 4/30/2006, Funding Agency: Semiconductor Research Corporation, Award No. SRC 1195.001, Award Amount \$100,000.
25. International Microelectronics and Packaging Society Foundation (PI), "Undergraduate Research Grant," Award Period: Open (awarded 2003), Award Amount \$10,000.
26. National Science Foundation, (Co-PI) "Integrated MEMS and Advanced Technologies for the Next Generation Power Distribution System," PI: Gerald Heydt (Arizona State University) Award Number ECS-0224228, Award Period 9/1/02 – 8/31/05, Award Amount \$399,968.
27. National Science Foundation, (PI) "Supplement: Testing of Integrated Passives," Award Period 8/1/03 – 7/31/04, Award Amount \$20,000.
28. DARPA, "Advanced Neural Implant Control," (Co-PI), Defense Sciences Office, Bio-Info-Micro Initiative, PI: Jiping He (Arizona State University), Award Number MDA972-00-1-0027, Award Period 11/1/00 – 5/31/04, Award Amount \$6,249,994.
29. National Science Foundation (PI), "CAREER: Testing of Integrated Passive Components and Interconnects in MCM Substrates," Award No. MIP-9701871, Award Period 08/01/97-07/31/01 Award amount, \$240,000.
30. National Science Foundation (Co-PI), "University Collaboration on Next Generation Packaging." PI: Rao Tummala (Georgia Institute of Technology), Award No. EEC-9726165, Award Period 11/01/97-10/31/00, Award amount, \$900,000.
31. National Science Foundation, (PI) "SGER: Design of MEMS Probe for Testing Nano-Scale Interconnects," Award No. CCF-0107624, Award Period 1/15/01 – 12/31/02, Award amount \$88,000.
32. National Science Foundation, (PI) "Developing Educational Modules in Package Interconnects for Next Generation Engineers," Award Period 12/01/99 – 11/30/01, Award amount, \$60,000.
33. WINTECH, (PI) "Switchable Dual Band Quadrature Voltage Controlled Oscillator," Award Period 8/1/03 – 7/31/04, Award Amount \$36,339.

34. Motorola, (PI) "Modeling and Simulation of SAW Filters for Wireless Applications," Award Period 12/15/02 – 8/15/03, Award Amount \$25,392.
35. Motorola, (PI) "Design of High-Q RF Resonator for Wireless Applications," Award Period 1/15/01 – 8/15/02, Award amount, \$155,000.
36. Texas Instruments, (PI) "Development of Test Algorithms for Mixed Signal DUT Board," Award Period 1/1/03 – 12/31/03, Award amount, \$23,080.
37. Philips Semiconductor, (PI) "Analog Research Grant," Award Period 10/1/00 – 12/31/01, Award amount \$31,946.
38. Philips Semiconductor, (PI) "Low Power RF Receiver Design on SOI Substrate," Award Period 1/1/01 – 12/31/01, Award amount \$43,042.
39. IEEE CPMT Society, (PI) "Unrestricted Research Grant," Open Award Period (awarded 1999), Award amount, \$16,000.

PUBLICATIONS

PUBLISHED BOOKS AND PART OF BOOKS

1. Anurag Gupta, Bruce Kim, Eugene Edwards, Christina Brantley, Paul Ruffin, Dawen Li, "Zinc Oxide Nanowires for Biosensing Applications," Chapter 50 of Nanoelectronic Device Applications Handbook, CRC Press, edited by James E. Morris, *Portland State University, Oregon, USA* ;Krzysztof Iniewski, *CMOS Emerging Technologies, Inc., Vancouver, British Columbia, Canada*, July 15, 2013.
2. D. Keezer, B. Kim, "Fundamentals of Microsystems Packaging" Chapter 19: Fundamentals of Electrical Test, edited by R. Tummala, McGraw-Hill, 2000.
3. M. Swaminathan, A. Chatterjee, F. Crnic, B. Kim, S. Koppollu, "Package Electrical Testing" Chapter 13, Volume II, Microelectronics Packaging Handbook, edited by R. Tummala, E. Rymaszewski and A. Klopfenstein, Chapman & Hall Publisher, 1997.
4. M. Swaminathan, B. Kim, A. Chatterjee, "A Survey of Test Techniques for MCM Substrates," A Chapter in Multi-Chip Module Test Strategies, edited by Yervant Zorian, ISBN 0- 7923-9920-X, Kluwer Academic Publishers, 1997.
5. B. Kim, "DDN Fault Isolation System," A Chapter in Network Management and Control, edited by Aaron Kershenbaur, Manu Malek, and Mark Wall, pp. 175-186, Plenum Publishing Co., 1990.

PUBLISHED REFEREED JOURNAL PAPERS

1. B.C. Kim, A. Gupta, JW Park, "Development techniques for nano-biosensors," International Journal of Biosensors & Bioelectronics, Vol. 7, Issue 1, pp. 1-3, 2021.
2. Bruce C Kim and Anurag Gupta, "A Reliable Device Topology for ZnO Nanowire-based Gas Sensors," Madridge Journal of Nanotechnology & Nanoscience (ISSN: 2638-2075), Volume 4, Issue 1, May 15, 2019.

3. S.Mondal, S.B. Cho, B. Kim, "Modeling and Crosstalk Evaluation of 3D TSV Based Inductor with Ground TSV Shielding," *IEEE Transactions on Very large Scale Integration (VLSI) Systems*, pp. 308-318, January 2017.
4. Saikat Mondal, Sang-Bock Cho, Bruce Kim, "Modeling and Crosstalk Evaluation of 3D TSV Based Inductor with Ground TSV Shielding," *IEEE Transactions on VLSI*, May 2016, pp 1-11, DOI: [10.1109/TVLSI.2016.2568755](https://doi.org/10.1109/TVLSI.2016.2568755).
5. A. Gupta, B. Kim, R. Kasim, "Synergistic Utilization of MEMS Array Topology and Nanosensor Package for Trace Multiple Analyte Detection" *Journal of Advanced Materials Research*, volume 774-776, pp. 1503-1507, DOI: 10.4028/www.scientific.net/AMR.774-776.1503, January 2014.
6. A. Gupta, B. Kim, R. Kasim, "Novel MEMS switch topology and nanosensor package for multi-analyte chemical detection" *Advanced Materials Research*, vol. 774, pp. 1503-1507, 2013.
7. A. Gupta, M. Spryn, B. Kim, E. Edwards, C. Brantley, P. Ruffin, "A wireless and modular design for MOX nanosensor interface electronics," *IEEE Transactions on Instruments and Measurements*, submitted.
8. A. Gupta, B. Kim, E. Edwards, C. Brantley, P. Ruffin, "A Reliable Device Topology for ZnO Nanowire-based Gas Sensors," *IMAPS Journal of Microelectronics*, submitted.
9. S. Evana, B. Kim, "Design and self-calibration scheme for RF circuits using MEMS in 3D packages," LAP LAMBERT Academic Publishing.
10. A. Gupta, B. Kim, "A Blended E-Learning Model for a Higher Education Framework," *Journal of Advanced Education and Management*, DEStech Publications, accepted.
11. S. Kannan, K. Kannan, B. Kim, F. Taenzler, R. Antley, K. Moushegian, K. Butler, D. Mirizzi, "Physics-Based Low-Cost Test Technique for High Voltage LDMOS," *Journal of Electronic Testing: Theory and Applications*, Vol.29, No. 6, pp. 745-762, DOI: 10.1007/s10836-013-5147-5, December, 2013.
12. A. Gupta, B. Kim, E. Edwards, C. Brantley, P. Ruffin, "Synthesis and Functionalization Study of Hierarchical ZnO Nanowires for Potential Nitroaromatic Sensing Applications" *Applied Physics A*, vol.107, pp. 709-714, 2012.
13. A. Gupta, B. Kim, E. Edwards, C. Brantley, P. Ruffin, "Functionalization of ZnO nanowires for potential *p*-nitrophenol sensing applications," *Advanced Materials Research*, Vol. 567, pp. 228-231, 2012.
14. A. Gupta, B. Kim, E. Edwards, C. Brantley, P. Ruffin, "Design of Nanosensing platform based on Zinc Oxide nanowire arrays," *Journal of Smart Nanosystems in Engineering and Medicine*, GINTEM, ISSN: 2167-5813, Editor: Vijay Varadan, September 2012.
15. A. Gupta; B. Kim; E. Edwards; C. Brantley; P. Ruffin, "Covalent Functionalization of Zinc Oxide Nanowires for High Sensitivity *p*-Nitrophenol Detection in Biological Systems," *Elsevier: Materials Science and Engineering - B*, September 2012.
16. S. Kannan, B. Kim, A. Gupta, S.K. Noh, L. Li, "Characterization of High Performance CNT-based TSV for High Frequency RF Applications," *Techno Press: International Journal of Advances in Materials Research*, Vol. 1, Num. 1, pp. 37-49, March 2012.

17. S. Kannan, B. Kim, B. Ahn, "Fault Modeling and Multi-tone Dither Scheme for Testing 3-D Through Silicon Via Defects," *Springer: Journal of Electronic Testing Theory and Applications* – Special Issue in 3D Testing, Vol. 28, Num. 1, pp. 39-51, 2012.
18. S. Kannan, B. Kim, N. Sai Evana, S.H. Noh, "System-on-Chip Integrated MEMS Packages for RF LNA Testing and Self Calibration," *IMAPS Journal of Microelectronics and Electronic Packaging*, Vol. 8, Num. 4, pp. 154-163, 2012.
19. A. Gupta, B. Kim, E. Edwards, C. Brantley, P. Ruffin, "Synthesis and Functionalization Study of Hierarchical ZnO Nanowires for Potential Nitroaromatic Sensing Applications", *Springer: Applied Physics A, Materials Science & Processing*, Vol. 107, No.3, pp. 709-714, March 2012.
20. A. Gupta, B. Kim, C. Watkins, S. Street, E. Edwards, C. Brantley, P. Ruffin, "Surface Chemistry for ZnO Nanowires for Nanosensor Applications," *Transactions of the ASME, Journal of Nanotechnology in Engineering and Medicine*, Vol.2, pp.011010-1-4, February 2011.
21. S. Kannan, B. Kim, G. Srinivasan, F. Taenzler, R. Antley, C. Force, "Embedded RF Circuit Diagnostic Technique with Multi-Tone Dither Scheme," *Springer Journal of Electronic Testing Theory and Applications*, Special Issue in Analog, Mixed Signal and RF Testing, Vol. 27, Number 3, pp.241-252, 2011.
22. B. Kim, R. Kasim, "Development of MEMS Power Sensor Package," *IMAPS Journal of Microelectronics and Electronic Packaging*, Vol. 7, No. 3, pp. 169-174, 2011.
23. B. Kim, S. Kannan, A. Gupta, F. Mohammed. B. Ahn, "Development of Carbon Nanotube Based Through Silicon Vias," *Transactions of the ASME, Journal of Nanotechnology in Engineering and Medicine*, Vol. 1, pp.121-128, May 2010.
24. B. Kim, H. Zhu, J. He, "Integrated Double Sided Neural Sensor with Dry Etch BCB", *Transactions of the ASME, Journal of Nanotechnology in Engineering and Medicine*, Vol. 1, pp.021010-1-4, May 2010.
25. B. Kim, "Novel Design of Carbon Nanotube Based RF Inductors," *Transactions of the ASME, Journal of Nanotechnology in Engineering and Medicine*, Vol. 1, pp.011003-1-4, February 2010.
26. Bruce C. Kim, Craig Force, "Guest Editors' Introduction: The Evolution of RFIC Design and Test," *IEEE Design and Test of Computers*, vol. 25, no.1, pp. 6-8, January-February, 2008.
27. G. Kim, R. L. Martens, G. B. Thompson, B. C. Kim, and A. Gupta, "Selective area synthesis of magnesium oxide nanowires," *Journal of Applied Physics*, 102, pp.104906-1 to 5, November 2007.
28. H. Zhu, J. He, B. Kim, "Processing and Characterization of Dry-Etch Benzocyclobutene Dielectrics as Substrate and Packaging Material for Neural Sensors," *IEEE Transactions on Components and Packaging Technologies*, Volume 30, Number 3, pp. 390-396, September 2007.
29. J.Y. Ryu, B.C. Kim, I. Sylla, "A Novel RF Test Scheme Based on a DFT Method," *Journal of Electronic Testing Theory and Applications*, Volume 22, Number 3, pp.229-237, June 2006.

30. J.H. Jang, N. Ishitobi, B.C. Kim, and S.G. Jeong, "Effects of Microstructural Defects in Multilayer LTCC Stripline," *IEEE Transactions on Advanced Packaging*, Volume 29, Number 2, pp. 314-319, May 2006.
31. Bruce C. Kim, Yervant Zorian, "Guest Editors' Introduction: Big Innovations in Small Packages," *IEEE Design and Test of Computers*, vol.23, no.3, pp. 186-187, May/Jun, 2006.
32. J.Y. Ryu, B.C. Kim, I. Sylla, "A Novel Low-Cost RF Built-In Self-Test measurement for System-on-Chip Transceivers," *IEEE Transactions on Instrumentation and Measurement*, Volume 55, Number 2, pp. 381 – 388, April 2006.
33. J.Y. Ryu, B.C. Kim, "Low-Cost Testing of 5 GHz Low Noise Amplifiers Using New RF BIST Circuit," *Journal of Electronic Testing Theory and Applications*, Volume 21, Number 6, pp. 571 – 581, December 2005.
34. K. Lee, B.C. Kim, and J. He, "BCB based spiral inductor for wireless application," *SPIE MEMS/MOEMS Micro and Nano Fabrication*, Vol. 1517, pp. 66-70, 2005.
35. J-Y Ryu and B. C. Kim, "Low-Cost Test Technique Using a New RF BIST Circuit for 4.5–5.5 GHz low noise amplifiers" *Microelectronics Journal*, vol. 36, issue 8, pp. 770–777, August 2005.
36. S.H. Lee, B.C. Kim, "Curled micro-cantilevers using Benzocyclobutene polymer and Mo for wafer level probing," *Elsevier, Sensors and Actuators A*, Volume 121, Issue 2, pp. 472 - 479, 2005.
37. K.K. Lee and B.C. Kim, "MEMS spring probe for non-destructive wafer level chip test," *Journal of Micromechanics and Microengineering*, Volume 15, pp. 953–957, 2005.
38. K. Lee, J. He, R. Clement, S. Massia, and B. Kim, "Biocompatible Benzocyclobutene (BCB) based intracortical neural implant with microfluidic channel", *Elsevier: Biosensors and Bioelectronics*, Vol. 20, No. 2, pp. 404-407, 2004.
39. K. Lee, J. He, A. Singh, S. Massia, B. Kim, and G. Raupp, "Polyimide-based intracortical neural implant with improved structural stiffness", *Journal of Micromechanics and Microengineering*, Vol. 14, No. 1, pp. 32-37, 2004.
40. K. Lee, A. Singh, J. He, S. Massia, R. Clement, B. Kim, and G. Raupp, "Polyimide based neural implant with stiffness improvement", *Elsevier: Sensors and Actuators Part B*, Vol. 102, No. 1, pp. 67-72, 2004.
41. K.G. Lee, H.K. Song, M. Kim, S. Kim, B. Kim and Y. You, "Impact of Parameter Imbalances on Transmit Diversity OFDM System Performance," *IEICE Transactions Fundamentals*, Vol. E85-A, No.1, 2003.
42. W. Yun, A. Singh, J. He, K.K. Lee, B. Kim, "Computer Simulation of Stress Analysis in Benzocyclobutene (BCB) Based Neural Interface," *IEEE Engineering in Medicine and Biology Society*, Volume 4, 17-21, pp. 3407 - 3410, 2003.
43. K. Lee, R. Liu, B. Kim, "Double Beam RF MEMS Switches for Wireless Applications," *Electronics Letters*, Vol. 39, No. 6, pp. 532-533, 2003.

44. B. Kim, A. Chatterjee, and M. Swaminathan, "Low-Cost Diagnosis of Defects in MCM Substrate Interconnections," *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*, 1997.
45. M. Swaminathan, B. Kim, A. Chatterjee, "A Survey of Test Techniques for MCM Substrates," *Journal of Electronic Testing: Theory and Applications*, Vol. 10, No. 1/2, pp. 27-38, 1997.
46. B. Kim, M. Swaminathan, A. Chatterjee, "A Novel Test Technique for MCM Substrates," *IEEE Transactions on Advanced Packaging*, Vol. 20, No. 1, pp. 2-12, 1997.
47. Chatterjee, B. Kim, N. Nagi, "DC Built-In Self-Test of Linear Analog Circuits Using Checksums," *IEEE Design & Test of Computers*, Vol. 13, No. 2, 26-33, 1996.

REFEREED CONFERENCE PAPERS WITH PROCEEDINGS

1. B. Kim, M. Aleem, T. Selvarathinam, S. Kundu, J. Lee, J. Park, "Reliable Fabrication Techniques of SiNW-based Nanosensors," IEEE NanoNMD, Napoli Italy, October 24-27, 2023.
2. S. Thambiraj, J.H. Lee, J. Park, B. Kim, "Multifunctional Gold Nanoformulations for Prostate Cancer Drug Delivery Applications," IEEE NanoMED, Okinawa Japan, December 2-5, 2023.
3. B. Kim, S. Thambiraj, A. Gupta, J.H. Lee, J. Park, "Functionalized ZnO Nanowires for Biosensing Applications," IEEE NanoMED, Okinawa Japan, December 2-5, 2023.
4. B. Kim, M. Aleem, S. Kundu, T. Selvarathinam, J. Park, IEEE Nano, Jeju Korea, July 2-5, 2023.
5. B. Kim, M. Aleem, S. Kundu, T. Selvarathinam, J. Park, "Nanosensor Fabrication with Silicon Nanowires," Nanotech France, Paris France, June 28-30, 2023.
6. H. Phan, M. Wardlaw,, B. Kim, A. Brockmeir, "Training a Machine Learning Model for Underwater Chemical Source Localization in Simulated Turbulent Flows ," IEEE OCEANS, Virginia Beach, October 17-20, 2022
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13. J.-Y. Ryu, and B. C. Kim, "A New RF BIST for 4.5-5.5GHz Low Noise Amplifiers," 10th *IEEE International Mixed-Signal Testing Workshop*, pp. 189-195, June 2004.
14. R. Kasim and B.C. Kim, "Noise Based Testing for Deep Sub-Micron CMOS," 10th *IEEE International Mixed-Signal Testing Workshop*, pp. 5-12, June 2004.
15. A. Germatsky and B. Kim, "CMOS Op Amp Bias Current Monitoring for Catastrophic Fault Detection and Analysis," *IEEE International Mixed-Signal Testing Workshop*, 1998.
16. B.C. Kim, M. Swaminathan, A. Chatterjee, "A Novel Low-Cost Test Technique for MCM Substrates," 6th *IEEE North Atlantic Test Workshop*, West Greenwich, Rhode Island, May 29-30, 1997.
17. B.C. Kim, A. Chatterjee, M. Swaminathan, "A New Technique for Testing MCM Substrates," IEEE & ISHM, *MCM Advanced Technology Workshop*, 1995.
18. Chatterjee, B. Kim, N. Nagi, "Towards Design or Repairable Linear Analog Circuits" *IEEE International Mixed-Signal Testing Workshop*, pp. 40-43, Paris, France, June 20-22, 1995.
19. P. Bond, B. Kim, C. Lee and D. Schimmel, "A Methodology for Generation and Collection of Multiprocessor Traces," *IEEE International Workshop on Modeling, Analysis and Simulation of Computer and Telecommunication System (MASCOTS) '94*, January 1994.

POSTERS

1. S. Evana, B. Kim, S. Kannan and F. Mohammad, "RF Circuit Testing and Calibration using MEMS", 43rd *International Symposium on Microelectronics, International Microelectronics and Packaging Conference*, Raleigh, N.C., November 2010.
2. S. Kannan, B. Kim, "Automatic Diagnostic Tool for Analog-Mixed Signal and RF Load Boards," *IEEE International Test Conference*, Austin, October 2009.
3. Srividya Sundar, Bruce Kim, "Circuit Analyzer and Test Generator (CATGEN) for Mixed-Signal Device Interface Boards," *IEEE VLSI Test Symposium*, San Diego, April 2008.

TECHNICAL MAGAZINES

- M. Swaminathan, A. Chatterjee, B. Kim, "Testing High Density Substrates," January/February 1997 *Advanced Packaging Magazine*, An IHS Publishing Group.
- B. Kim, "Test scheme could take a bite out of MCM costs," *Electronic Engineering Times*, May 12, 1997.

INVITED SEMINARS AND SHORT COURSES

- Nanjing Institute of Technology, China, “MEMS and Nano Technologies for Solar Power Applications,” June 11, 2019
- Korea Research Institute of Ships and Ocean, “Nano Sensors and Packaging Security for IoT in Maritime Environment,” July 1, 2019.
- Beijing University of Technology, China, “Zinc Oxide Nanowire-based Chemical Gas Sensor for Highly Sensitive Explosive Detection,” Invited Seminar at BUT, School of Electrical and Instrumentation Engineering, Beijing, China, January 7, 2014.
- Beijing Institute of Technology, China, “CNT-TSV Technology and ZnO Nanowire-based Chemical Gas Sensor,” Invited Seminar at BIT, School of Materials Science & Engineering, Nano Micro Technology Center, Beijing China, January 6, 2014.
- Indian Institute of Technology – Kharagpur (IIT), “VLSI integration with MEMS for Sensors and Smartphone Applications,” Invited Speaker at the 2014 ICVSP - International Conference on VLSI and Signal Processing, India, January 11, 2014.
- GRC-India, hosted by Freescale, Intel and Texas Instruments, “High Voltage LDMOS Transistor Fault Modeling and Testing,” January 10, 2014.
- Cisco, Inc., “CNT-TSV Technology and ZnO Nanowire-based Chemical Gas Sensor,” Santa Clara, CA, July 11, 2013.
- Beijing University of Technology, “Design of Nanosensing Platform Based on Zinc Oxide Nanowires,” Beijing, China, May 16, 2013.
- Seoul National University, “Software Development for High Voltage LDMOS Testing Technique,” Seoul Korea, June 26, 2012.
- Korea Test Conference, Tutorial on Mixed-Signal and RF Circuit Test Techniques,” Seoul Korea, June 27, 2012.
- Ulsan University, Korea, “MEMS Circuit Breaker Design and Fabrication,” Ulsan Korea, May 18, 2012
- Korea Ocean and Marine Research Institute, “Synthesis of Zinc Oxide Nanowires for Radiation Detection,” Daejeon Korea, May 17, 2012.
- Seoul National University, “MEMS for Biology,” Seoul Korea, October 28, 2011.
- Seoul National University, “RADPro: Automatic Program Generation Tool for RFIC Load Boards,” Seoul Korea, August 10, 2011.
- Yeoungnam University, “New Test Technique for PC Boards,” Daegu, Korea, September 6, 2011.
- Samsung Electronics, “Tutorial on High Density Package Substrate Testing,” Suwon, Korea, September 7, 2011.
- 12th IEEE Electronics and Packaging Technology Conference (EPTC), “Electrical Test Strategies for High Density Package,” Short Course #5, Singapore, December 8, 2010.

- Alabama A&M University Research Institute (AAMURI), “Synthesis of ZnO Nanowires for Sensor Development,” Huntsville, AL, November 18, 2010.
- Auburn University, “Testing of Interconnects for High Density Substrates”, VLSI Design & Test Seminar, Electrical Engineering, ELEC7950, November 18, 2009.
- Army Center of Excellence for Aviation and Missile Technology (ARMDEC), “Novel IED Sensor Using MgO Nanowires,” Huntsville, Alabama, November 20, 2007.
- Auburn University, “CATGEN: Circuit Analyzer and Test Generator for Mixed-Signal Boards,” VLSI Design & Test Seminar, Electrical Engineering, ELEC7950, November 7, 2007.
- Samsung Techwin Ltd, “Trends of Nanowire Application in Industry,” Seoul Korea, July 2, 2007.
- Hanyang University, “Automatic Program Generation Tool for ATE Load Boards,” Korea, June 27, 2007.
- Alabama Department of Transportation, “Sensors for DOT Applications,” Montgomery, Alabama, June 8, 2007.
- Army Center of Excellence for Aviation and Missile Technology (ARMDEC), “UA Nanotechnology Research Activities and Plans,” Huntsville, Alabama, September 21, 2006.
- Samsung Techwin, “MEMS Breakers for Integrated Shipboard Power Systems,” July 20, 2006.
- Samsung Electronics, “Built-In Self-Test for RF System on Chip” July 20, 2006.
- IEEE Electronics Components & Technology Conference (ECTC) Half-Day Short Course, “Electrical Testing of High Density Package,” May 5, 2006.
- Auburn University, “Built-In Self-Test for Radio Frequency System-On-Chip”, VLSI Design & Test Seminar, Electrical Engineering, ELEC7950, March 1, 2006.
- UA MINT Seminar, “High Voltage MEMS Switch Arrays,” March 31, 2006.
- The University of Alabama, “Bio and Chemical Engineering Graduate Seminar/Design of Neural Probes,” Tuscaloosa, AL, March 24, 2005.
- Power Paragon, Inc. “MEMS Relay Arrays for High Power Distribution,” Anaheim, CA, July 15, 2004.
- Texas Instruments, Inc. “On-Chip RF Devices for 4G Systems,” 2003.
- Samsung Electronics, “Towards High Quality Products through Modeling and Verifications,” Suwon Korea, 2002.
- KRISO Institute, “Wireless Systems with MEMS and Nano Technologies,” Korea, 2001.
- Chonnam National University, “Mixed-Signal Circuit Design for Bluetooth Applications,” Korea, 2001.
- Delco Remy International Inc., “Overview of MEMS Technology and Packaging,” 1999.
- Rockwell-Collins, “MCM Substrate Test Methodology and Probe Routing Algorithm,” 1999.

- Hyundai Electronics, “MCM Substrate Test and Fabrication of Embedded Passives,” Korea, 1997.
- Georgia Institute of Technology, “Novel Low-Cost MCM Substrate Test Technique,” 1996.

PROFESSIONAL SOCIETIES, ACHIEVEMENTS & AWARDS

- Recipient, Best Industry Paper, “Forced-Resonance Test Technique for Multiple Wire bonds in Electronic Packages” IEEE Electronic Packaging Technology Conference 2012, Award received in Singapore on December 12th, 2013.
- Recipient, Prestigious Outstanding Educator Award for “his leadership as an IMAPS Fellow for his contribution as an author and researcher and for his guidance for over 25 graduate students in the area of Microelectronics and Electronics Packaging,” IMAPS Society, September 2012.
- Recipient, Fellow of IMAPS Society for “his contributions to the ongoing technical excellence of IMAPS programs and his continued support of IMAPS student chapter” October 2011.
- Recipient with students, Third Place for Student Chapter Booth, IMAPS Symposium 2011.
- Recipient with students, Third Place for Student Chapter Booth, IMAPS Symposium 2010.
- Recipient with student, Outstanding Paper Award, IMAPS RF Device Workshop 2009.
- Recipient, Meritorious Service Award, IEEE Computer Society, 2009
- Recipient, Certificate of Appreciation Award, IEEE Computer Society, 2007
- Recipient, Certificate of Appreciation Award, IEEE Communications Society, 2007
- Recipient, Certificate of Appreciation Award, IEEE Computer Society, 2006
- Recipient, Meritorious Service Award, IEEE Computer Society, 2006
- Recipient, Best Presentation Award, Andong National University, Korea, 2003
- Recipient, Outstanding Technical Contribution Award, IEEE Phoenix Section, 2003
- Recipient, Outstanding Contribution Award, IEEE Computer Society, 2002
- Recipient, Certificate of Appreciation Award, IEEE MTTS, 2002
- Recipient, Best Poster Award, IEEE RFTAG Conference, 2002
- Recipient, Meritorious Service Award, IEEE Computer Society, 2001
- Recipient, Professor of the Year Award, ASU Corporate Leaders Program, 2001
- Recipient, Certificate of Appreciation Award, IEEE Computer Society, 1999
- Recipient, NSF/IEEE Educational Award, 1999
- Recipient, Best paper of the session award, IEEE Multi-Chip Module Conference, 1998
- Recipient, NSF CAREER Award, teaching and research in Design Automation, 1997
- Recipient, Outstanding Poster Award, NSF/PRC at Georgia Institute of Technology, 1995
- Senior Member, IEEE (Institute of Electrical and Electronics Engineers), 2002 - Present
- Senior Member, IMAPS (International Microelectronics and Packaging Society), 2002 – 2011
- Fellow, IMAPS (International Microelectronics and Packaging Society), 2011 –
- Alabama Student Chapter Advisor, IMAPS, 2008 - 2013

- Member, ACM (Association for Computing Machinery), 1992-2001
- Member, “Who's Who in the South and Southwest of America”, 1995
- Chapter President, KSEA (Korean-American Scientists and Engineers Association), 2001-2006

PROFESSIONAL SOCIETY CONTRIBUTIONS

- Editorial Board Member, Journal of Communications Engineering and Networks, Bowen Publishing, 2013- present
- Editorial board, HSOA Journal of Nanotechnology: Nanomedicine & Nanobiotechnology, 2013-
- Associate Editor, IMAPS Journal of Microelectronics, 2009 – present.
- Associate Editor, IEEE Design and Test of Computers, 2004 – present.
- Associate Editor, IEEE Transactions on Advanced Packaging, CPMT (Components, Packaging and Manufacturing Technology) Society, 2004 – present.
- Associate Editor & Editorial Board Member, Springer: Journal of Electronic Testing and Applications (JETTA), 2005 – present.
- Editorial Board Member, Korea Test Magazine, 2008 - present
- Editor-in-Chief, TTTC Newsletter, IEEE Computer Society, 2001 – 2008.
- Editor-in-Chief, Embedded Newsletter in IEEE Design and Test of Computers, 2005 - 2008.
- Editor-in-Chief, TTTC Newsletter for Journal of Electronic Testing, 2005 – 2008.
- Guest Editor, IEEE Design and Test of Computers, Special Issue on RFIC Design and Testing, Jan/Feb 2008.
- Guest Editor, IEEE Design and Test of Computers, Special Issue on Design and Test of SiP, May/June 2007.
- Guest Editor, IEEE Transactions on Advanced Packaging, CPMT Society, 2004.
- TC Chair, TC-11 of IEEE CPMT Society, 2001 - present.
- Chair, Modeling and Simulation Committee, IEEE ECTC, 2011-2012.
- Member, Board of Governor of IEEE CPMT Society, 2001-present.
- Program Committee Member, IEEE North Atlantic Test Workshop, 1998, 2008-present.
- Program Committee Member, IEEE ECTC, 1998 – present.
- Program Committee Member, IEEE EPTC, 2010 – present.
- Program Committee Member, KGD Packaging & Test Workshop, 1996 – present.
- Program Committee Member, IEEE International Conference on BiCMOS, 2005-2006, 2009-present.
- Program Committee Member, IEEE Southwest Symposium on Mixed-Signal Design, 2003.
- Program Committee Member, IEEE Asian Test Symposium, 2001 – 2002.
- Program Committee Member, IEEE High Density Module Workshop, 1997 – 2000.

- General Co-Chair, Phoenix Section IEEE Workshop, “Devices, Interconnects, and Packaging for Next Generation Computing and Communication Applications,” 2003.
- General Co-Chair, Phoenix Section IEEE Workshop, “Devices and Packaging for Wireless Communications,” 2002.
- IEEE Chapter Chair, Phoenix IEEE Waves and Devices, 2000 – 2003.
- Chair, TTTC Awards Committee, IEEE Computer Society, 2000.
- Vice-Chair, TTTC Awards Committee, IEEE Computer Society, 1998 - 1999.
- Session Chair, IEEE Electronics and Packaging Technology Conference, 2010.
- Session Chair, IEEE International Test Conference, 1997, 2001.
- Session Chair, IEEE Electronic Components and Technology Conference, 2000-2010.
- Session Chair, IEEE International Conference on BiCMOS (BCTM), 2005, 2006, 2012.
- Session Chair, KGD Packaging and Test Workshop, 2000-2007.
- Session Chair, IEEE International Symposium on Circuits and Systems, 2002.

CAMPUS CONTRIBUTIONS

- CCNY, Faculty Senate, 2013 – 2016.
- CCNY Computer Engineering Faculty Search Committee, 2013 – 2014.
- CCNY Electrical Engineering, tenure committee member for Prof. Seo, 2013.
- Nominated for panel chair for the PSC-CUNY Research Awards, October 2013.
- The University of Alabama, Member, Faculty Senate, 2009 – 2012.
- The University of Alabama, Member, Academic Committee, 2009 – 2012.
- The University of Alabama, Member, Committee on University Committees, 2006-2009.
- The University of Alabama, Graduate Council, 2006-2007.
- Member, ECE Search Committee, 2010.
- Chair, ECE Assistant/Associate Professor Search Committee, 2007.
- Chair, ECE Assistant/Associate Professor Search Committee, 2006.
- Member, Graduate Committee, ECE Department, 2006 - present
- Arizona State University Academic Senate, 2000 - 2002.
- ASU Electrical Engineering Undergraduate Academic Committee, 2000 - 2004.
- ASU Electrical Engineering Faculty search committee, 2001-2003.

CCNY Ph.D. Committee Contributions

- Second Exam for Emir Ganic (Prof. Uyar’s student), September 2013
- Ph.D. Defense for Yanchen Liu, Resource Allocation in Mobile Cloud Computing, (Prof. Myung Lee’s student), May 8, 2015

OTHER CONTRIBUTIONS

- Panel Reviewer, NSF Panels in various areas in CAREER, CISE, BISH, SBIR, MRI, 1998 - 2013.
- Finance Co-Chair, IEEE International Microwave Symposium, 2001.
- Local Arrangements Chair, the 43rd IEEE Midwest Symposium on Circuits and Systems, East Lansing, Michigan, 2000.
- Reviewer, IEEE Design and Test of Computers, 1995-2009.
- Reviewer, IEEE Transaction on Advanced Packaging, 1995-2013.
- Reviewer, IEEE Transaction on Computer-Aided Design, 1996-2012.
- Reviewer, Journal of Electronic Testing: Theory and Applications, 1997-2014.
- Reviewer, IEEE Transaction on VLSI Systems, 2001-2009.
- Reviewer, IEEE Transaction on Computer Aided Design, 2003-2013.
- Reviewer, IMAPS Journal of Microelectronics, 2006 - 2014

RESEARCH INTERESTS

- Nanotechnology
- Electronic Package Modeling and Testing
- 3D IC Design & Testing
- Sensor Electronics
- MEMS sensors, biophotonics
- Sensors for Biomedical Applications
- Mixed-Signal and Packaging
- Chemical gas sensors
- RF IC Design and Testing
- VLSI Testing and Algorithms
- Robotics, Unmanned Systems

TEACHING EXPERIENCE

- Mixed-Signal Circuits (New Graduate), 2005-2012
- Micro-systems Packaging (New Graduate), 2000-2009
- Digital Integrated Circuits and Systems (Undergraduate/Graduate), 2000-2005
- Electronic Circuits (Undergraduate), 2001-2005
- Advanced VLSI Design (Graduate), 1998-2000
- Digital Logic (Undergraduate), 1998-2012
- Introduction to VLSI Design (Undergraduate/Graduate), 1996-2000, 2005 - present
- VLSI Systems (Graduate), 1997-2000
- Circuit Theory (Undergraduate), 1996-2002

AWARDED U.S. PATENTS

<u>Patent/App. No.</u>	<u>Date</u>	<u>Description</u>
------------------------	-------------	--------------------

8,742,777 B2	June 3, 2014	Method and System for Testing an Electric Circuit (awarded).
2012/0306096 A1	12/06/2012	Method and Model of Carbon Nanotube based Through Silicon Vias (tsv) for RF Applications
12980638	12/29/2010	Method and System for Testing an Electric Circuit (Utility)
60/982,030	10/23/2007	Low Cost Automatic Mixed-Signal Board Test Using IEEE 1149.4
7,129,719	10/31/2006	Apparatus for Detecting Defect in Circuit Pattern and Defect Detecting system Having the Same (awarded)
6,111,414	08/29/2000	System, Circuit, and Method for Testing an Interconnect in a Multi-Chip Substrate (awarded)
9138-0063	08/19/2002	Low-Power RF Receiver on Single SOI Substrate (rejected)
M3-034	07/12/2003	Electrode for Implant In Live Tissue With Flexible Region To Accommodate Micro Movement (rejected)

GRADUATE STUDENTS & POST-DOCS SUPERVISED

Graduated Ph.D. Students

1. Dr. Anurag Gupta, "Synthesis and Surface Chemistry of Zinc Oxide Nanowires for Chemical Sensor Applications," January 2014.
2. Dr. Sureshwar Kannan, "Automatic Test Program Generation and Novel Test Techniques for Testing Radio Frequency and High-Voltage Device Interface Boards," May 2013.
3. Dr. Haixin Zhu, "Dry-Etch Benzocyclobutene Based Neural-Electronic Interface," (co-advised with Dr. J. He in Bioengineering at Arizona State University), June, 2006.
4. Dr. Rahim Kasim, "Advanced MEMS for Medium and High Power Integrated Distribution Systems," September, 2005.
5. Dr. Jee-Youl Ryu, "Built-In Self-Test Circuit for Radio Frequency System-On-Chip", December, 2004.
6. Dr. Jong Chan Oh, "CMOS Implementation of the Security Encryption Algorithm," August 2001.

Graduated MS Students with Thesis

1. Naga Sai Evana, "Design and Self-Calibration Scheme for RF Circuits Using MEMS in 3D Packages," May 12, 2011
2. Sureshwar Kannan, "Development of High-Density RF Board Diagnostic Program," May 6, 2010.
3. Vinitha Krishnamurthy, "Automatic Program Generation for Diagnosis of Analog Integrated Circuits," December 2, 2008.

4. Srividya Sundar, "Circuit Analyzer and Test Generation for Mixed-Signal Boards," March 13, 2008.
5. Venkataramanan Kalyanaraman, "Automatic Test Program Generation Tool for Mixed-Signal Device Interface Boards," September 28, 2005.
6. Srikanth Surapaneni, "Modeling of High Speed Interconnects for Mixed Signal Circuits," September 28, 2005.
7. Wenjun Yun, "The Design and Fabrication of Advanced Benzocyclobutene Based Octopus-Shaped Flexible electrode," June 23, 2005.
8. Rajeet Chatterjee, "Checkpointing Mechanism for Efficient Hardware-Software Co-Simulation," May 17, 2005.
9. Jonvyn Henry Wongso, "Autonomous Frequency and Gain Tuning Methodology for Polyphase Analog Filter", March, 2005.
10. Tinku Alex , "Design of a One Volt Low Noise Amplifier for 802.11a Application", August, 2004.
11. Dharma Kadam, "Switchable Dual Mode Voltage Controlled Oscillator", August, 2004.
12. Narendra V. Lakamraju, "CMOS Compatible RF MEMS Switch", August, 2004.
13. Kranthi Kiran Pinjala, "Test Methods for Analog-Integrated Circuits" August 2003
14. Rahim Kasim, "Noise Based Testing for Deep Sub Micron CMOS", August, 2003.
15. Sushant Dilip Salgar, "Modeling of Acoustic Resonators and Filters for Wireless Applications" June 24, 2003.
16. Shilpa Perla, "Design and Testing of Digital Phase Locked Loop for High Speed Microprocessor Applications" June, 2003.
17. Guntae Kim, "Design and Fabrication of Bulk Acoustic Wave Resonator for Wireless Applications", May, 2002.
18. Pinshan Jiang, "Implementation of Probe Scheduling Algorithm for Multi-Chip Module Substrates," May 2000.
19. Yong Qin, "Design of Accelerometers using MEMS Techniques," May, 2000.
20. Anatoly Germatsky, "Bias Current Monitoring Technique for Catastrophic Fault Detection and Analysis of CMOS Op Amp," May 1998.
21. Rongchang Yan, "Probe Routing Algorithms for Package Substrate Verification," May 1998.

Current Graduate Students

- Sharmistha Kundu, Ph.D. student on Nanotechnology and Nanosensors, 2021-present
- Saikat Mondal, Ph.D. student, area of research: Embedded Power Driver and Biosensors.
- Kaushal Kannan, Ph.D. student, areas of research: High voltage LDMOS transistor SOC testing and characterization, estimated graduation date: May 2017.

Post-Docs and Visiting Faculty

- Thambiraj Selvarathinam, Post-Doc Fellow, May 2023-May 2024
- Bassha Aleem, Post-Doc Fellow, April 2021-March 2023
- Prof. Falah Mohammed, AN-Najah National University, Full-Bright Scholar, 2009-2010.
- Prof. Byong Ahn, Yeongnam University in South Korea, worked on RF load board test algorithms, 2009-2010.
- Dr. Haixin (Michael) Zhu, Post-doc, worked on Nano Polymer Chemical Sensor Development, 2006 - 2007
- Dr. Yon-Kon Lim, Principal Research Engineer from KRISO in South Korea, worked on Embedded Sensor Technology for Underwater Applications, 2005 – 2006.
- Dr. Kee K. Lee, Post-doc, worked on Bio MEMS and Polymer-based Neural Electrodes, 2001 - 2004.
- Dr. Si Hyung Lee, Post-Doc, worked on flexible BCB-based MEMS probe for wafer level testing, 2003-2004.
- Prof. Gyu-Je Sung, Hankyong National University in South Korea, worked on RF Filter and Phase Shifters, 2003-2004.
- Prof. Seok Noh, Andong National University in South Korea, worked on Wireless Networks, 2001-2003.
- Prof. Hak-Lim Ko, Hoseo University in South Korea, worked on Wireless System Design, 2003-2004.
- Prof. Kwang S. Lee, Jinju National University from South Korea worked, on RF MEMS Devices, 2003-2004.
- Prof. Jeong-Soo Park, Chonnam National University in South Korea, worked on Bayesian Optimization Technique, 2002-2003.
- Prof. Se-Hoon Park, Andong University from South Korea, worked on CMOS Noise Analysis, 2002-2003.
- Prof. Dae-Hyun Han, Dong-Eui University from South Korea, worked on RF Inductors, 2001-2003.
- Prof. Se-Hyun Park, Andong National University in South Korea, worked on FPGA Embedded System Design, 1999-2000.

Recent Undergraduate Research Students

- Manjit Singh, CCNY Computer Engineering for Machine Learning, May 2023-present
- Gazi Shahi, CCNY Computer Engineering for Machine Learning, July 2023-December 2023
- Daniel Ziegel, CCNY EE student, LDMOS device modeling, 2014
- Jitin Philip, CCNY EE student, LDMOS characterizations, 2014

- Elvin Gonzalez, CCNY EE student, LDMOS measurements, 2014
- Irina Georgescu, CCNY EE student, RF measurements, 2014
- Guan Cheng Li, CCNY EE student, VLSI Circuit Design, 2014
- Michell Spryn, Emerging Scholar in Electrical Engineering, “Wireless Communication for Sensors” 2012 -
- Sidney Collins, Computer Science, “Web program development,” 2005-2009.
- Justin Gay, Electrical Engineering, “Sensor Electronics,” 2007-2008.
- Cory Johnson, Electrical Engineering, “Nanowires and nanotubes,” 2007-2008.
- Nabil Dawahre, Computer Engineering, “Nanowires and nanotubes,” 2007-2008.
- Kyle Rippey, Computer Science, “Physics Based Nanowire Simulation,” 2007-2008.