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Associate Professor
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Education

Massachusetts Institute of Technology (MIT), Cambridge, Massachusetts

Doctor of Philosophy in Electrical Engineering and Computer Science, June 1997.

PhD dissertation title: *High-Precision Planar Magnetic Levitation*.

Advisor: Prof. David L. Trumper.

Developed a novel high-precision planar magnetic levitation technology. After theoretical groundwork, designed and implemented for the first time a maglev stage for planar nanopositioning in semiconductor manufacturing. Dissertation centered on electromagnetic analysis, design, construction, and real-time multivariable digital control for this precision mechatronic system. GPA: 5.00/5.

Seoul National University (SNU), Seoul, Korea

Master of Science in Control Engineering, February 1991.

MS thesis title: *Recursive Parameter Identification for Partially Unknown State Space Systems*.

Advisor: Prof. Jang Gyu Lee.

Developed a parameter-identification methodology for dynamic systems represented in state space. GPA: 4.03/4.3.

Bachelor of Science in Control Engineering, Summa Cum Laude, February 1989.

Advisor: Prof. Jang Gyu Lee.

Devised an 8086-based parallel computer that resulted in the Grand Prize from the Student Paper Contest held by the Korean Institute of Electrical Engineers. GPA: 3.93/4.3.

Experience

Department of Mechanical Engineering, Texas A&M University (TAMU), College Station, Texas

Associate Professor, September 2006–current.

Associate Professor & Holder of the Gulf Oil/Thomas A. Dietz Career Development Professorship II, May 2007–August 2010.

Assistant Professor, September 2000–August 2006.

SatCon Technology Corporation, Cambridge, Massachusetts

Staff Engineer, July 1997–July 2000.

Laboratory for Manufacturing and Productivity, MIT, Cambridge, Massachusetts

Research Assistant, September 1993–June 1997.

Department of Electrical Engineering and Computer Science, MIT, Cambridge, Massachusetts

Teaching Assistant, Spring 1996.

Automation and Systems Research Institute, SNU, Seoul, Korea

Research Assistant, March 1989–February 1991.

Honors and Fellowship

1. Best Senior Editor Award “in recognition of your dedicated and best services for your exceptional contributions to the advancement of the *International Journal of Control, Automation, and Systems*,” November 2023.
2. Certificate of Appreciation for serving as an Editor for the *International Journal of Control, Automation, and Systems*,” December 2021.
3. Academic Activity Award “in recognition of dedicated and outstanding services for your exceptional contributions to the advancement of the *International Journal of Control, Automation, and Systems*,” December 2019 and December 2018.
4. Academic Activity Award “in recognition of outstanding services and dedicated work as an Editorial Board Member to the *International Journal of Control, Automation, and Systems*,” December 2013.
5. Outstanding Graduate Teaching Award by TAMU Department of Mechanical Engineering (MEEN) in “recognition and reward of graduate teaching excellence,” March 2013.
6. 2010 Best Student Paper Award Finalist in the 2010 IEEE/ASME International Conference on Advanced Intelligent Mechatronics (AIM’ 2010), July 2010.
7. Elected to Fellow of the American Society of Mechanical Engineers (ASME), January 2010.
8. Best Presentation Award from American Control Conference, June 2009, June 2007, and June 2003.
9. Appointed to be the inaugural Holder of the Gulf Oil/Thomas A. Dietz Career Development Professorship II, May 2007.
10. BP Teaching Excellence Award by TAMU College of Engineering (COE) for “long-term teaching excellence, dedication to students, and commitment to the quality of engineering education at Texas A&M University,” October 2006.
11. Select Young Faculty Award by TAMU COE and the Texas Engineering Experiment Station (TEES) for “outstanding research performance and commitment to excellence in engineering research,” October 2005.
12. Professional Engineering Publishing Award for “the best paper published in the 2004 volume of *Journal of Engineering Manufacture*,” October 2005.
13. Inducted as Honorary Faculty Member of Pi Tau Sigma, Mechanical Engineering Honor Society, for “excellence in teaching and willingness to help students,” April 2004.
14. Select Young Faculty Award by TAMU COE and TEES, September 2003.
15. Elevated to Senior Member of the Institute of Electrical and Electronics Engineers (IEEE), May 2003.

16. Space Act Award from the National Aeronautics and Space Administration (NASA) in “recognition for inventions and other scientific and technical contributions that have helped NASA to achieve its aeronautical and space goals,” July 2002.
17. Semifinalist from the Advanced Technology Program’s 2000 Competition of the National Institute of Standards and Technology (NIST), July 2000.
18. Gold Prize from the Third Humantech Thesis Prize from Samsung Electronics, Inc., March 1997.
19. Korean Education Ministry Scholarship, 1992–1995.
20. Excellence and Leadership Award from the Alumni Association of SNU for “contributions to SNU with outstanding academic achievements and leadership in extracurricular activities,” February 1989.
21. Graduated from SNU with Summa Cum Laude, February 1989.
22. Grand Prize from the Student Paper Contest held by the Korean Institute of Electrical Engineers (KIEE), November 1988.
23. Seoul National University Fellowship, 1988–1990.

Research Interests

- Precision mechatronics—synthesis of control and instrumentation, actuators and power electronics, sensors and signal processing, and precision system design.
- Nanoscale engineering and technology with emphasis on nanopositioning and control.
- Network-based control and cyber-physical systems.
- Development of novel high-performance, high-efficiency actuators and sensors with smart materials for biomimetic robots.
- Design and implementation of real-time control systems and signal processing algorithms for semiconductor manufacturing and aerospace applications.
- Magnetic levitation system design for precision positioning and energy-storage applications.

Refereed Journal Publications

Publications with students designate the students with an asterisk (*).

1. Wei*, Y., Nguyen*, V. H., and Kim, W.-J., “A 3-D Printed Halbach-Cylinder Motor with Self-Position Sensing for Precision Motions,” *IEEE/ASME Transactions on Mechatronics*, vol. 27, no. 3, pp. 1489–1497, June 2022.
2. Cortes*, I. and Kim, W.-J., “Automated Alignment with Respect to a Moving Inductive Wireless Charger,” *IEEE Transactions on Transportation Electrification*, vol. 8, no. 1, pp. 605–614, March 2022.
3. Nguyen*, V. H. and Kim, W.-J., “Error Analysis to Minimize Cross-Axis Dynamic Coupling in 6-DOF Motion Systems with a Single Moving Part,” *Precision Engineering*, vol. 63, pp. 49–61, May 2020.

4. Chen*, J. and Kim, W.-J., "A Human-Following Mobile Robot Providing Natural and Universal Interfaces for Control with Wireless Electronic Devices," *IEEE/ASME Transactions on Mechatronics*, vol. 24, no. 5, pp. 2377–2385, October 2019.
5. Cortes*, I. and Kim, W.-J., "Lateral Positioning Error Reduction Using Misalignment-Sensing Coils in Inductive Power Transfer Systems," *IEEE/ASME Transactions on Mechatronics*, vol. 23, no. 2, pp. 875–882, April 2018.
6. Nguyen*, V. H. and Kim, W.-J., "Two-Phase Lorentz Coils and Linear Halbach Array for Multiaxis Precision-Positioning Stages with Magnetic Levitation," *IEEE/ASME Transactions on Mechatronics*, vol. 22, no. 6, pp. 2662–2672, December 2017.
7. Kwon*, Y.-S. and Kim, W.-J., "Electromagnetic Analysis and Steady-State Performance of Double-Sided Flat Linear Motor Using Soft Magnetic Composite," *IEEE Transactions on Industrial Electronics*, vol. 64, no. 3, pp. 2178–2187, March 2017.
8. Chang*, Y.-C. and Kim, W.-J., "An Electrical Model with Equivalent Elements in a Time-Variant Environment for an Ionic-Polymer-Metal-Composite System," *International Journal of Control, Automation, and Systems*, vol. 15, no. 1, pp. 45–53, February 2017.
9. Kwon*, Y.-S. and Kim, W.-J., "Steady-State Modeling and Analysis of a Double-Sided Interior Permanent-Magnet Flat Linear Brushless Motor with Slot-Phase Shift and Alternate Teeth Windings," *IEEE Transactions on Magnetics*, vol. 52, no. 11, November 2016, Art. no. 8205611 (11 pages).
10. Yu*, H. and Kim, W.-J., "Design of Precision Positioner with Hall-Effect Sensors and Multivariable Control Methodology," *International Journal of Control, Automation, and Systems*, vol. 14, no. 3, pp. 787–795, June 2016.
11. Kwon*, Y.-S. and Kim, W.-J., "Detent-Force Minimization of Double-Sided Interior Permanent-Magnet Flat Linear Brushless Motor," *IEEE Transactions on Magnetics*, vol. 52, no. 4, April 2016, Art. no. 8201609 (9 pages).
12. Kwon*, Y.-S. and Kim, W.-J., "Development of a New High-Resolution Angle-Sensing Mechanism Using an RGB Sensor," *IEEE/ASME Transactions on Mechatronics*, vol. 19, no. 5, pp. 1707–1715, October 2014.
13. Dong*, J. and Kim, W.-J., "Bandwidth Allocation and Scheduling of Networked Control Systems with Exponential and Quadratic Approximation," *Control Engineering Practice*, vol. 26, pp. 72–81, May 2014.
14. Dong*, J. and Kim, W.-J., "Experimental Analysis and Implementation of a Multiscale Wired/Wireless Networked Control System," *International Journal of Control, Automation, and Systems*, vol. 12, no.1, pp. 102–110, February 2014.
15. Silva-Rivas*, J. C. and Kim, W.-J., "Multivariable Control and Optimization of a Compact 6-Degree-of-Freedom Precision Positioner with Hybrid H_2/H_∞ and Digital Filtering," *IEEE Transactions on Control Systems Technology*, vol. 21, no. 5, pp. 1641–1651, September 2013.
16. Nguyen*, V. H. and Kim, W.-J., "Design and Control of a Compact Light-Weight Planar Positioner Moving over a Concentrated-Field Magnet Matrix," *IEEE/ASME Transactions on Mechatronics*, vol. 18, no. 3, pp. 1090–1099, June 2013.
17. Chang*, Y.-C. and Kim, W.-J., "Aquatic Ionic-Polymer-Metal-Composite Insectile Robot with Multi-

- DOF Legs,” *IEEE/ASME Transactions on Mechatronics*, vol. 18, no. 2, pp. 547–555, April 2013.
18. Bibinagar*, N. and Kim, W.-J., “Switched Ethernet-Based Real-Time Networked Control Systems with Multiple Client-Server Architecture,” *IEEE/ASME Transactions on Mechatronics*, vol. 18, no. 1, pp. 104–112, February 2013.
 19. Dong*, J. and Kim, W.-J., “Markov-Chain-Based Output Feedback Control for Stabilization of Networked Control Systems with Random Time Delays and Packet Losses,” *International Journal of Control, Automation, and Systems*, vol. 10, no. 5, pp. 1013–1022, October 2012.
 20. Nguyen*, V. H. and Kim, W.-J., “Novel Electromagnetic Design for a Precision Planar Positioner Moving over a Superimposed Concentrated-Field Magnet Matrix,” *IEEE Transactions on Energy Conversion*, vol. 27, no. 1, pp. 52–62, March 2012.
 21. Chen, I.-M., Benbouzid, M. E. H., Ding, H., Kim, W.-J., and Menq, C.-H., “Guest Editorial: Introduction to the Focused Section on Electromagnetic Devices for Precision Engineering,” *IEEE/ASME Transactions on Mechatronics*, vol. 16, no. 3, pp. 401–410, June 2011.
 22. Sadighi*, A. and Kim, W.-J., “Adaptive-Neuro-Fuzzy-Based Sensorless Control of a Smart-Material Actuator,” *IEEE/ASME Transactions on Mechatronics*, vol. 16, no. 2, pp. 371–379, April 2011.
 23. Sadighi*, A. and Kim, W.-J., “Sensorless Control of a Novel Linear Magnetostrictive Motor,” *IEEE Transactions on Industry Applications*, vol. 47, no. 2, pp. 736–743, March/April 2011.
 24. Shakir*, H. and Kim, W.-J., “Time-Domain Fixed-Structure Closed-Loop Model Identification of an Unstable Multivariable Maglev Nanopositioning System,” *International Journal of Control, Automation, and Systems*, vol. 9, no. 1, pp. 32–41, February 2011.
 25. Yu*, H. and Kim, W.-J., “A Compact Hall-Effect-Sensing 6-DOF Precision Positioner,” *IEEE/ASME Transactions on Mechatronics*, vol. 15, no. 6, pp. 982–985, December 2010.
 26. Lee*, S. and Kim, W.-J., “Active Suspension Control with Direct-Drive Tubular Linear Brushless Permanent-Magnet Motor,” *IEEE Transactions on Control Systems Technology*, vol. 18, no. 4, pp. 859–870, July 2010.
 27. Kim, W.-J. and Sadighi*, A., “A Novel Low-Power Linear Magnetostrictive Actuator with Local Three-Phase Excitation,” *IEEE/ASME Transactions on Mechatronics*, vol. 15, no. 2, pp. 299–307, April 2010.
 28. Yu*, H. and Kim, W.-J., “Controller Design and Implementation of Six-Degree-of-Freedom Magnetically Levitated Positioning System with High Precision,” *Journal of Systems and Control Engineering*, vol. 222, no. 18, pp. 745–756, December 2008.
 29. Ji*, K. and Kim, W.-J., “Optimal Bandwidth Allocation and QoS-Adaptive Control Co-Design for Networked Control Systems,” *International Journal of Control, Automation, and Systems*, vol. 6, no. 4, pp. 596–606, August 2008.
 30. Kim, W.-J. and Verma*, S. “Multiaxis Maglev Positioner with Nanometer Resolution over Extended Travel Range,” *ASME Journal of Dynamic Systems, Measurement and Control*, vol. 129, no. 6, pp. 777–785, November 2007.
 31. Ji*, K. and Kim, W.-J., “Stochastic Optimal Control and Network Co-Design for Networked Control Systems,” *International Journal of Control, Automation, and Systems*, vol. 5, no. 5, pp. 515–525, October 2007.

32. Kim, W.-J., Verma*, S., and Shakir*, H. "Design and Precision Construction of Novel Magnetic-Levitation-Based Multi-Axis Nanoscale Positioning Systems," *Precision Engineering*, vol. 31, no. 4, pp. 337–350, October 2007.
33. Shakir*, H. and Kim, W.-J., "Multiscale Control for Nanoprecision Positioning Systems with Large Throughput," *IEEE Transactions on Control Systems Technology*, vol. 15, no. 5, pp. 945–951, September 2007.
34. Ji*, K. and Kim, W.-J., "Robust Control for Networked Control Systems with Admissible Parameter Uncertainties," *International Journal of Control, Automation, and Systems*, vol. 5, no. 4, pp. 372–378, August 2007.
35. Ji*, K. and Kim, W.-J., "Stabilization of Networked Control System with Time Delays and Data-Packet Losses," *European Journal of Control*, vol. 13, no. 4, pp. 343–350, July-August 2007.
36. Ji*, K., Kim, W.-J., and Srivastava*, A., "Internet-Based Real-Time Control Architectures with Time-Delay/Packet-Loss Compensation," *Asian Journal of Control*, vol. 9, no. 1, pp. 45–49, March 2007.
37. Hu*, T. and Kim, W.-J., "Extended-Range Six DOF High-Precision Positioner for Wafer Processing," *IEEE/ASME Transactions on Mechatronics*, vol. 11, no. 6, pp. 682–689, December 2006.
38. Kawato*, Y. and Kim, W.-J., "Multi-Degree-of-Freedom Precision Positioning Sensing and Motion Control Using Two-Axis Hall-Effect Sensors," *ASME Journal of Dynamic Systems, Measurement and Control*, vol. 128, no. 4, pp. 980–988, December 2006.
39. Yun*, K. and Kim, W.-J., "System Identification and Microposition Control of Ionic Polymer Metal Composite for Three-Finger-Gripper Manipulation," *Journal of Systems and Control Engineering*, vol. 220, no. 7, pp. 539–551, November 2006.
40. Shakir*, H. and Kim, W.-J., "Nanoscale Path Planning and Motion Control with Maglev Positioners," *IEEE/ASME Transactions on Mechatronics*, vol. 11, no. 5, pp. 625–633, October 2006.
41. Kim, W.-J., Ji*, K., and Ambike*, A., "Networked Real-Time Control Strategy Dealing with Stochastic Time Delays and Packet Losses," *ASME Journal of Dynamic Systems, Measurement and Control*, vol. 128, no. 3, pp. 681–685, September 2006.
42. Verma*, S., Shakir*, H., and Kim, W.-J., "Novel Electromagnetic Actuation Scheme for Multiaxis Nanopositioning," *IEEE Transactions on Magnetics*, vol. 42, no. 8, pp. 2052–2062, August 2006.
43. Yun*, K. and Kim, W.-J., "Microscale Position Control of an Electroactive Polymer Using an Anti-Windup Scheme," *Smart Materials and Structures*, vol. 15, no. 4, pp. 924–930, August 2006.
44. Kim, W.-J., Ji*, K., and Ambike*, A., "Real-Time Operating Environment for Networked Control Systems," *IEEE Transactions on Automation Science and Engineering*, vol. 3, no. 3, pp. 287–296, July 2006.
45. Hu*, T. and Kim, W.-J., "Modeling and Multivariable Control of a Novel Multi-Dimensional Levitated Stage with High Precision," *International Journal of Control, Automation, and Systems*, vol. 4, no. 1, pp. 1–9, February 2006.
46. Kim, W.-J., Ji*, K., and Srivastava*, A., "Network-Based Control with Real-Time Prediction of Delayed/Lost Sensor Data," *IEEE Transactions on Control Systems Technology*, vol. 14, no. 1, pp. 182–185, January 2006.

47. Joshi*, A. A. and Kim, W.-J., "Modeling and Multivariable Control Design Methodologies for Hexapod-Based Satellite Vibration Isolation," *ASME Journal of Dynamic Systems, Measurement and Control*, vol. 127, no. 4, pp. 700–704, December 2005.
48. Ji*, K. and Kim, W.-J., "Real-Time Control of Networked Control Systems via Ethernet," *International Journal of Control, Automation, and Systems*, vol. 3, no. 4, pp. 591–600, December 2005.
49. Verma*, S., Kim, W.-J., and Shakir*, H. "Multi-Axis Maglev Nanopositioner for Precision Manufacturing and Manipulation Applications," *IEEE Transactions on Industry Applications*, vol. 41, no. 5, pp. 1159–1167, September/October 2005.
50. Gu*, J., Kim, W.-J., and Verma*, S., "Nanoscale Motion Control with a Compact Minimum-Actuator Magnetic Levitator," *ASME Journal of Dynamic Systems, Measurement and Control*, vol. 127, no. 3, pp. 433–442, September 2005.
51. Bhat*, N. D. and Kim, W.-J., "Precision Force and Position Control of Ionic Polymer Metal Composite," *Journal of Systems and Control Engineering*, vol. 218, no. 6, pp. 421–432, October 2004.
52. Joshi*, A. A. and Kim, W.-J., "System Identification and Multivariable Control Design for a Satellite UltraQuiet Isolation Technology Experiment (SUITE)," *European Journal of Control*, vol. 10, no. 2, pp. 174–186, September 2004.
53. Kim, W.-J. and Murphy*, B. C., "Development of a Novel Direct-Drive Tubular Linear Brushless Permanent-Magnet Motor," *International Journal of Control, Automation, and Systems*, vol. 2, no. 3, pp. 279–288, September 2004.
54. Verma*, S., Kim, W.-J., and Gu*, J., "Six-Axis Nanopositioning Device with Precision Magnetic Levitation Technology," *IEEE/ASME Transactions on Mechatronics*, vol. 9, no. 2, pp. 384–391, June 2004.
55. Kim, W.-J., Bhat*, N. D., and Hu*, T., "Integrated Multidimensional Positioner for Precision Manufacturing," *Journal of Engineering Manufacture*, vol. 218, no. 4, pp. 431–442, April 2004. Received Professional Engineering Publishing Award for the best paper published in the 2004 volume.
56. Kim, W.-J., "Nanoscale Dynamics, Stochastic Modeling, and Multivariable Control of Planar Magnetic Levitator," *International Journal of Control, Automation, and Systems*, vol. 1, no. 1, pp. 1–10, March 2003.
57. Kim, W.-J., Goldie, J. H., Gerver, M. J., Kiley, J., and Swenbeck, J. R., "Extended-Range Linear Magnetostrictive Motor with Double-Sided Three-Phase Stators," *IEEE Transactions on Industry Applications*, vol. 38, no. 3, pp. 651–659, May/June 2002.
58. Kim, W.-J., Trumper, D. L., and Lang, J. H., "Modeling and Vector Control of Planar Magnetic Levitator," *IEEE Transactions on Industry Applications*, vol. 34, no. 6, pp. 1254–1262, November/December 1998.
59. Kim, W.-J. and Trumper, D. L., "High-Precision Magnetic Levitation Stage for Photolithography," *Precision Engineering*, vol. 22, no. 2, pp. 66–77, April 1998.
60. Kim, W.-J., Trumper, D. L., and Bryan, J. B., "Linear-Motor-Levitated Stage for Photolithography," *CIRP Annals - Manufacturing Technology*, vol. 46, no. 1, pp. 447–450, August 1997.

61. Trumper, D. L., Kim, W.-J., and Williams, M. E., "Design and Analysis Framework for Permanent-Magnet Machines," *IEEE Transactions on Industry Applications*, vol. 32, no. 2, pp. 371–379, March/April 1996.
62. Lee, J. G. and Kim, W.-J., "Doubly Competitive Neural Network for Solving Traveling Salesman Problem," *Journal of the Korean Institute of Electrical Engineers*, vol. 3, no. 2, pp. 123–127, September 1990.
63. Kim, W.-J., "Realization of a Parallel Computer with Shared Memory (in Korean)," *Proceedings of the Korean Institute of Electrical Engineers*, vol. 38, no. 1, pp. 31–38, January 1989.

Refereed Conference Presentations

1. Nguyen*, V. H. and Kim, W.-J., "Cross-Axis Dynamic-Coupling Analysis for 6-DOF Magnetically-Levitated Stage Design," *Proceedings of ASPE 34th Annual Meeting*, pp. 100–105, October 2019.
2. Algethami*, A. A. B. and Kim, W.-J., "Design and Control of Power-Electronic Interface for Regenerative Suspension System," *Proceedings of the 12th ASME Dynamic Systems and Control Conference*, Paper No. 9081, October 2019.
3. Cortes*, I. and Kim, W.-J., "Autonomous Positioning of a Mobile Robot for Wireless Charging Using Computer Vision and Misalignment-Sensing Coils," *Proceedings of 2018 American Control Conference*, pp. 4324–4329, July 2018.
4. Cortes*, I. and Kim, W.-J., "Using Sensing Coils to Detect and Correct Lateral Misalignments in an Inductive Power-Transfer Wireless Charging System," *Proceedings of the 10th ASME Dynamic Systems and Control Conference*, Paper No. 5060, October 2017.
5. Algethami*, A. A. B. and Kim, W.-J., "Energy Harvesting and Damping Capability of Quarter-Car Test Bed," *Proceedings of the 9th ASME Dynamic Systems and Control Conference*, Paper No. 9748, October 2016.
6. Chen*, J. and Kim, W.-J., "Development of a Mobile Robot Providing a Natural Way to Interact with Electronic Devices," *Proceedings of the 9th ASME Dynamic Systems and Control Conference*, Paper No. 9751, October 2016.
7. Nguyen*, V. H. and Kim, W.-J., "Parameter Identification for Nanopositioning of a 6-Axis Maglev Stage with Moving Lorentz Coils," *Proceedings of 2016 IEEE International Conference on Advanced Intelligent Mechatronics (AIM) Conference*, pp. 657–662, July 2016.
8. Kim*, K. and Kim, W.-J., "Performance-Index Functions in Networked Control Systems with Disturbance and Noise," *Proceedings of 2015 ASME International Mechanical Engineering Congress and Exposition*, Paper No. 52886, November 2015.
9. Chang*, Y.-C. and Kim, W.-J., "A Linear Time-Variant (LTV) Ionic-Polymer-Metal-Composite (IPMC) Electrical Model with Effects of Capacitors and Resistors," *Proceedings of the 8th ASME Dynamic Systems and Control Conference*, Paper No. 9648, October 2015.
10. Kwon*, Y.-S. and Kim, W.-J., "A Low-Cost Rotary Optical Potentiometer Mechanism Based on Optoelectronics Technique," *Proceedings of the 7th ASME Dynamic Systems and Control Conference*, Paper No. 5947, October 2014.
11. Nguyen*, V. H. and Kim, W.-J., "A Two-Phase Framework for Linear Permanent-Magnet Machines

and Multi-Axis Stages with Magnetic Levitation,” *Proceedings of the 7th ASME Dynamic Systems and Control Conference*, Paper No. 5936, October 2014.

12. Kwon*, Y.-S. and Kim, W.-J., “A New Rotary Position-Control System with Color Sensing,” *Proceedings of the 6th ASME Dynamic Systems and Control Conference*, Paper No. 3822, October 2013.
13. Chang*, Y.-C. and Kim, W.-J., “An Ionic-Polymer-Metal-Composite Electrical Model with a Linear Time-Variant Method,” *Proceedings of the 6th ASME Dynamic Systems and Control Conference*, Paper No. 3803, October 2013.
14. Dong*, J. and Kim, W.-J., “Bandwidth Allocation of Networked Control Systems with Exponential Approximation,” *Proceedings of the 6th ASME Dynamic Systems and Control Conference*, Paper No. 3778, October 2013.
15. Chang*, Y.-C. and Kim, W.-J., “Design and Implementation of an Ionic-Polymer-Metal-Composite Aquatic Biomimetic Robot,” *Proceedings of the 4th ASME Dynamic Systems and Control Conference*, Paper No. 6023, November 2011.
16. Nguyen*, V. H. and Kim, W.-J., “Design and Controls of a Compact Light-Weight Planar Positioner Moving over a Concentrated-Field Magnet Matrix,” *Proceedings of the 4th ASME Dynamic Systems and Control Conference*, Paper No. 5962, November 2011.
17. Sadighi*, A. and Kim, W.-J., “Intelligent Sensorless Control of a Smart-Material Actuator,” *Proceedings of 2010 IEEE/ASME International Conference on Advanced Intelligent Mechatronics*, pp. 248–253, July 2010. 2010 Best Student Paper Award Finalist.
18. Hsieh*, P.-C. and Kim, W.-J., “Autonomous Robotic Wheelchair with Collision-Avoidance Navigation and Real-Time Path Planning,” *Proceedings of 2010 IEEE/ASME International Conference on Advanced Intelligent Mechatronics*, pp. 1396–1401, July 2010.
19. Sadighi*, A. and Kim, W.-J., “Sensorless Control of a Linear Magnetostrictive Motor,” *Proceedings of 2009 IEEE Energy Conversion Congress & Exposition*, pp. 1726–1731, September 2009.
20. Lee*, S. and Kim, W.-J., “Active Suspension Control with Direct-Drive Tubular Linear Brushless Permanent-Magnet Motor,” *Proceedings of 2009 American Control Conference*, pp. 5498–5503, June 2009.
21. Kim, W.-J. and Sadighi*, A., “Design and Relay-Based Control of a Novel Linear Magnetostrictive Motor,” *Proceedings of 2009 American Control Conference*, pp. 3482–3487, June 2009.
22. Shakir*, H. and Kim, W.-J., “Discrete-Time Closed-Loop Model Identification of Fixed-Structure Unstable Multivariable Systems,” *Proceedings of 2007 ASME International Mechanical Engineering Congress and Exposition*, Paper No. 41834, November 2007.
23. Ji*, K. and Kim, W.-J., “Optimal Bandwidth Allocation and QoS-Adaptive Control Co-Design for Networked Control Systems,” *Proceedings of 2007 ASME International Mechanical Engineering Congress and Exposition*, Paper No. 41827, November 2007.
24. Yu*, H. and Kim, W.-J., “Controller Design and Implementation for a 6-DOF Magnetic Levitator for High-Precision Positioning,” *Proceedings of 2005 ASME International Mechanical Engineering Congress and Exposition*, Paper No. 82556, November 2005.
25. Ji*, K. and Kim, W.-J., “Robust Control for Networked Control Systems with Admissible Parameter Uncertainties,” *Proceedings of 2005 ASME International Mechanical Engineering Congress and*

Exposition, Paper No. 81551, November 2005.

26. Kim, W.-J. and Verma*, S. "Multi-Axis Maglev Positioner with High Resolution over Large Travel Range" *Proceedings of 2005 ASME International Mechanical Engineering Congress and Exposition*, Paper No. 80050, November 2005.
27. Shakir*, H. and Kim, W.-J., "Multiscale Control to Meet the Conflicting Nanoscale Performance Requirements" *Proceedings of 2005 ASME International Mechanical Engineering Congress and Exposition*, Paper No. 80048, November 2005.
28. Kawato*, Y. and Kim, W.-J., "A Novel Multi-DOF Precision Positioning Methodology Using Two-Axis Hall-Effect Sensors," *Proceedings of 2005 American Control Conference*, pp. 3042–3047, June 2005.
29. Kim, W.-J., Ji*, K., and Ambike*, A., "Networked Real-Time Control Strategies Dealing with Stochastic Time Delays and Packet Losses," *Proceedings of 2005 American Control Conference*, pp. 621–626, June 2005.
30. Shakir*, H. and Kim, W.-J., "Nanoscale Path Planning and Motion Control," *Proceedings of 2005 American Control Conference*, pp. 3604–3609, June 2005.
31. Ambike*, A., Kim, W.-J., and Ji*, K., "Real-Time Operating Environment for Networked Control Systems," *Proceedings of 2005 American Control Conference*, pp. 2353–2358, June 2005.
32. Hu*, T. and Kim, W.-J., "Modeling and Multivariable Control of a High Precision Multidimensional Positioner," *Proceedings of 2004 ASME International Mechanical Engineering Congress and Exposition*, Paper No. 59536, November 2004.
33. Ji*, K., Ambike*, A., and Kim, W.-J., "Control Strategies for Distributed Real-Time Control with Time Delays and Packet Losses," *Proceedings of 2004 ASME International Mechanical Engineering Congress and Exposition*, Paper No. 61733, November 2004.
34. Shakir*, H., Kim, W.-J., and Verma*, S., "System Identification and Optimal Control of a 6-DOF Magnetic Levitation Stage with Nanopositioning Capabilities," *Proceedings of 2004 ASME International Mechanical Engineering Congress and Exposition*, Paper No. 60507, November 2004.
35. Verma*, S., Kim, W.-J., and Shakir*, H. "Multi-Axis Maglev Nanopositioner for Precision Manufacturing and Manipulation Applications," *Proceedings of IEEE Industry Applications Society 39th Annual Meeting*, pp. 2084–2091, October 2004.
36. Kim, W.-J. and Verma*, S., "Fabrication and Control of a 6-DOF Magnetic Levitation Stage with Nanopositioning Capability," *Proceedings of 2004 American Control Conference*, pp. 2487–2492, July 2004.
37. Kim, W.-J., Hu*, T., and Bhat*, N. D., "Design and Control of a 6-DOF High-Precision Integrated Positioner," *Proceedings of 2004 American Control Conference*, pp. 2493–2498, July 2004.
38. Murphy*, B. C. and Kim, W.-J., "Intuitive Representation of Gain Schedulers to Facilitate their Design and Tuning," *Proceedings of 2004 American Control Conference*, pp. 1115–1120, June 2004.
39. Bhat*, N. D. and Kim, W.-J., "Precision Position Control of Ionic Polymer Metal Composite," *Proceedings of 2004 American Control Conference*, pp. 740–745, June 2004.

40. Kim, W.-J., Hu*, T., and Bhat*, N. D., "Design and Control of a 6-DOF Positioner with High Precision," *Proceedings of 2003 ASME International Mechanical Engineering Congress and Exposition*, Paper No. 42780, November 2003.
41. Bhat*, N. D. and Kim, W.-J., "Precision Control of Force Produced by Ionic Polymer Metal Composite," *Proceedings of 2003 ASME International Mechanical Engineering Congress and Exposition*, Paper No. 42709, November 2003.
42. Kim, W.-J., Verma*, S., and Gu*, J., "Maglev 6-DOF Stage for Nanopositioning," *Proceedings of 2003 ASME International Mechanical Engineering Congress and Exposition*, Paper No. 42708, November 2003.
43. Kim, W.-J. and Murphy*, B. C., "Design and Construction of a Precision Tubular Linear Motor and Controller for Robotics Applications," *Proceedings of 2003 ASME International Mechanical Engineering Congress and Exposition*, Paper No. 41131, November 2003.
44. Srivastava*, A. and Kim, W.-J., "Supervisory Control via the Internet with Time Delay Estimation," *Proceedings of 2003 IEEE International Symposium on Intelligent Control*, pp. 574–579, October 2003.
45. Kim, W.-J. and Murphy*, B. C., "Development of a Novel Direct-Drive Tubular Linear Brushless Permanent-Magnet Motor," *Proceedings of IEEE Industry Applications Society 38th Annual Meeting*, pp. 1664–1671, October 2003.
46. Joshi*, A. A. and Kim, W.-J., "Modeling and 6-DOF Vibration Reduction for a Spacecraft with Precision Sensors," *Proceedings of 2003 American Control Conference*, pp. 1122–1127, June 2003.
47. Srivastava*, A. and Kim, W.-J., "Internet-Based Supervisory Control and Stability Analysis for Time Delay," *Proceedings of 2003 American Control Conference*, pp. 627–632, June 2003.
48. Bhat*, N. D. and Kim, W.-J., "System Identification and Control of Ionic Polymer Metal Composite," *Proceedings of the 10th SPIE Symposium on Smart Materials and Structures*, vol. 5049, pp. 526–535, March 2003.
49. Bhat*, N. D. and Kim, W.-J., "Estimation and Reduction of Micro-Adhesion Forces between Ionic Polymer Metal Composite and Micro-Objects," *Proceedings of the 10th SPIE Symposium on Smart Materials and Structures*, vol. 5051, pp. 125–132, March 2003.
50. Joshi*, A. A. and Kim, W.-J., "Multivariable Control for Hexapod-Based Satellite Vibration Isolation," *Proceedings of the 2nd IFAC Conference on Mechatronic Systems*, pp. 141–146, December 2002.
51. Kim, W.-J., Gu*, J., and Maheshwari*, H., "Six-DOF Mechatronic Nanopositioning Device," *Proceedings of the 2nd IFAC Conference on Mechatronic Systems*, pp. 909–914, December 2002.
52. Joshi*, A. A. and Kim, W.-J., "System Identification and Multivariable Controller Design for a Satellite UltraQuiet Isolation Technology Experiment (SUITE)," *Proceedings of 2002 ASME International Mechanical Engineering Congress and Exposition*, Paper No. 32024, November 2002.
53. Kim, W.-J., Maheshwari*, H., and Gu*, J., "Maglev Linear Actuator for Nanopositioning," *Proceedings of 2002 ASME International Mechanical Engineering Congress and Exposition*, Paper No. 33395, November 2002.
54. Kim, W.-J., "Novel Magnetic Levitation Technology for Nanoscale Manufacturing," *Proceedings of US-Korea Conference on Science, Technology, and Entrepreneurship*, pp. 851–857, July 2002.

55. Kim, W.-J., "Precision Dynamics, Stochastic Modeling, and Multivariable Control of Planar Magnetic Levitator," *Proceedings of 2002 American Control Conference*, pp. 4940–4945, May 2002.
56. Kim, W.-J. and Maheshwari*, H., "High-Precision Control of a Maglev Linear Actuator with Nanopositioning Capability," *Proceedings of 2002 American Control Conference*, pp. 4279–4284, May 2002.
57. Kim, W.-J., "Six-Axis Nano-Positioning with Planar Magnetic Levitation," *Proceedings of IEEE-Nano 2001, First IEEE Conference on Nanotechnology*, pp. 174–179, October 2001.
58. Gerver, M. J., Goldie, J. H., Kim, W.-J., Kiley, J., and Swenbeck, J. R., "Force Capability of a Planar Peristaltic Terfenol-D Motor," *Proceedings of Materials Research Society Fall Meeting*, p. 667, November 1999.
59. Kim, W.-J., Goldie, J. H., Gerver, M. J., Kiley, J., and Swenbeck, J. R., "Extended-Range Linear Magnetostrictive Motor with Double-Sided Three-Phase Stators," *Proceedings of IEEE Industry Applications Society 34th Annual Meeting and Technical Conference*, pp. 1215–1222, October 1999.
60. Kim, W.-J. and Trumper, D. L., "Velocity Regulation Limits in a Precision Two-Dimensional Magnetic Levitator," *Proceedings of IEEE International Magnetics Conference*, p. EE-09, May 1999.
61. Kim, W.-J. and Trumper, D. L., "Precision Control of Planar Magnetic Levitator," *Proceedings of ASPE 13th Annual Meeting*, pp. 606–609, October 1998.
62. Kim, W.-J. and Trumper, D. L., "Six-Degree-of-Freedom Planar Positioner with Linear Magnetic Bearings/Motors," *Proceedings of the 6th International Symposium on Magnetic Bearings*, pp. 641–649, August 1998.
63. Kim, W.-J. and Trumper, D. L., "High-Precision Magnetic Levitation Stage for Photolithography," *Proceedings of ASPE 12th Annual Meeting*, pp. 470–473, October 1997.
64. Kim, W.-J. and Trumper, D. L., "Active Multivariable Control of a Planar Magnetic Levitator," *Proceedings of the 6th IEEE International Conference on Control Applications*, pp. 97–102, October 1997.
65. Kim, W.-J., Trumper, D. L., and Lang, J. H., "Modeling and Vector Control of a Planar Magnetic Levitator," *Proceedings of IEEE Industry Applications Society 32nd Annual Meeting*, pp. 349–356, October 1997.
66. Kim, W.-J., "High-Precision Six-Degree-of-Freedom Magnetic Levitator with Large Two-Dimensional Motion Capability," *Proceedings of the Third Humantech Thesis Prize*, pp. 40–49, March 1997.
67. Kim, W.-J., Berhan, M. T., Trumper, D. L., and Lang, J. H., "Analysis and Implementation of a Tubular Motor with Halbach Magnet Array," *Proceedings of IEEE Industry Applications Society 31st Annual Meeting*, pp. 471–478, October 1996.
68. Kim, W.-J. and Trumper, D. L., "Force Ripple in Surface-Wound Permanent-Magnet Linear Motors," *Proceedings of IEEE International Magnetics Conference*, p. FE-03, April 1996.
69. Trumper, D. L., Kim, W.-J., and Williams, M. E., "Design and Analysis Framework for Permanent-Magnet Machines," *Proceedings of IEEE Industry Applications Society 29th Annual Meeting*, pp. 216–223, October 1994.

70. Kim, W.-J., Lee, J. G., and Lee, D. H., "Application of Recursive Partially Unknown System Identification to Aerodynamic Coefficients Estimation," *Proceedings of AIAA Atmospheric Flight Mechanics Conference*, pp. 468–473, August 1992.
71. Lee, J. G. and Kim, W.-J., "A Novel Strategy to Solve TSP Using Doubly Competitive Neural Network," *Proceedings of Korean Association of Information Science Conference*, pp. 339–351, May 1990.

Other Conference Presentations

1. Cortes*, I. and Kim, W.-J., "Sensing and Correcting Lateral Misalignment in Inductive Wireless Power Transfer Devices," TAMU Student Research Week 2017, March 2017.
2. Cortes*, I. and Kim, W.-J., "Sensing and Correcting Lateral Misalignment in Inductive Wireless Power Transfer Devices," 2017 Texas A&M University System (TAMUS) Louis Stokes Alliance for Minority Participation (LSAMP) Symposium, March 2017.
3. Cortes*, I. and Kim, W.-J., "Sensing and Correcting Lateral Misalignment in Inductive Wireless Power Transfer Devices," *Proceedings of the 13th Annual Pathways Student Research Symposium*, November 2016.
4. Cortes*, I. and Kim, W.-J., "Mechanical Solutions for Wireless Power Transmission," NSF Louis Stokes Alliance for Minority Participation (LSAMP) Research Symposium, February 2016.
5. Kim, W.-J., Verma*, S., and Shakir*, H., "Magnetic Levitation Based Nanopositioner," *Proceedings of the 2nd Conference on Nanoscale Devices and System Integration*, p. 95, April 2005.
6. Kim, W.-J., Verma*, S., and Shakir*, H., "Maglev-Based Nanoscale Positioning and Motion Control," *Proceedings of TEX-MEMS VI*, p. 30, September 2004.
7. Kim, W.-J., "Development of a Six-Axis, Magnetically Levitated Instrument for Nanoscale Science and Engineering," *2004 NSF Design, Service and Manufacturing and Industrial Innovations Grantees & Research Conference*, January 2004.
8. Parlos, A., Jayasuriya, S., and Kim, W.-J. "A New Generation of Sensor Designs Based on Nonlinear Distortion and Signal Recovery for Health Assessment, Distributed Sensing and Control," *2003 NSF Design, Service, and Manufacturing Grantees & Research Conference*, January 2003.
9. Kim, W.-J., "Development of a Maglev Instrument for Nanoscale Science and Engineering," *2002 NSF Design, Service, and Manufacturing Grantees & Research Conference*, January 2002.

Patents

1. Kim, W.-J. and Verma*, S. "Magnetically Levitated Apparatus," US Patent and Trademark Office (PTO) Provisional Patent No. 60/794,981, April 26, 2006.
2. Kim, W.-J., "Method and Apparatus for Magnetically Generating Motion with High Precision," US PTO Patent No. 6,885,536 B1, April 26, 2005.
3. Maheshwari*, H. and Kim, W.-J., "Method and Apparatus for Electrically Levitating and Positioning a Device," US PTO Provisional Patent No. 60/426,425, December 4, 2001.
4. Kim, W.-J., "Six-Axis Maglev Instrument," US PTO Provisional Patent No. 60/316,920, August 31, 2001.

5. Andrews, M. J., Beskok, A., Hartwig, K. T., Kim, W.-J., Ross, Jr., J. H., Slattery, J. C., and Yavuz, M., "Nano-Pinned Memory Device and Method," US PTO Provisional Patent No. 60/262,609, January 17, 2001.
6. Trumper, D. L. and Kim, W.-J., "Magnetic Positioner Having a Single Moving Part," US PTO Patent No. 6,003,230, December 21, 1999.
7. Trumper, D. L., Kim, W.-J., and Williams, M. E., "Magnetic Array," US PTO Patent No. 5,631,618, May 20, 1997.

Doctoral Students (16 graduated)

1. Cortes, I., *Design, Analysis, and Control of a Cable-Suspended Robot for Large-Scale Additive Manufacturing*, May 2022. Senior R&D S&E Mechanical Engineer, Sandia National Laboratories.
2. Kim, K., *Optimal Bandwidth Allocation and Control for Networked Control Systems with Disturbance and Noise*, August 2019. Software Application Developer at SLAC National Accelerator Laboratory.
3. Fu, J., *A Non-Intrusive Method for Mechanical Measurements in Constant Frequency Electric Motors*, (chair: Dr. Parlos), August 2018. Research Engineer II at Veros Systems, Inc.
4. Algethami, A. A. B., *Regenerative Suspension System Design and Control*, December 2017. Assistant Professor at Taif University in Saudi Arabia.
5. Kwon, Y.-S., *Development of Double-Sided Interior Permanent Magnet Flat Linear Brushless Motor and its Control Using Linear Optical Potentiometer*, August 2016. Keithley Instruments.
6. Nguyen, V. H., *Design and Construct of a 6-Degree-of-Freedom Magnetically-Levitated Positioning Stage with a Single-Part Moving Platen Moving over a Concentrated-Field Magnet Matrix*, December 2015. Senior Mechatronics Engineer at 10X Genomics.
7. Chang, Y.-C., *Design and Implementation of an Ionic-Polymer-Metal-Composite Biomimetic Robot*, May 2013. Automation Engineer at Miller Eads Co.
8. Dong, J., *Output Feedback Control and Optimal Bandwidth Allocation of Networked Control System*, May 2013. Automation Engineer at National Oilwell Varco.
9. Kim, Y. H., *Modeling and Vibration Control with a Nano-Positioning Magnetic-Levitation System*, December 2011. Senior Engineer at Samsung Electronics, Inc. in Korea.
10. Sadighi, A., *Development of a Novel Magnetostrictive Actuator*, August 2010. Scientist, Mechatronic Engineer at US Hybrid, Corp.
11. Yu, H., *Design and Control of a Compact 6-Degree-of-Freedom Precision Positioner with Linux-Based Real-Time Control*, August 2009. Servo Control Engineer IV at Applied Materials, Inc.
12. Shakir, H., *Control Strategies and Motion Planning for Nanopositioning Applications with Multi-Axis Magnetic-Levitation Instruments*, May 2007. Senior Scientist at Halliburton Co.
13. Yun, K., *System Design with Macro-Micro Control of a Novel 3-Finger IPMC Gripper for Microscale Applications*, May 2006. Senior Engineer at Samsung Electro-Mechanics Co. Ltd. in Korea.

14. Ji, K., *Real-Time Control over Networks*, May 2006. Innovator at Siemens.
15. Verma, S., *Development of Novel High-Performance Six-Axis Magnetically Levitated Instruments for Nanoscale Applications*, August 2005. Director of Engineering at Meta Reality Labs.
16. Hu, T., *Design and Control of a 6-Degree-of-Freedom Levitated Positioner with High Precision*, May 2005. Senior Mechanical Design Engineer at KLA-Tencor Corp.

Masters Students (41 graduated)

1. Venkatachalam, A., in progress.
2. Kang, K., *Indoor Autonomous Mobile Surveillance Robot Based on Robot Operating System and Kinect Sensor*, August 2023, Instructor at Korean Naval Academy.
3. Kalaga, V., MS non-thesis option, December 2022.
4. Khawar, Z., MS non-thesis option, May 2022. Project Engineer at Barrios Technology, Ltd.
5. Wei, Y., *Analysis, Design, and Control of a Novel Halbach-Array-Based Two-Phase Motor*, December 2020. Continuing for PhD at TAMU.
6. Lipham, R., *A Potential Method for Precision Position Self-Sensing in Voice-Coil Actuators*, December 2020. Continuing for PhD at TAMU.
7. McCabe, J., *Street-Sign and Lane-Marker Recognition for the Control of an Autonomous Ground Vehicle*, August 2018, Aeronautical Engineer at Lockheed Martin Corp.
8. Striklin, B., *Design and Control of a High-Precision, High Power Density Permanent Magnet AC Motor Using a Halbach Magnet Array*, December 2017. E&D Aeronautical Engineer at Sandia National Laboratories.
9. Nelson, A., *Precision Position Control Using and RGB Sensor and Linearized Output Variable-Intensity Color Array*, August 2017.
10. Cortes, I., *Automatic Positioning System for Inductive Wireless Charging Devices and Application to Mobile Robot*, August 2017. Continuing for PhD at TAMU.
11. Berg, F., *Lane Keeping and Pedestrian Avoidance for a Vision-Based Autonomous Test Vehicle*, August 2016. General Motors Co.
12. Maddineni, P. M., MEng, May 2016, Hardware Engineer at Apple, Inc.
13. Chen, J., *An Intelligent Human-Tracking Robot Based on Kinect Sensor*, December 2015. Robotics Software Engineer at the American Research Center, Huawei Technologies Co. Ltd.
14. Guerrero, Jr., R., *Low-Cost Rigid-Frame Exoskeleton Glove with Finger-Joint Flexion Tracking*, August 2015. Systems Engineer at Lockheed Martin Missiles and Fire Control.
15. Zhu, R., *Repetitive Control of a Novel Magnetostrictive Actuator*, August 2014. Engineer at Ford Motor Research & Engineering, Co. Ltd. In China.
16. Silva-Rivas, J. C., *Control and Optimization of a Compact 6-Degree-of-Freedom Precision Positioner Using Combined Digital Filtering Techniques*, December 2011. Mechanical Design Engineer at US Bellows.

17. Chintala, R. H., *Robust Multi-Objective Control of a Quarter-Car Suspension Model Using an LBPMM as an Actuator*, December 2011. Continuing for PhD at TAMU.
18. Li, A., MS non-thesis option. May 2011. Project Engineer at Testngeer.
19. Nguyen, V. H., *A Multi-Axis Compact Positioner with a 6-Coil Platen Moving over a Superimposed Halbach Magnet Matrix*. May 2011. PostDoc Fellow at Lawrence Livermore National Laboratory.
20. Chen, C.-F., *Closed-Loop Real-Time Control of a Novel Linear Magnetostrictive Actuator*, August 2010. Continuing for PhD at TAMU.
21. Bibinagar, N. K., *Robustness of Ethernet-Based Real-Time Networked Control System with Multi-Level Client/Server Architecture*, August 2010. Engineering Manager, InsightPhishing at Rapid7.
22. Chao, Y.-C., *Unmanned Cooperative Fire-Seeking and -Fighting Robot with Bluetooth Communication and Stair-Climbing Capability*, May 2010. Returned to Taiwan.
23. Lee, M.-H., *Real-Time Networked Control with Multiple Clients*, August 2009. Captain in the Korean Army.
24. Lee, S., *Active Suspension Control with Direct-Drive Tubular Linear Brushless Permanent-Magnet Motor*, May 2009. Motion Control Engineer at Ford Motor Company.
25. Pingle, S., *Intelligent Machines for Search and Pick Operations*, MEng, December 2008. Tooling Engineering Manager at Kulicke & Soffa Industries.
26. Hsieh, P.-C., *Autonomous Robotic Wheelchair with Collision-Avoidance Navigation*, August 2008. Went to Columbia for PhD.
27. Allen, J. A., *Design of Active Suspension Control Based upon Use of Tubular Linear Motor and Quarter-Car Model*, August 2008. Controls Application Development Engineer at General Electric.
28. Hsu, C.-Y., MS non-thesis option, May 2008. Returned to Taiwan.
29. Rogers, A. G., *Precision Mechatronics Lab Robot Development*, December 2007.
30. Vickers, J. A., *The Development and Implementation of an Ionic Polymer Metal Composite Propelled Vessel Guided by a Goal-Seeking Algorithm*, May 2007. Engineering and Maintenance Supervisor at MilliporeSigma.
31. Satter, M. R., *Rapid Thermal Processing Project*, MEng, May 2006. Lecturer at the Department of Mechanical Engineering of the Papua New Guinea University of Technology in Papua New Guinea.
32. Homji, R., *Intelligent Pothole Repair Vehicle*, August 2005. Facilities Engineer at Chevron International Exploration & Production.
33. Yu, H., *Controller Design and Implementation for a 6-Degree-of-Freedom Magnetically Levitated Positioner with High Precision*, August 2005. Servo Control Engineer IV at Applied Materials, Inc.
34. Yu, D., *Development of a 6-Degree-of-Freedom Magnetic-Levitated System with Nano-Positioning Control*, MEng, August 2005. Assistant Engineer at Samsung Electronics in Korea.
35. Kawato, Y., *Multi-DOF Precision Positioning Methodology Using Hall-Effect Sensors*, May 2005. Engineer at KLA-Tencor Corp. in Japan.

36. Ambike, A. D., *Closed-Loop Real-Time Control on Distributed Networks*, August 2004. Software Engineer at Sigma Genosys.
37. Bhat, N. D., *Modeling and Precision Control of Ionic Polymer Metal Composite*, August 2003. Vice President, Product Design & Hardware Engineering at Juul Labs.
38. Murphy, B. C., *Design and Construction of a Precision Tubular Linear Motor and Controller*, May 2003. Controls & Mechanisms Analyst at Boeing.
39. Srivastava, A., *Distributed Real-Time Control via the Internet*, May 2003. Staff Mechanical Engineer at MEDRAD / Bayers Radiology NPD.
40. Gu, J., *Development of a 6-Degree-of-Freedom Magnetically Levitated Instrument with Nanometer Precision*, May 2003. Assistant Professor at Northwestern University.
41. Maheshwari, H., *Design and Fabrication of a Maglev Linear Actuator Capable of Nanopositioning*, December 2002. Engineer at MER Corp.
42. Joshi, A. A., *System Identification and Multivariable Control Design for a Satellite UltraQuiet Isolation Technology Experiment (SUITE)*, August 2002. CPE Engineer at Cummins, Inc.
43. Woo, S.-B., MS non-thesis option, August 2002. Enrolled in the TAMU MEEN PhD program.

Undergraduate Students

1. McConachie, I., in progress.
2. Quezada, M., *Actuator Design for a Stepper Motor*, May 2021.
3. Richter, A., *Dynamic Wireless Power Transfer with a Planar Transmitter Array*, December 2020. Went to Purdue University for graduate study.
4. Rains, C., *Review of Inductive Power Transport Technology*, May 2020.
5. Jakob, D., *Investigation of AC–DC Interface Circuit for Ambient Energy Harvesting from Low-Voltage Piezoelectric Transducer Array*, December 2019.
6. Flores, O., *Wireless Local Inductive Charging for Moving Electric Vehicles*, December 2019.
7. Lipham, R., *Development of the Actuator Position Sensing Method Using a Variable Inductor*, May 2018. Accepted to the MEEN graduate program.
8. Nwoye, E., *Electromechanical Energy Harvesting*, December 2017. Accepted to the MEEN graduate program.
9. Ijaz, O. M., TAMUQ Undergraduate Summer Research Exchange Program, August 2017. Was a junior at TAMU Qatar.
10. Shi, C., *Dynamics and Control of a Skid-Steered Mobile Robot with Kinect Sensor*, NSF REU Program, August 2016. Was a sophomore at Rice University. Went to Stanford University for graduate study.
11. Pham, H., *Control of a Single Actuator Magnetic Levitation System*, NSF REU Program, August 2015. Was a sophomore at Syracuse University.

12. Kaufman, B., *Design and Analysis of a Halbach Array Motor*, NSF REU Program, August 2015. Was a junior at University of Rochester.
13. Zarate, E., *Modeling a Brushless Two-Axis Gimbal Laser Platform and Designing its Stabilization Loop*, CANIETI (The IT Chamber of Commerce of Mexico) Program, August 2014. Was a junior of Universidad Modelo in Mexico.
14. Lau, V., *Fabrication of Brushless Ironless DC Motor Using Radial Halbach Array*, NSF REU Program, August 2014. Was a junior at University of Texas at Austin.
15. Wehr, M. L., *Construction and Control of a One Degree of Freedom Balancing Robot*, December 2011. Exchange Student from Puhr-Universität Bochum in Germany,
16. Garay, R. A., *Two Axis Motion Plates with C Programming*, Undergraduate Summer Research Grant (USRG) Program, August 2011.
17. Niesel, N. D., *Microcontroller-Based Omnidirectional Solar Tracking*, USRG Program, August 2011.
18. Silva, R. A., *Development of a Digital Controller for a Vertical Wind Tunnel (VWT) Prototype to Mitigate Ball Fluctuations*, Undergraduate Research Scholars Program (URSP) Thesis, May 2010, also participating in the NSF Louis Stokes Alliances for Minority Participation (LSAMP) program. Post Graduate Researcher at Los Alamos National Laboratory.
19. Hong, K.-M., *Design and Control of a Fully Automatic Vehicle Door*, URSP Thesis, May 2010. Went to Purdue University for graduate study.
20. Wilks, B. D., *Low Cost Control of a Furuta Pendulum*, Senior Honors Thesis, May 2008. Engineer at Shell.
21. Jones, T. E., *Feedback Control of an Intelligent Autonomous Vehicle*, USRG Program, August 2006. Enrolled in the TAMU MEEN graduate program.
22. Glenn, S. T., *Feedback Control of Intelligent Pothole Repair Vehicle*, Senior Honors Thesis, May 2006. Enrolled in the TAMU MEEN graduate program.
23. Bray, A. S., *Design of a Fluid Pump Made with Ionic Polymer Metal Composite*, Senior Honors Thesis, August 2005. Engineer at Lockheed Martin.
24. Gland, J., *Inferential Sensing in a 1-D Magnetic Levitation Coil*, USRG Program, August 2004. Was a junior at Rose-Hulman Institute of Technology.
25. Estill, S. M., *Simple Magnetic Pendulum System*, August 2002. Went to University of California, Berkeley for graduate study.
26. Paschall, II, S. C., *Design, Fabrication, and Control of a Single Actuator Magnetic Levitation System*, Senior Honors Thesis, May 2002. Senior Member of the Technical Staff at Charles Stark Draper Laboratory.

Educational Development

- Completed the development of two courses MEEN 434/634 and MEEN 433, now listed as permanent courses in the catalog. Have taught 8 distinctive courses at TAMU including all junior/senior-level core courses in dynamics and controls. Have been the lab/course coordinator of MEEN 364, 431,

433/667, and 434/634. MEEN 364 went through a major revision by Dr. A. Parlos and me. MEEN 433/667 computing hardware and software upgrade has just been initiated.

- Developed a new graduate course, MEEN 634, *Dynamics and Modeling of Mechatronic Systems*. This course covers following topics: electromechanical interactions in lumped-parameter and continuum systems, lumped elements and dynamic equations of motion, linear and nonlinear actuators and transducers, field transformation and moving media, electromagnetic force densities and stress tensors, and dynamics of one- and two-dimensional elastic continua. Students are attracted to this course due to its interdisciplinary nature and in order to obtain fundamental, yet practical understanding of electromechanical systems and phenomena. This course was also approved as a permanent undergraduate course by the University Curriculum Committee and carries the course number MEEN 434.
- Took over and completed the development of a new undergraduate course, MEEN 433, *Mechatronics*. Key topics introduced include: precision design, semiconductor electronics, microcontroller hardware/software architecture, digital control, and specialty sensors and actuators. Have developed 5 new labs with my former PhD students, S. Verma and K. Ji. The Mechatronics Laboratory went through several major upgrades. The old Pentium Pro- or II-based lab personal computers (PCs) that operated on Windows 98 had been replaced with Pentium IV PCs on Windows XP. These PCs were replaced with the laptops running Windows 7. The laboratory is now equipped with 9 programmable power supplies, 10 four-channel oscilloscopes, and 2 function generators. Helped Dr. Alan Barhorst and Mr. Yasser Al-Hamidi in the development of MEEN 433/667 *Mechatronics* at TAMU-Qatar. Provided lecture slides, handouts, lab descriptions and slides, lab solutions in C codes, bill of lab materials and supplies, homework and exam problems, and so forth. Completely revised all labs of the MEEN 433/667, *Mechatronics* with the help of TA F. Berg in Fall 2015. The migration from the PIC 16F877 microcontroller to the Arduino Mega has been finished. All C codes have been updated and fully tested to be compatible with the Arduino Software, ver. 1.8.4. Students are attracted to this course due to its practicality and hands-on nature. In this course, they become confident in mechatronic-system design and implementation through weekly three-hour hands-on labs and a term project designing a practical mechatronic system and making it work. This course currently meets with MEEN 667.
- Coordinated the computing hardware and software upgrade of the labs for MEEN 364, *Dynamic Systems and Controls* with the TAs, J. Mlcak and T. Hu, and Mr. E. Luther of National Instruments (NI). Dr. A. Parlos and I received NI's academic donation of 6 PXIBox hardware systems worth \$18,000 plus LabView 7.1 software. The compatibility check has been completed, and the full upgrade is in effect. Contributed to a major revision of MEEN 364 in Spring~Fall 2010 with Dr. A. Parlos. Developed a new lesson plan, streamlined the course materials eliminating overlapping materials with MEEN 260, and introduced more class examples. Have contributed to the department proposal effort for the undergraduate *Systems and Controls Laboratory* for TAMU-Qatar.
- Five of my former students (S. Paschall, S. Estill, B. Murphy, S. Lee, and A. Sadighi) and I constructed four class-demonstration units (magnetic ball levitation system, magnetic pendulum, induction ring launcher, and ping-pong-ball levitation system) with my NSF (National Science Foundation) REU (Research Experiences of Undergraduates) grant and new-faculty start-up funds. Gave successful demonstrations in my MEEN 364, 431, 433/667, and 434/634 lectures.

Courses Taught

- ENGR 111, *Foundations in Engineering I* (Spring 2006).
- MEEN 335, *Mechanical Systems II* (Fall 2000).

- MEEN 363, *Dynamics and Vibrations* (Spring of 2015, Summer of 2011 and 2007; Fall of 2017, 2009 and 2001).
- MEEN 364, *Dynamic Systems and Controls* (Spring of 2024, 2023, 2022, 2021, 2020, 2019, 2018, 2013, 2012, 2011, 2010, 2009, 2008, 2007, and 2004; Fall of 2010, 2005, 2004, 2003 and 2002).
- MEEN 365, *Dynamic Systems and Controls Lab* (Spring of 2024).
- MEEN 368, *Solid Mechanics in Mechanical Design* (Summer of 2012).
- MEEN 431, *Advanced System Dynamics and Controls* (Spring of 2023, 2020, 2019, 2018, 2017, 2016, 2014 and 2003).
- MEEN 433, *Mechatronics* (Spring of 2005 and 2004; Summer of 2009 and 2008; Fall of 2022, 2021, 2020, 2019, 2018, 2017, 2016, 2015, 2014, 2013, 2012, 2011, 2008, 2007, 2006, and 2005).
- MEEN 434, *Dynamics and Modeling of Mechatronic Systems* (Fall of 2022, 2021, 2020, 2019, 2018, 2016, 2015, 2014, 2013, 2012, 2010, 2009, 2007, and 2006).
- MEEN 634, *Dynamics and Modeling of Mechatronic Systems* (Spring of 2005, 2003, 2002, and 2001; Fall of 2022, 2021, 2020, 2019, 2018, 2016, 2015, 2014, 2013, 2012, 2011, 2010, 2009, 2008, 2007, and 2006).
- MEEN 667, *Mechatronics* (Spring of 2005 and 2004; Summer of 2010, 2009, and 2008; Fall of 2022, 2021, 2020, 2019, 2018, 2017, 2016, 2015, 2014, 2013, 2012, 2011, 2008, 2007, 2006, and 2005).

Editorship

- Senior Editor, *International Journal of Control, Automation, and Systems*, February 2023–current.
- Editor, *International Journal of Control, Automation, and Systems*, March 2018–February 2023.
- Associate Editor, *Asian Journal of Control*, April 2011–current.
- Member of Editorial Board, *International Journal of Discrete Event Control Systems*, August 2009–current.
- Member of Editorial Board, *International Journal of Control, Automation, and Systems*, March 2003–February 2018.
- Member of Editorial Board, *American Journal of Engineering and Applied Sciences*, December 2014–October 2017.
- Member of Editorial Board, *Journal of Mechatronics*, April 2012–October 2017.
- Associate Editor, *IEEE Access*, May 2013–January 2016.
- Associate Editor, *ASME Journal of Dynamic Systems, Measurement and Control*, April 2007–March 2014.
- Technical Editor, *IEEE/ASME Transactions on Mechatronics*, April 2008–October 2012.

- Guest Editor, *IEEE/ASME Transactions on Mechatronics*, for Focused Section on Electromagnetic Devices for Precision Engineering, November 2009–June 2011.
- Associate Editor, ASME Dynamic Systems and Control Conference (DSCC) Editorial Board, December 2007–December 2010.

Professional Service

- Member, Electoral College, ASME Dynamic Systems and Control Division, December 2014–current.
- Member, IFAC (International Federation of Automatic Control) Technical Committee on Mechatronic Systems, June 2012–current.
- Primary Member, ASME Mechatronics Technical Committee, June 2006–current; Chair, January 2013–December 2013; Awards Chair, January 2014–December 2014; Vice-Chair, January 2012–December 2012; Conference Chair, January 2011–December 2011; Secretary, January 2010–December 2010.
- Chair, ASME Nanoscale Control Technical Panel, September 2003–June 2006.
- IEEE Nanotechnology Council, Member, February 2003–current.
- Invited to participate in an NSF Workshop on Frontiers in Dynamic Systems and Control, November 2011.
- Invited to participate in an NSF Workshop on Cyber-Enabled Discovery and Innovation, November 2007.
- Organizing Committee, Member, The 22nd International Conference on Control, Automation and Systems (ICCAS 2022), October 2022.
- Regional Chair for USA, ICCAS 2021, October 2021.
- International Program Committee, Member, ICCAS 2020, October 2020.
- Technical Program Committee, Member, The 15th International Conference on Autonomic and Autonomous Systems (ICAS 2019), June 2019.
- Organizing Committee, Member, The 2nd World Congress on Petrochemistry, Oil & Gas, March 2019.
- International Program Committee, Member, ICCAS 2018, October 2018.
- Technical Program Committee, Member, ICAS 2018, May 2018.
- Program Committee, Member, The 12th Korea Information Processing Society (KIPS) International Conference on Ubiquitous Information Technologies and Applications (CUTE 2017), December 2017.
- International Program Committee, Associate Editor, The 2017 Asian Control Conference (ASCC 2017), December 2017.
- International Program Committee, Member, ICCAS 2017, October 2017.

- Program Committee, Member, IEEE/ASME International Conference on Advanced Intelligent Mechatronics (AIM 2017), July 2017.
- Program Committee, Member, ICAS 2017, May 2017.
- International Program Committee, Member, The 12th IFAC Workshop on Intelligent Manufacturing Systems, December 2016.
- International Program Committee, Member, ICCAS 2016, October 2016.
- International Program Committee, Member, The 13th International Conference on Informatics in Control, Automation and Robotics (ICINCO 2016), July 2016.
- Program Committee, Member, ICAS 2016, June 2016.
- International Program Committee, Member, ICCAS 2015, October 2015.
- International Program Committee, Member, ICINCO 2015, July 2015.
- Program Committee, Member, The 11th International Conference on Intelligent Information Hiding and Multimedia Signal Processing (IIHMSP-2015), September 2015.
- International Program Committee, Member, ICCAS 2014, October 2014.
- International Program Committee, Member, ICINCO 2014, September 2014.
- Program Committee, Member, IIHMSP-2014, August 2014.
- International Program Committee, Member, ICCAS 2013, October 2013.
- Program Committee, Member, IIHMSP-2013, October 2013.
- International Program Committee, Member, 2013 IFAC International Symposium on Mechatronic Systems, April 2013.
- Program Committee, Member, The 2012 FTRA International Symposium on Advances in Cryptography, Security and Applications for Future Computing (ACSA-12), November 2012.
- International Program Committee, Member, ICCAS 2012, October 2012.
- Program Committee, Member, AIM 2012, July 2012.
- International Program Committee, Member, 2011 International Conference on Intelligent Robotics and Applications (ICIRA 2011), December 2011.
- International Program Committee, Member, ICCAS 2011, October 2011.
- Program Committee, Member, The 2011 IEEE International Conference on Intelligent Robotics, Automations and Applications (IRoA-11), October 2011.
- Program Committee, Member, AIM 2011, July 2011.
- International Program Committee, Member, ICINCO 2011, July 2011.
- International Program Committee, Member, ICIRA 2010, November 2010.

- Associate Editor, DSCC-2010, September 2010.
- International Program Committee, Member, The 10th IEEE International Conference on Nanotechnology (NANO) 2010, August 2010.
- International Program Committee, Member, ICINCO 2010, June 2010.
- Associate Editor, 2010 American Control Conference (ACC), June 2010.
- Workshop Program Committee, Member, The 5th International Workshop on High Performance Computing for Nano-Science and Technology (HPCNano09), November 2009.
- Associate Editor, DSCC-2009, October 2009.
- International Program Committee, Member, ICINCO 2009, July 2009.
- Associate Editor, 2009 ACC, June 2009.
- Workshop Program Committee, Member, HPCNano08, November 2008.
- Program Committee, Member, International Symposium on Optomechatronic Technologies, November 2008.
- Associate Editor, DSCC-2008, October 2008.
- International Program Committee, Member, ICCAS 2008, October 2008.
- International Program Committee, Member, 2008 IEEE International Conference on Control Applications (CCA 2008), September 2008.
- Associate Editor, 2008ACC, June 2008.
- Program Committee, Member, 2008 International Symposium on Flexible Automation (ISFA), June 2008.
- Workshop Program Committee, Member, HPCNano07, November 2007.
- International Program Committee, Member, 2007 ICCAS, October 2007.
- Program Committee, Member, AIM' 2007, September 2007.
- Workshop Program Committee, Member, HPCNano06, November 2006.
- International Program Committee, Member, Society of Instrument and Control Engineers and Institute of Control, Automation, and Systems Engineers (SICE-ICASE) International Joint Conference 2006, October 2006.
- Program Committee, Member, 2006 ISFA, July 2006.
- Program Committee, Member, The 2nd International Workshop on Computational Nano-Science and Technology (CNST'06), May 2006.
- Technical Program Committee, Member, The 9th IEEE International Workshop on Advanced Motion Control, March 2006.
- Program Committee, Member, HPCNano05, November 2005.

- Program Committee, Member, IEEE International Conference on Mechatronics (ICM2005), July 2005.
- Program Committee, Member, 2005 ACC, June 2005.
- Program Committee, Member, CNST'05, May 2005.
- Technical Program Committee, Member, The 8th International Workshop on Advanced Motion Control, March 2004.
- Program Committee, Member, IEEE NANO 2003 Conference, August 2003.
- Session organizer, ASME International Mechanical Engineering Congress and Exposition (IMECE), November 2006.
- Co-organizer, Symposium on Dynamics and Control of Micro and Nanosystems in the 2005 ASME IMECE, November 2005.
- Co-organizer, Symposium on Nanoscale Dynamics, Sensing, and Control in the 2003 ASME IMECE, November 2003.
- Session Organizer, 2016 ASME DSCC, October 2016.
- Session Chair, for two sessions, 2014 ASME DSCC, October 2014.
- Session Chair, 2013 ASME DSCC, October 2013.
- Session Co-chair, 2011 ASME DSCC, November 2011.
- Session Co-chair, AIM' 2010, July 2010.
- Session Co-chair, 2007 ASME IMECE, November 2007.
- Session Chair, 2004 ASME IMECE, November 2004.
- Session Co-chair, 2004 American Control Conference, June 2004.
- Session Co-chair, The 2nd IFAC Conference on Mechatronics, December 2002.

Reviewed 176 proposals submitted to NSF.

Reviewed over 100 papers submitted to the following archival journals.

- *ASME Journal of Dynamic Systems, Measurement, and Control.*
- *ASME Journal of Manufacturing Science and Engineering.*
- *ASME Journal of Vibration and Acoustics.*
- *IEEE/ASME Transactions on Mechatronics.*
- *IEEE Transactions on Control Systems Technology.*
- *IEEE Transactions on Robotics.*

- *IEEE Transactions on Education.*
- *IEEE Transactions on Industry Applications.*
- *IEEE Transactions on Circuits and Systems.*
- *IET Control Theory and Applications*
- *Mechatronics.*
- *International Journal of Control.*
- *International Journal of Systems Science.*
- *Asian Journal of Control.*
- *Mechanical Systems and Signal Processing.*
- *Control and Intelligent Systems.*
- *Journal of Intelligent Material Systems and Structures.*
- *International Journal of Control, Automation, and Systems.*
- *International Journal of Computational Engineering Science.*
- *Precision Engineering.*
- *Simulation Modeling Practice and Theory.*
- *Structural Engineering and Mechanics.*

University Service

- MEEN Honors and Awards Committee, Member, July 2020–current and September 2013–August 2015.
- MEEN Graduate Program Qualifiers Committee, Member, August 2019–current.
- ETID Faculty Search Committee, External Member, December 2018–May 2019.
- MEEN Educational Development Committee, Member, September 2017–May 2019, September 2006–August 2009.
- MEEN ABET Committee, September 2014–May 2019.
- MEEN Faculty Search Committee, Member, September 2016–August 2017.
- COE, Advanced Manufacturing Group (AMG), Department Representative, January 2014–current.
- COE, Engineering Faculty Advisory Council (EFAC), Department Representative, Spring 2014.
- MEEN Faculty Search Committee, Member, September 2013–August 2015.
- MEEN Distance Learning Committee, Member, July 2013–August 2014.

- MEEN Growth Committee, Member, March 2013– August 2014.
- MEEN Laboratory Committee, Member, October 2002–August 2015.
- MEEN Automation/Advanced Manufacturing/Robotics Faculty Search Subcommittee, Member, February 2013–May 2013.
- Reviewing graduate applications and making admission recommendations, March 2013.
- MEEN Energy and Energy Systems Engineering Faculty Search Committee, Member, November 2010–May 2011.
- TAMU, Energy Institute, Affiliate Faculty Member, May 2010–current.
- MEEN Graduate Studies and Research Committee, Member, September 2009–August 2010.
- MEEN Systems and Controls Faculty Search Committee, Chair, August 2007–May 2008.
- MEEN TAMU-Qatar Faculty Search Interview Committee, Member, Spring 2006.
- MEEN PhD Qualifying Exam Committee (Controls), Fall 2016–Spring 2017, Fall 2014–Spring 2015, Spring 2012–Fall 2013, Fall 2010–Spring 2011, Fall 2008–Fall 2009, Fall 2006–Fall 2007, and Fall 2002–Spring 2005; Chair, Spring 2015, Fall 2013, Spring 2013, Fall 2007, Spring 2005, and Spring 2004.
- MEEN Systems and Controls Faculty Search Committee, Member, February 2004–May 2005.
- MEEN 433/667, 434/634 course/lab coordinator, February 2004–current.
- MEEN 431, course coordinator, February 2004–March 2005.
- Hosted four USRG (Undergraduate Summer Research Grant) students (R. A. Garay, N. D. Niesel, T. E. Jones and J. M. Gland), Summer of 2011, 2006, and 2004.
- Contributed to a workshop in the Discover Engineering Conference hosted by TAMU COE. My graduate students gave high-school students demonstrations of their research work, October 2005.
- Contributed to the department proposal effort for the undergraduate *Systems and Controls Laboratory* for TAMU-Qatar in November 2002.
- Participated in the Graduate Invitational Days on March 7–8, 2008, March 3, 2006, March 4, 2005, April 2, 2004, March 8, 2002, March 9, 2001, and September 15, 2000 to interview prospective graduate students and to help the Department recruit qualified domestic graduate students. Offered prospective students tours to my research lab.
- Proctored Fundamentals of Engineering Examination, April 2001.
- Member of PhD advisory committees
 1. Carroll, K. (Dr. Ehsani, Electrical and Computer Engineering), in progress.
 2. Wei, Y. (Dr. Lee), in progress.
 3. Deng, Yi. (Dr. Ehsani, Electrical and Computer Engineering), in progress.

4. Talebi, D. (Dr. Toliyat, Electrical and Computer Engineering), in progress.
5. Hasanpour, S. (Dr. Toliyat, Electrical and Computer Engineering), in progress.
6. Pal, A. (Dr. Toliyat, Electrical and Computer Engineering), in progress.
7. Wang, Y. (Dr. Ehsani, Electrical and Computer Engineering), in progress.
8. Nie, K. (Dr. Langari), graduated in 2023.
9. Naghavi, F. (Dr. Toliyat, Electrical and Computer Engineering), graduated in 2023.
10. Praslika, B. (Dr. Toliyat, Electrical and Computer Engineering), graduated in 2023.
11. Albader, M. (Dr. Toliyat, Electrical and Computer Engineering), graduated in 2023.
12. Torres, E. (Dr. Pagilla), graduated in 2022.
13. Kim, B. J. (Dr. Palazzolo), graduated in 2022.
14. Hu, J. (Drs. Pagilla and Darbha), graduated in 2022.
15. Wen, Y. (Dr. Pagilla), graduated in 2022.
16. Rahrovi, B. (Dr. Ehsani, Electrical and Computer Engineering), graduated in 2021.
17. He, J. (Dr. Thomasson, Biological and Agricultural Engineering), graduated in 2021.
18. Oh, J. (Dr. Palazzolo), graduated in 2020.
19. Shin, D. (Dr. Palazzolo), graduated in 2020.
20. Dawahdeh, A. (Dr. Palazzolo), graduated in 2020.
21. Jin, Z. (Dr. Pagilla), graduated in 2020.
22. Bashaireh, A. (Dr. Ehsani, Electrical and Computer Engineering), graduated in 2019.
23. Gardner, M. (Dr. Toliyat, Electrical and Computer Engineering), graduated in 2019.
24. Kang, X. (Dr. Palazzolo), graduated in 2019.
25. Li, Y. (Dr. Palazzolo), graduated in 2019.
26. Morya, A. (Dr. Toliyat, Electrical and Computer Engineering), graduated in 2018.
27. Li, G. (Drs. Parlos and Langari), graduated in 2018.
28. Alme'hiza, A. (Dr. Ehsani, Electrical and Computer Engineering), graduated in 2018.
29. Tong, X. (Dr. Palazzolo), graduated in 2018.
30. Tobias, J. A. M. (Dr. Rasmussen), graduated in 2018.
31. Wang, T. (Dr. Parlos), graduated in 2017.
32. Jeung, S.-H. (Dr. San Andres), graduated in 2017.

33. Bostanci, A. (Dr. Toliyat, Electrical and Computer Engineering), graduated in 2017.
34. Jiang, S. (Dr. Lau), graduated in 2017.
35. Johnson, M. (Dr. Toliyat, Electrical and Computer Engineering), graduated in 2017.
36. Shin, S. (Dr. Langari), graduated in 2016.
37. Jalal, R. E. (Dr. Rasmussen), graduated in 2016.
38. Meenakshi, V. (Dr. Toliyat, Electrical and Computer Engineering), graduated in 2016.
39. Zhang, H. (Dr. Balog, Electrical and Computer Engineering), graduated in 2016.
40. Daniel, M. T. (Dr. Enjeti, Electrical and Computer Engineering), graduated in 2016.
41. Han, X. (Dr. Palazzolo), graduated in 2015.
42. Park, J.-B. (Dr. Toliyat, Electrical and Computer Engineering), graduated in 2015.
43. Krishnamoorthy, S. H. (Dr. Enjeti, Electrical and Computer Engineering), graduated in 2015.
44. Zhang, X. (Dr. Palazzolo), graduated in 2014.
45. Pakdelian, S. (Dr. Toliyat, Electrical and Computer Engineering), graduated in 2014.
46. Vartanian, R. (Dr. Toliyat, Electrical and Computer Engineering), graduated in 2014.
47. Somasundaram, E. (Dr. Enjeti, Electrical and Computer Engineering), graduated in 2014.
48. Keyhani, H. (Dr. Toliyat, Electrical and Computer Engineering), graduated in 2014.
49. Han, J.-H. (Dr. Kim, Y.-J.), graduated in 2013.
50. Niu, Y. (Dr. Kim, Y.-J.), graduated in in 2013.
51. Lai, L. (Dr. Ehsani, Electrical and Computer Engineering), graduated in 2012.
52. Chiu, C.-W. (Dr. Liang), graduated in 2012.
53. Saeed, A. (Dr. Palazzolo and Dr. Ahmed, Electrical and Computer Engineering), graduated in 2012.
54. Long, L. (Dr. McShane, Biomedical Engineering), graduated in 2012.
55. Lee, J. G. (Dr. Palazzolo), graduated in 2012.
56. Chu, P. C. (Dr. Parlos), graduated in 2011.
57. Frank, N. (Dr. Toliyat, Electrical and Computer Engineering), graduated in 2011.
58. Kim, C. W. (Dr. Langari), graduated in 2010.
59. Choi, S. (Dr. Toliyat, Electrical and Computer Engineering), graduated in 2010.
60. Zhang, J. (Dr. Jayasuriya), graduated in 2010.
61. Baek, J. (Dr. Toliyat, Electrical and Computer Engineering), graduated in 2009.

62. Lan, C.-Y. (Dr. Jayasuriya), graduated in 2008.
 63. Lee, J. (Dr. Boyd, Aerospace Engineering), graduated in 2008.
 64. Nam, S. (Dr. Alouini, Electrical and Computer Engineering), graduated in 2008.
 65. Bhattacharya, A. (Dr. Parlos), graduated in 2007.
 66. Lee, J. (Dr. Jayasuriya), graduated in 2007.
 67. Harihara, P. (Dr. Parlos), graduated in 2007.
 68. Wang, L. (Dr. Parlos), graduated in 2007.
 69. Ye, D. (Dr. Parlos), graduated in 2006.
 70. Lim, H. (Dr. Choe, Computer Science), graduated in 2006.
 71. Kang, S. (Dr. Swaroop), graduated in 2005.
 72. Jaradat, M. A. (Dr. Langari), graduated in 2005.
 73. Kim, D. (Dr. Boyd, Aerospace Engineering), graduated in 2005.
 74. Kim, S.-H. (Dr. Boyd, Aerospace Engineering), graduated in 2005.
 75. Seo, C. (Dr. Boyd, Aerospace Engineering), graduated in 2005.
 76. Cho, G. (Dr. Boyd, Aerospace Engineering), graduated in 2004.
 77. Suranthiran, S. (Dr. Jayasuriya), graduated in 2004.
 78. Li, M. (Dr. Palazzolo), graduated in 2004.
 79. Sun, G. (Dr. Palazzolo), graduated in 2003.
 80. Grady, K. (Architecture, Graduate Council Representative (GCR)), graduated in 2003.
 81. Cready, C. (Sociology, GCR), graduated in 2002.
- Member of MS advisory committees
 1. Jalamo, J. (Dr. Song, Engineering Technology and Industrial Distribution), in progress.
 2. Hays, J. (Dr. Palazzolo), in progress.
 3. Naghavi, F. (Dr. Toliyat, Electrical and Computer Engineering), in progress.
 4. Chun, H. (Dr. C. Lee), in progress.
 5. Agrawal, V. (Drs. Silva-Martinez and Moreira-Tamayo, Electrical and Computer Engineering), in progress.
 6. Bhimani, R. (Dr. Enjeti, Electrical and Computer Engineering), in progress.
 7. Hu, F. (Dr. Toliyat, Electrical and Computer Engineering), in progress.
 8. Zhang, H. (Drs. Balog and Enjeti, Electrical and Computer Engineering), in progress.

9. Wilson, J. (Dr. Searcy, Biological and Agricultural Engineering), in progress.
10. Mandipalli, S. S. R. (Dr. Song, Engineering Technology and Industrial Distribution), graduated in 2022.
11. Hasanpour, S. (Dr. Toliyat, Electrical and Computer Engineering), graduated in 2021.
12. Xu, J. (Dr. Bhattacharyya, Electrical and Computer Engineering), graduated in 2021.
13. Chang, J.-H. (Dr. Langari), graduated in 2020.
14. Mishra, S. (Dr. Palazzolo), graduated in 2020.
15. Sankaranarayanan, S. (Dr. Ehsani, Electrical and Computer Engineering), graduated in 2020.
16. Franklin, D. (Dr. Gopalswami), graduated in 2020.
17. Guan, L. (Dr. Silva, Electrical and Computer Engineering), graduated in 2019.
18. Zhang, Y. (Dr. Toliyat, Electrical and Computer Engineering), graduated in 2019.
19. Kottala, A. Y. (Dr. Ryu), will graduate in 2019.
20. Eib, A. (Dr. Langari), graduated in 2018.
21. Chour, K. (Dr. Hur), graduated in 2018.
22. Travino-Flores, A. (Dr. Palazzolo), graduated in 2018.
23. Ito, A. (Dr. Parlos), graduated in 2018.
24. AnilKumar, N. (Dr. Hur), graduated in 2017.
25. Pattanshetti, S. (Dr. Ryu), graduated in 2017.
26. Karthikeyar, R. (Dr. Ryu), graduated in 2017.
27. Stockton, A. (Dr. Hsieh, Engineering Technology and Industrial Distribution), graduated in 2015.
28. Wang, Y. (Dr. Hsieh, Engineering Technology and Industrial Distribution), graduated in 2015.
29. Liu, M. (Dr. Suh), graduated in 2014.
30. Hsu,S.-C. (Dr. Ames), graduated in 2014.
31. Cheng, Y.-C. (Dr. Langari), graduated in 2014.
32. Abdelzaher, O. M. (Dr. Palazzolo), graduated in 2014.
33. Midura, D. H. (Dr. Langari, MS non-thesis option), graduated in 2014.
34. Albader, M. (Dr. Enjeti, Electrical and Computer Engineering), graduated in 2014.
35. Rana, D. (Dr. Enjeti, Electrical and Computer Engineering), graduated in 2014.
36. Mazumdar, P. (Dr. Enjeti, Electrical and Computer Engineering), graduated in 2012.
37. Ozkentli, E. (Dr. Toliyat, Electrical and Computer Engineering), graduated in 2012.

38. Duan, X. (Dr. Parlos), graduated in 2012.
39. Hussain, H. (Dr. Toliyat, Electrical and Computer Engineering), graduated in 2012.
40. Lopez, T. J. (Dr. Gildin, Petroleum Engineering), graduated in 2011.
41. Tangirala, R. K. (Dr. Parlos), graduated in 2011.
42. Seshadri, S. N. (Dr. Rasmussen), graduated in 2011.
43. Tolety, A. B. (Dr. Ehsani, Electrical and Computer Engineering and Dr. Robson, Engineering Technology and Industrial Distribution), graduated in 2011.
44. Sundaram, V. M. (Dr. Toliyat, Electrical and Computer Engineering), graduated in 2011.
45. Fu, J. (Dr. Parlos), graduated in 2010.
46. Li, G. (Dr. Parlos), graduated in 2010.
47. Han, X. (Dr. Palazzolo), graduated in 2010.
48. Duong, T. C. (Dr. Parlos), graduated in 2010.
49. Balakrishnan, D. (Dr Balog, Electrical and Computer Engineering), graduated in 2010.
50. Gao, Y. (Dr. Ehsani, Electrical and Computer Engineering), graduated in 2010.
51. Somasundaram, E. (Dr. Enjeti, Electrical and Computer Engineering), graduated in 2010.
52. Luis Arturo, R. B. (Drs. Bhattacharya and Chakravorty, Aerospace Engineering), graduated in 2009.
53. Chakali, A. K. (Dr. Toliyat, Electrical and Computer Engineering), graduated in 2009.
54. Chou, H.-M. (Dr. Ehsani, Electrical and Computer Engineering), graduated in 2009.
55. Balakrishnan, A. (Dr. Toliyat, Electrical and Computer Engineering), graduated in 2008.
56. Banneyake, R. (Dr. Banerjee), graduated in 2008.
57. Ozkeskin, M. (Dr. Hung), graduated in 2008.
58. Gupta, A. (Dr. Rasmussen), graduated in 2007.
59. Mika, B. (Dr. Liang), graduated in 2007.
60. Zuniga, D. (Dr. Griffin), graduated in 2006.
61. Fithian, R. (Dr. Langari), MEng, graduated in 2005.
62. Commaraju, M. (Dr. Parlos), graduated in 2005.
63. Yang, J. (Dr. Parlos), graduated in 2005.
64. Lo, T.-W. (Dr. Suh), graduated in 2005.
65. Shukla, Y. (Dr. Parlos), graduated in 2005.

66. Bruun, E. (Dr. Eldin, Construction Science), graduated in 2004.

67. Shah, C. (Dr. Jayasuriya), graduated in 2004.

68. Bade, R. (Dr. Parlos), graduated in 2004.

69. Doddi, S. (Dr. Parlos), graduated in 2003.

- Member senior honor thesis advisory committees
 1. Stewart, C. (Dr. Parlos), graduated in 2004.
 2. Bartlett, T. (Dr. Lee), graduated in 2002.
 3. Satter, M. R. (Dr. Lee), graduated in 2002.

Affiliation

- The American Society of Mechanical Engineers (ASME), Fellow.
- The Institute of Electrical and Electronics Engineers (IEEE), Senior Member.
- Pi Tau Sigma, International Mechanical Engineering Honor Society, Honorary Faculty Member.