Short Biography



Prof. Toliyat received the B.S, degree from Sharif University of Technology, Tehran, Iran in 1982, the M.S. degree from West Virginia University, Morgantown, WV in 1986, and the Ph.D. degree from University of Wisconsin-Madison, Madison, WI in 1991, all in electrical engineering. Following receipt of the Ph.D. degree, he joined the faculty of Ferdowsi University of Mashhad, Mashhad, Iran as an Assistant Professor of Electrical Engineering. In March 1994 he joined the Department of Electrical and Computer Engineering, Texas A&M University where he is currently Raytheon endowed professor of electrical engineering.

Dr. Toliyat has received the prestigious **Nikola Tesla Field Award** for "outstanding contributions to the design, analysis and control of fault-tolerant multiphase electric machines" from IEEE in 2014, the Cyrill Veinott Award in Electromechanical Energy Conversion from the IEEE Power Engineering Society in 2004, Patent and Innovation Award from Texas A&M University System Office of Technology Commercialization's in 2020, 2018, 2016 and 2007, TEES Faculty Fellow Award in 2006, Distinguished Teaching Award in 2003, E.D. Brockett Professorship Award in 2002, Eugene Webb Faculty Fellow Award in 2000, and Texas A&M Select Young Investigator Award in 1999. He has also received the Space Act Award from NASA in 1999, and the Schlumberger Foundation Technical Awards in 2001 and 2000.

Prof. Toliyat work is highly cited by his colleagues more than 26,000 times and has an H-index of 78. Dr. Toliyat was an Editor of IEEE Transactions on Energy Conversion. He was Chair of the IEEE-IAS Industrial Power Conversion Systems Department of IEEE-IAS, and is a member of Sigma Xi. He is a fellow of the IEEE, the recipient of the 2008 Industrial Electronics Society Electric Machines Committee Second Best Paper Award as well as the recipient of the IEEE Power Engineering Society Prize Paper Awards in 1996 and 2006, and IEEE Industry Applications Society Transactions Third Prize Paper Award and Second Prize Paper Award in 2006 and 2016, respectively. His main research interests and experience include analysis and design of electrical machines, variable speed drives for traction and propulsion applications, fault diagnosis of electric machinery, and magnetic gear integrated electric machines. Prof. Toliyat has supervised more than 120 graduate students, post docs, and research engineers. He has published over 510 technical papers, presented more than 99 invited lectures all over the world, and has 34 issued and pending He is the author of 11 books and book chapters including DSP-Based US patents. Electromechanical Motion Control, CRC Press, 2003, the co-editor of Handbook of Electric Motors - 2nd Edition, Marcel Dekker, 2004, and the co-author of Electric Machines - Modeling, Condition Monitoring, and Fault Diagnosis, CRC Press, Florida, 2013.

He was the General Chair of the 2005 IEEE International Electric Machines and Drives Conference in San Antonio, Texas. Dr. Toliyat is a Professional Engineer in the State of Texas.

Resume Hamid A. Toliyat

Office:

Dept. of Electrical & Computer Engineering Texas A&M University College Station, TX 77843 Phone: (979) 862-3034 E-mail: toliyat@tamu.edu

Residency Status:

US Citizen

Professional Engineer in the State of Texas, P.E. # 97974

Patents, Patent Applications and Patent Disclosures:

- 1. Methods and Apparatus for Medium-Voltage Electronic Power Conversion, H.A. Toliyat, and M. Moosavi, United States Patent No.: 10,998,825, May 4, 2021.
- 2. Method and Apparatus for Compact Axial Field Magnetically Geared Machines, **H.A. Toliyat**, M. Johnson, and M. Gardner, **United States Patent No. 10,476,349 B2**, Nov. 11, 2019.
- 3. Sparse and Ultra-Sparse Partial Resonant Converters, H.A. Toliyat, and M. Amirabadi, United States Patent No.: 9,543,853 B2, Jan. 10, 2017.
- System and Method for Controlling Multiphase Electric Motors, H.A. Toliyat, M. Hajiaghajani, V. Sundaram, N. Nzeocha, Y. Deshpande, and M.M. Rahimian, United States Patent No.: 9,543,879 B2, Jan. 10, 2017.
- 5. DC Capacitors-Less Power Converters, H.A. Toliyat, and M. Amirabadi, United States Patent No.: 8,988,900 B2, Mar. 24, 2015.
- 6. A Low-Cost Brushless DC Motor Drive with Improved Power Factor, H.A. Toliyat, and T. Gopalarathnam, United States Patent No.: 7,049,786 B1, May 23, 2006.
- 7. Multiphase Induction Motor Drive System and Method, H.A. Toliyat, R. Shi, H. Xu, United States Patent No.: 6,426,605 B1, July 30, 2002.
- 8. Methods and Apparatus for Medium-Voltage Electronic Power Conversion, H.A. Toliyat, and M. Moosavi, United States Patent Application No.: US 2019/0252989 A1, Aug. 15, 2019.
- 9. Method and Apparatus for Compact Axial Field Magnetically Geared Machines, **H.A. Toliyat**, M. Johnson, and M. Gardner, **International Application WO 2017/062654 A1**, April 13, 2017.
- System and Method for Controlling Multiphase Electric Motors, H.A. Toliyat, M. Hajiaghajani, V. Sundaram, Y. Deshpande, M.M. Rahimian, and N. Nzeocha, United States Patent Application No.: 2015/0270747 A1, Sep. 24, 2015.
- 11. Sparse and Ultra-Sparse Partial Resonant Converters, H.A. Toliyat, and M. Amirabadi, United States Patent Application No.: 2014/0286059 A1, Sep. 25, 2014

- System, Apparatus and Method for Driving a Permanent Magnet Motor, R. Khopkar, S.M. Madani, M. Hajiaghajani, and H.A. Toliyat, Unites States Patent Application No.: 2006/0267527 A1, Nov. 30, 2005.
- 13. High-Frequency-Link Power Converter Topologies with Soft-switching Operation, H.A. Toliyat, and H. Keyhani, TAMUS 3974, January 30, 2014, Unites States Patent Application No.: 62/036, 176, Aug. 12, 2014
- 14. Apparatus for Soft Magnetic Counterweight in Cycloidal-Type Magnetic Gear, B. Praslicka, D. Zamarron, and **H.A. Toliyat**, 5780TEES21, Apr. 8, 2021.
- 15. Alternative Cycloidal Type Magnetic Gear Topologies and Methods Thereof, M.C. Johnson, M. Gardner, S. Hasanpour, B. Praslicka, and **H.A. Toliyat**, 5759TEES21, March 11, 2021.
- Method and Apparatus for Surface Permanent Magnet Cycloidal Type Magnetic Gear, B. Praslicka, M.C. Johnson, D. Zamarron, A. Goodarzi, E. Bauk, A. Nguyen, and H.A. Toliyat, 5708TEES21, March 1, 2021.
- 17. Cycloidal type Radial Flux Magnetic Gear with Multiple rotor segments, **H.A. Toliyat**, B. Praslicka, M.C. Johnson, D. Zamarron, 5675TEES21, Dec. 16, 2020.
- Brushless Wound Field Synchronous Machines and Methods, H.A. Toliyat, 5464TEES20, March 2, 2020.
- 19. A High Torque Density Axial Flux Machine with Directly Cooled End Windings, **H.A. Toliyat**, M.C. Gardner, P.J. Shamberger, M. Benedict, J.C. Grunlan, D.S. Antao, B.P. Rasmussen, J.R. Felts, and P.N. Enjeti, 5493TEES20, Apr. 26, 2020.
- 20. A Synergistically Excited Brushless Wound Field Synchronous Machine, **H.A. Toliyat**, M.C. Gardner, D. Talebi, 5492TEES20, Apr. 6, 2020.
- 21. Method for Achieving Wide Constant Power Speed Range for Motors with Multiple Modular Stators, **H.A. Toliyat**, M.C. Gardner, 5451TEES20, Feb. 18, 2020.
- 22. CPW-Fed Annular Monopole Antenna for External Partial Discharge Sensing in Gas Insulated Switchgear, A. Darwish, S.S. Refaat, H. Abu-Rub, and **H.A. Toliyat**, Sep. 2019.
- 23. Method and Apparatus for Retaining Magnets in a Magnetic Gear, **H.A. Toliyat**, M.C. Gardner, and M.C. Johnson, 5247TEES19, Aug. 13, 2019.
- 24. Modular Axial Flux Solid Rotor Induction Machine with Printed Circuit Board, **H.A. Toliyat**, M.C. Gardner, and M.C. Johnson, 5192TEES19, April 18, 2019.
- 25. A Multistage Coaxial Magnetic Gearbox Capable of Achieving Very High Gear Ratios, **H.A. Toliyat**, M. Gardner, 4761TEES17, July 3, 2017.
- 26. Multiphase Motor Drives with High Acceleration Capability, **H.A. Toliyat**, and A.K. Morya, 4705TEES17, Apr. 7, 2017.
- 27. Variable Gear Ratio Trans-Rotary Magnetic Gear with a Magnetic Clutch, H.A. Toliyat, S. Pakdelian, M. Gardner, M. Johnson, 4114 TEES15, Sep. 24, 2014.
- 28. Rotary to Linear and Linear to Rotary Magnetic Transmission System, H.A. Toliyat, and S. Pakdelian, TAMUS 4066, Aug. 12, 2014.
- 29. Damper Windings for the Magnetic Gear, H.A. Toliyat, and N. Frank, TAMUS 3279, Oct. 27, 2010.
- 30. Condition Monitoring and Fault Diagnosis of Electric Motors and Generators Apparatus and Methods, **H.A. Toliyat**, and B. Akin, TAMUS 2495, Feb. 22, 2007.

- 31. An Integrated Alternator/Active Filter for Wind Power Applications, **H.A. Toliyat**, M.T. Abolhassani, TAMUS2376, April 2006.
- 32. Current Source Inverter with Simple Commutation Method and Apparatus, **H.A. Toliyat**, and S. Kwak, TAMUS 2130, April 2004.
- 33. Fault Tolerant Permanent Magnet Motor Drives with High Specific Torque, **H.A. Toliyat**, L. Parsa, 2093TEES04, November 2003.
- 34. A Multiphase Synchronous Reluctance Motor Drive with High Specific Torque, **H.A. Toliyat**, and R. Shi, TAMUS 1589, April 2000.
- 35. A Four-quadrant Soft-switched Brushless Permanent Magnet Motor Drive and Method, H.A. Toliyat, J.C. Moreira, S. Waikar, and M.S. Arefeen, TAMUS 1567, March 2000.

Books:

- 1. Electric Machines Modeling, Condition Monitoring, and Fault Diagnosis, H.A. Toliyat, S. Nandi, S. Choi, and H. Meshgin-Kelk, CRC Press, Florida, 2013, 272 pages.
- 2. **DSP-Based Electromechanical Motion Control**, H.A. Toliyat, S. Campbell, CRC Press, Florida, 2003, 344 pages.
- 3. Handbook of Electric Motors, H.A. Toliyat, G. Kliman, 2nd Edition, Marcel Dekker, New York, 2004, 805 pages.
- 4. Electric Machines Modeling, Condition Monitoring, and Fault Diagnosis, H.A. Toliyat, S. Nandi, S. Choi, and H. Meshgin-Kelk, CRC Press, in Chinese, 2015.

Books Chapters:

- 5. Contributor to Compendium on Electromagnetic Analysis, Editor: Y. Sozer, World Scientific, 2020, pp. 389-420.
- 6. Contributor to Power Electronic Converters and Systems Frontiers and applications, Edited by A.M. Trzynadlowski, IET Press, 2016, pp. 75-110.
- 7. Contributor to Power Electronics for Renewable Energy Systems, Transportation and Industrial Applications, H. Abu-Rub et al., Wiley & Sons, 2014, pp. 107-135.
- 8. Contributor to the Third Edition of: Power Electronics Handbook", Muhammad H. Rashid, Butterworth-Hinemann Publishing, 2011, pp. 1155-1176.
- 9. Contributor to the Second Edition of: Power Electronics Handbook", Muhammad H. Rashid, Academic Press, 2006.
- 10. Contributor to "The Power Electronics Handbook", Timothy L. Skvarenina, Editor-in-chief, CRC Press, 2002.
- 11. Contributor to "Comprehensive Dictionary of Electrical Engineering", Phillip Laplante, Editor-inchief, CRC Press, 1999.

Professional Interests:

- 1. Electric and Hybrid Electric Vehicles
- 2. Motors and generators, high speed, medium voltage, etc.

- 3. Auxiliary power generators
- 4. Condition monitoring and fault diagnosis of electric machinery
- 5. Sensors and Sensorless electric motor drive and spindle motors
- 6. Submersible motors and downhole equipment.
- 7. Magnetic gears
- 8. DSP-based power electronics systems
- 9. Novel electric machines for different applications
- 10. Electromechanical energy storage systems
- 11. Uninterruptible power supplies (UPS)
- 12. Power supplies
- 13. Power converters for electric machines including multilevel converters.
- 14. Distributed Energy Systems; Wind Mills, Microturbine, Solar
- 15. Smart Grids and their components
- 16. Active power filters for power systems network
- 17. Fuel cell operated electric motor drives

Educational Background:

Ph.D. in Electrical Engineering with specialization in Industrial Drives, Electrical Machines, Power Electronics, Power Systems and Control.

Ph.D. Dissertation: Analysis of Concentrated Winding Induction and Reluctance Motors for Adjustable Speed Drive Applications, University of Wisconsin-Madison, Madison, Wisconsin, USA; May 19, 1991

M.S. in Electrical Engineering

M.S. Thesis: Damping of Natural Mechanical Oscillations Using DC Modulation in a Multiterminal AC/DC System, West Virginia University, Morgantown, West Virginia, USA; May 1986

B.S. in Electrical Engineering Sharif University of Technology, Tehran, Iran; May 1982

Teaching:

I stress the use of interdisciplinary ideas in my teaching. Rather than teaching students to specialize in a narrow area, I try to provide valuable perspective on how ideas relate with concepts students have already seen in other classes. With these interdisciplinary goals in mind, I have purposely taught courses in two different areas within my department: power electronics, and electric machinery. I have developed and taught three new courses in the area of electromechanical motion devices. These are:

- 1. ECEN 611 General Theory of Electromechanical Motion Devices, 3 credits
- 2. ECEN 612 Computer Aided Design of Electromechanical Motion Devices, 4 credits
- 3. ECEN 442/742 DSP-Based Electromechanical Motion Control, 3 credits

August 2003- Present

Raytheon Professor of Electrical & Computer Engineering, Teaching undergraduate and graduate courses and performing research in Power Electronics and Electric Machinery, Texas A&M University, College Station, TX.

<u>August 2000- August 2003</u> Associate Professor of Electrical Engineering

January 1995- August 2000 Assistant Professor, of Electrical Engineering

March 1994- December 1994

Visiting Assistant Professor, Teaching Power Electronics and Electric Machines and performing research in the related fields, Texas A&M University, College Station, TX.

September 1991 - January 1994

Assistant Professor, Electrical Machines, Teaching Power Electronics, Modern Control courses at Graduate and Senior Undergraduate levels, conducting research in the related fields, developed two graduate courses in the area of electrical machinery and power electronics, Ferdowsi University of Mashhad, Mashhad, Iran.

September 1990 - December 1990 Teaching Assistant, ECE 504, "Electric Machine & Drive System Laboratory", 2-3 credits, senior/graduate course, UW-Madison, Madison, WI, USA

<u>June 1990 - August 1990</u> Teaching Assistant, ECE 306, "Linear active Circuits Laboratory", 1 credit, UW-Madison.

January 1990 - May 1990

Lecturer, ECE 511, "Analysis and Control of Synchronous Machines", 3 credits, senior/graduate course, UW-Madison.

<u>September 1987 - December 1989</u> Lecturer, ECE 375, "Electrical Engineering Laboratory II", UW Madison.

September 1979 - June 1980

Teaching Assistant of Electrical Measurement Laboratory, Sharif University of Technology, Tehran, Iran.

Industrial Experience:

January 1991 - May 1991

General Motors Corporation, Electro-Motive Division, LA Grange, IL, USA Worked on the EMD research project on the design of a concentrated winding machine for a DC locomotive traction alternator.

June 1989 - September 1989

Allen-Bradley Company, Motion Control Division, Milwaukee, WI, USA Worked on the improvement of a new product called: "High Performance AC Drive, Bulletin 1336".

June 1982 - February 1984

Engineering Department, Khorasan Regional Electric Company, Mashhad, Iran. Conducted design and construction of high voltage substations including the auxiliary power supplies.

June 1980 - December 1981

Electrical Engineering Division, Neka Thermal Power Plant Worked on the turbo-generator exciter and auxiliary systems such as inverters and rectifiers.

Awards/Honors:

- 1. **Patent and Innovation Award**, Texas A&M University System Office of Technology Commercialization's, 2020.
- 2. **Honorary Co-Chair**, 13th Edition of the IEEE International Symposium on Diagnostics for Electric Machines, Power Electronics and Drives (SDEMPED 2021), Aug. 22-25, Dallas, Texas.
- 3. **IEEE Fellow Committee**, IEEE Power Electronics Society, Oct. 2010-Dec. 2016.
- 4. **Patent and Innovation Award**, Texas A&M University System Office of Technology Commercialization's, 2018.
- 5. Best Paper Second Prize Award, IEEE IAS Electric Machines Technical Committee, 2016.
- 6. **Patent and Innovation Award**, Texas A&M University System Office of Technology Commercialization's, 2016.
- 7. **IEEE Nikola Tesla Field Award**, For outstanding contributions to the design, analysis and control of fault-tolerant multiphase electric machines, IEEE, \$10,000.0 prize award, 2014.
- 8. **Distinguished Lecturer**, IEEE Industry Applications Society, 2014-2015.
- 9. **Guest Co-Editor**, IEEE Journal of Emerging and Selected Topics in Power Electronics, Special Issue on Advanced Control of Electric Motor Drives, December 2013.
- 10. **Distinguished Lecturer**, IEEE Vehicular Technology Society, July 1, 2012- June 31, 2014.
- 11. **IEEE Fellow Committee**, IEEE Industry Applications Society, Oct. 2010-Dec. 2016.
- 12. **Best Paper Second Prize Award**, IEEE Industrial Electronics Society, Electrical Machine Technical Committee, IECON 2008.
- 13. **Raytheon Endowed Professor** of Electrical and Computer Engineering, 2008.

- 14. **IEEE Fellow** for "Contributions to the Design, Analysis and Control of Multi-Phase Fault Tolerant Electric Machines", 2007.
- 15. IEEE Industry Applications Society Executive Board, Member, Jan. 2008- Dec. 2009.
- 16. **Prize Paper Award**, IEEE Power Engineering Society (PES), 2007.
- 17. Prize Paper Award, IEEE Power Engineering Electric Machinery Committee, 2007.
- 18. **Patent and Innovation Award**, Texas A&M University System Office of Technology Commercialization's, 2007.
- 19. **TEES Fellow Award**, Texas Engineering Experiment Station (TEES), \$5000.0 prize award, Fall 2006.
- 20. Third Prize Transactions Paper Award, IEEE Industry Applications Society, 2006.
- 21. **Professional Engineer**, State of Texas, P.E. # 97974.
- 22. Chair, Industrial Power Conversion Systems Department of IEEE Industry Applications Society, 2008-2010.
- 23. **Outstanding Professor Award**, Department of Electrical and Computer Engineering, Texas A&M University, \$5000.0 prize award, Fall 2005.
- 24. **Cyrill Veinott Electromechanical Energy Conversion Award**, IEEE Power Engineering Society, \$5000 prize award, 2004.
- 25. **General Chair,** International Electric Machines and Drives Conference (IEEE-IEMDC'05), May 15-18, 2005, San Antonio, Texas.
- 26. **TEES Fellow Award**, Texas Engineering Experiment Station (TEES), \$5000.0 prize award, Fall 2004.
- 27. Listed in Marquis Who's Who is the World, 24th Edition, 2007.
- 28. Editor, IEEE Transactions on Energy Conversion, 2001-2010.
- 29. **Distinguished Achievement Award**, in recognition of distinguished achievements in teaching, Association of Former Students, Texas A&M University, Fall 2003, \$2000 prize award.
- 30. Associate Editor, IEEE Transactions on Power Electronics.
- 31. **E.D. Brockett Professorship Award,** Texas Engineering Experiment Station (TEES), \$4000.0 prize award, 2002-2003.
- 32. **Appeared on People's Agenda talk show** of KERA 90.1 Dallas/Fort Worth/Denton on "Fuel Cell Research and other Aspects of Automotive Research," January 7, 2003, 10:00 AM-11:00 AM.
- 33. **Member of Editorial Board**, The Institution of Engineering and Technology, Electric Power Applications, United Kingdom, Sep. 2007 Dec. 2013.
- 34. Member of Editorial Board, Electric Power Components and Systems Journal.
- 35. Member of Editorial Board, Journal of Electrical Engineering Romania.
- 36. Schlumberger Foundation Technical Awards, \$25,000 prize award, April 2001.
- 37. **Eugene E. Webb'43 Faculty Fellow Award**, Texas Engineering Experiment Station (TEES), , \$5000.0 prize award, for "Overall contribution to the Engineering Program including classroom instruction, scholarly activities and professional service", 2000-2001.

- 38. Select Young Investigator Award, Texas Engineering Experiment Station (TEES), \$5000.0 stipend, 1999.
- 39. Schlumberger Foundation Technical Awards, \$30,000.0 prize award, April 2000.
- 40. Space Act Award by NASA Inventions and Contributions Board, \$250.0 prize award, April 1999.
- 41. **Prize Paper Award,** Electric Machinery Committee of the IEEE Power Engineering Society, Best Transactions paper, 1996.
- 42. Listed in Marquis Who's Who in American Education, 6th Edition.
- 43. Member of ASEE, Nov. 1999.
- 44. Listed in Marquis Who's Who in Science and Engineering, 5th Edition.
- 45. Listed in Marquis Who's Who in Science and Engineering, 4th Edition.

Lectures and Short Courses:

- 1. Plenary Lecture, Kansas Power & Energy Conference 2021, Multi-input Multi-output ac Link Power Converter, Manhattan, KS, Apr. 19-20, 2021.
- 2. Plenary Lecture, NSF Workshop on Future and Opportunities for Power Electronics in an Electrified Transportation Industry, Washington, DC, Oct. 18-19, 2018.
- 3. Invited Webinar, IEEE Industry Applications Society, Nov. 1, 2017, Motivation for Magnetic Gear and Magnetically Geared Machines.
- 4. Invited seminar, May 11, 2017, Seoul, South Korea, Hyundai Motor Co., Recent Advances in Electric Machines and Power Electronics at EMPE Lab.
- 5. Invited Distinguished Colloquium Series Speaker, Apr. 28, 2017, ECE Dept., University of Maryland, College Park, MD, Compact Modular Medium Voltage Power Converters
- 6. Invited Seminar, Apr. 5, 2017, College Station, TX, Texas A&M, ECE Dept.- Analog Group, Recent Advances in Electric Machines and Power Electronics at EMPE Lab.
- 7. Invited seminar, Oct. 28, 2016, Dallas, TX, Unitron, Capacitor-less Power Converters.
- 8. Invited seminar, Oct. 27, 2016, Dallas, TX, Texas Instruments Inc., Permanent Magnet Assisted Synchronous Reluctance Motors.
- 9. Invited lecture, Feb. 17th, 2016, TVS Inc., Bengaluru, India, Recent Advances in Electric Machines.
- 10. Invited lecture, Dec. 18th, 2014, Emerson Electric Motors, St. Louis, MO, Permanent Magnet Assisted Synchronous Reluctance Machines (PMa-SynRM),
- 11. Invited lecture, IEEE PES General Meeting, July 27-31, 2014, National Harbor, MD, "Permanent Magnet Assisted Synchronous Reluctance Machine (PMa-SynRM) Design and Performance Analysis For Fan and Pump Applications'.
- 12. Invited seminar, SMMA'14, April. 22-24, Fort Myers, FL, "Design of Ferrite Assisted Synchronous Reluctance Motor (Fa-SynRM) with Aluminum Conductors in Stator".
- 13. Invited seminar, Prairie View A&M University, Feb. 10, 2014, Prairie View, TX, "Recent Advances in Electric Machines and Power Electronics for Renewable Energy Offshore Electric Power Grid".
- 14. Invited short course presented at the IEEE-APEC'13, March 17-21, 2013, Long Beach, CA, "ac-Link Universal Converters for Renewable energy and Transportation".

- 15. Invited seminar, University of Southern California, Los Angeles, CA, Jan. 11, 2013, "Recent Advances in Electric Machines and Power Electronics for Renewable Energy Offshore Electric Power Grid".
- 16. Keynote Speaker, JMAG User Conference, Detroit, Oct. 16, 2012, "Magnetic Gears".
- 17. Invited seminar, University of Texas San Antonio, Oct. 28, 2011, "Soft Switched High-Frequency Link dc/ac Converters for Subsea Applications".
- 18. Invited seminar, POSCO, Seoul, Korea, Aug. 19, 2011, "New Power Converters for Battery Energy Storage".
- Invited seminar, Samsung Advanced Research Institute of Technology (SAIT), Seoul, Korea, Aug. 18, 2011, "Recent Advances in Electric Machines and Power Electronics at EMPE Lab".
- 20. Invited seminar, Korea Railroad Research Center (KRRI), Seoul, Korea, Aug. 18, 2011, "Recent Advances in Electric Machines and Power Electronics at EMPE Lab".
- 21. Invited seminar, LGC R&D Center, Seoul, Korea, Aug. 17, 2011, "Electric Motors for Electric and Hybrid Electric Vehicles".
- 22. Invited seminar, LG Electronics, Seoul, Korea, Aug. 17, 2011, "Electric Motors and Power Converters for Electric Vehicles".
- 23. Invited seminar, Hanyang University, Seoul, Korea, Aug. 16, 2011, "Recent Advances in Electric Machines and Power Electronics at EMPE Lab".
- 24. Invited seminar, Hyundai Motor Co., Seoul, Korea, Aug. 16, 2011, "Recent Advances in Electric Machines and Power Electronics at EMPE Lab".
- 25. Invited seminar, Rensselaer Polytechnic Institute, Troy, NY, Sep. 23, 2010, "Condition Monitoring and Fault Diagnosis of Electric Machines".
- 26. Invited seminar, GE Global Research Center, Niskayuna, NY, Sep 24, 2010, "High Frequency Power Converters".
- 27. Invited Tutorial, IEEE 2010 Energy Conversion Conference and Exposition (ECCE'10), Atlanta, GA, Sep. 12, 2010, "Design and Control of Permanent Magnet Machines for Geared and Gearless Applications".
- 28. Invited seminar, Solar Turbines, San Diego, CA, Aug. 20, 2010, "Electric Machines and Power Electronics Review".
- 29. **Distinguished speaker**, University of Texas Arlington, March. 31, 2010, "Condition Monitoring and Fault Diagnosis of Electric Machines".
- 30. Invited seminar, General Electric Technology Center, Bangalore, India, March 8, 2010, "Recent Advances in Electric Machines Technologies".
- 31. Invited seminar, National Cheng Kung University, Tainan, Taiwan, Feb. 5, 2010, "A Novel Soft-Switched AC Link Converter".
- 32. Invited seminar, National Tshing Hua University, Hsinchu, Taiwan, Feb. 4, 2010, "Permanent Magnet Synchronous reluctance Machines".
- 33. Invited seminar, National Central University, Taoyuan, Taiwan, Feb. 3, 2010, "Fault Diagnosis and Condition Monitoring of Electric Machines".
- 34. Invited seminar, PSERC, "Recent Advances in Electric Energy Conversion and Storage," Sep. 1, 2009.

- 35. Invited seminar, Northeastern University, Boston, MA, May 26, 2009, "Energy Conversions, Transmissions, and Storage".
- 36. Panelist, IEEE-IECON'08, Nov. 10-13, 2008, Orlando, FL, "Recent Advances and Applications of Power Electronics and Motor Drives".
- 37. **Keynote speaker**, International Conference in Electric Machines and Systems (ICEMS'08), Oct. 17-19, 2008, Wuhan, China.
- 38. Invited seminar, Tsinghua University, Beijing, China, Oct. 15, 2008, "Advanced Electric Machines and Power Electronics Lab at TAMU".
- 39. Invited seminar, Ferdowsi University, Mashhad, Iran, June 1, 2008, "Advances in Power Electronics and Electric Machines".
- 40. Invited seminar, San Diego State University, San Diego, CA, April 15, 2008, "Recent Advances in Electric Machines and Power Electronics".
- 41. Invited seminar, General Atomics, San Diego, CA, April 14, 2008, "Recent Advances in Electric Machines and Power Electronics".
- 42. Invited seminar, University of Denver, Denver, CO, April 7-8, 2008, "Recent Advances in Electric Machines and Power Electronics".
- 43. Invited seminar, North Carolina University, Raleigh, NC, March 27, 2008, "Recent Advances in Electric Machines and Power Electronics".
- 44. Invited seminar, Northeastern University, Boston, MA, March 19, 2008, "Recent Advances in Electric Machines and Power Electronics".
- 45. Invited seminar at RDECOM Power & Energy IPT, Tactical Electronics and Rotating Machinery Workshop, 23-24 January 2008, "Feasibility Study of Novel Permanent Magnet Assisted Synchronous Reluctance Generators (PMa-SynRG)".
- 46. Invited seminar at TECO-Westinghouse, Round Rock, TX, November 20, 2007, "Research Activities at EMPE Lab".
- 47. Invited seminar at European Airspace and Defense Systems (EADS), Munich, Germany, May 25, 2007, "Fault Tolerant Motor Drives", Munich, Germany.
- 48. Invited tutorial at PCIM'07, Nuremberg, Germany, May 21, 2007, "Condition Monitoring, Fault Diagnosis, and Fault Tolerant Electric Motor Drives".
- 49. Invited seminar at Black & Decker Company, Baltimore, MD, May 14, 2007, "Design and Performance Improvement of Electromechanical Devices".
- 50. Invited seminar at United Technology Research Center (UTRC), Hartford, Connecticut, March 14, 2007, "Recent Advances in Modern Electric Machines and Power Electronics Converters".
- 51. Invited short course presented at the Army Research Lab (TARDEC), Jan. 10, 2007, Detroit, MI, "Vehicle Electric Power Generation and Distribution".
- 52. Invited seminar, King Mongkut Institute of Technology at Ladkrabang, Bangkok, Thailand, Dec. 15, 2006, "Recent Advances in Modern Electric Machines and Power Electronics Converters".
- 53. Invited seminar, Chiang Mai University, Chiang Mai, Thailand, Dec. 13, 2006, "Research Activities at Advanced Electric Machines & Power Electronics Laboratory of Texas A&M University".
- 54. **Keynote Speaker**, Ansoft Leading Insight Application Workshops for High-Performance Design, Detroit, Oct. 24, 2006.

- 55. Invited seminar, Air Force Research Lab, Albuquerque, NM, July 25, 2006, "Flywheel Energy Storage Systems, Condition Monitoring, Fault Diagnosis, and Fault Tolerant Electric Drives".
- 56. Invited seminar, Drexel University, Philadelphia, PA, April 13, 2006, "Recent Advances in Power Electronics and Motor Drives".
- 57. Invited seminar, Federal University of Rio de Janeiro, Rio de Janeiro, Brazil, April 1, 2006, "Flywheel Energy Storage Systems".
- 58. Invited seminar, Federal University of Santa Catarina, Florianopolis, Brazil, March 30, 2006, "Flywheel Energy Storage Systems".
- 59. Invited short course, WEG Industries, Jaragua del Sol, Brazil, March 28, 2006, "Permanent Magnet Assisted Synchronous Reluctance Motors for Low Cost Applications".
- 60. Invited seminar, WEG Industries, Jaragua del Sol, Brazil, March 27, 2006, "Flywheel Energy Storage Systems, for Land/Sea/Space Applications".
- 61. Invited seminar, Oregon State University, Corvallis, OR, March 17, 2006, "Flywheel Energy Storage Systems".
- 62. Invited short course presented at the Army Research Lab (TARDEC), Jan. 9, 2006, Detroit, MI, "Flywheel Energy Storage Systems, for Land/Sea/Space Applications".
- 63. Invited seminar, Universidad de Concepcion, Concepcion, Chile, Nov. 24-25, 2005, "Permanent Magnet Assisted Synchronous reluctance Motor Design and Performance Improvement" and "Design and Analysis of Three-Phase AC/AC Power Converters for AC Drives and Utility Interface".
- 64. Invited seminar, Universidad Tecnica Federico Santa Maria, Valparaiso, Chile, Nov. 28, 2005, "Recent Advances in Electric Machines & Power Converters in Advanced Electric Machines & Power Electronics Laboratory".
- 65. Invited seminar, University of Tehran, Tehran, Iran, Dec. 7, 2004, "Fault Tolerant Motor Drives for Hybrid Electric Vehicle Applications".
- 66. Invited seminar, Power System Conference (PSC'04), Tehran, Iran, Nov. 22-24, 2004, "Recent Advances in Wind Power Generations".
- 67. Invited lecture, LG Electronics, Home Appliance Research Laboratory, Seoul, Korea. Oct. 22, 2004, "Wind Power Generators and Converters".
- 68. Invited lecture, Korea University, Seoul, Korea, Oct. 22, 2004, "Fault Diagnosis of Electric Machines".
- 69. Invited lecture, Chungbuk University, Cheongju, Korea, Oct. 21, 2004, "Fault Diagnosis of Electric Machines".
- 70. Invited lecture, Pohang Technical University, Pohang, Korea, Oct. 19, 2004, "Fault Diagnosis and Fault Tolerant Electric Motor Drives".
- 71. Invited lecture, Pusan National University, Busan, Korea, Oct. 19, 2004, "Fault Diagnosis of Electric Machines".
- 72. Invited short course presented at 2004 International Conference on Power Electronics (ICPE'04), Oct. 18-22, Busan, Korea, "Fault Diagnosis and Fault Tolerant Electric Motor Drives".
- 73. Invited lecture, Illinois Institute of Technology, April 30, 2004, Chicago, IL, "A Novel Integrated Alternator/Active Filter for Wind Power Applications".

- 74. Invited lecture, University of Missouri-Rolla, April 28, 2004, Rolla, MO, "Fault Tolerant Matrix Converters".
- 75. Invited short course presented at the Army Research Lab (TARDEC), Jan. 14, 2004, Detroit, MI, "Reconfigurable Motor Drives and Power Electronics Based Architectures for Military Vehicles".
- 76. Invited short course presented at the IEEE-IECON'03, November 2-6, 2003, Roanoke, VA, "Applications of Power Electronics in Automotive Industry: State of the Art and Future Possibilities".
- 77. Invited lecture, Hyundai Motor Company, Advanced Technology Center, Seoul, Korea, July 16, 2003.
- 78. Invited lecture, LG Electronics, Home Appliance Research Laboratory, Seoul Korea. July 15, 2003.
- 79. Invited lecture, Samsung Electronics, Digital Appliance Research Laboratory, Seoul, Korea, July 16, 2003.
- 80. Invited short course, Korean Agency for Technology and Standards (ATS), Seoul, Korea, July 14, 2003.
- 81. Invited lecture, Korea Electronics Technology Institute (KETI), Seoul, Korea, July 14, 2003.
- 82. Invited lecture, Korea Electric Research Institute (KERI), Seoul, Korea, July 18, 2003.
- 83. Invited short course presented at the IEEE-APEC'03, February 9-13, 2003, Miami Beach, FL, "Synthesis of Advanced Control Methodologies for High Grade Adjustable Speed Motor Drives: Theory and Applications".
- 84. Invited short course presented at the Army Research Lab (TARDEC), Dec. 5, 2002, Detroit, MI, "Condition Monitoring and Fault Diagnosis of Electric Machines and Fault Tolerant Electric Machinery".
- 85. Invited short course presented at the IEEE-IECON'02, November 5-8, 2002, Seville, Spain, "Integration of Advanced Motion Control Devices in automotive Products: Design in the Context of the Application.
- 86. Invited short course presented at the IEEE-IAS, October 13-17, 2002, Pittsburgh, PA, "Selection, Design, and Control of Adjustable Speed Motor Drives for Stressful & Fault Tolerant Applications".
- 87. Invited short course presented at the IEEE Applied Power Electronics Conference and Exposition, March 10-14, 2002, Dallas, TX, "Sensorless Control of Adjustable Speed Motor Drives: State of the Art and Recent Advances"
- 88. Invited short course at Copeland Corporation, Sidney, OH, November 2, 2001, "Fault Diagnosis of Electric Machines".
- 89. Invited short course presented at the IEEE Applied Power Electronics Conference and Exposition, March 4-8, 2001, Anaheim, CA, "Current Intensive Motor Drives: A New Challenge in Automotive Applications"
- 90. Invited Tutorial at 2nd International Conference on Power Electronics Drives and Energy Systems for Industrial Growth, IEEE-PEDES'98, Perth, Australia, 1-3 Dec., "Condition Monitoring and Fault Diagnosis of Electric Machines & Transformers".
- 91. Invited Seminar at Small Motors & Motion Association, Nashville, TN, Nov. 12, 1998, "Adjustable Speed AC Motor Drives: Application Problems and Solutions".
- 92. Invited short course at Reliance Electric, Cleveland, OH, March 27, 1997, "Fault Diagnosis of Electric Machines".

- 93. Invited short course at Whirlpool Co, Benton Harbor, MI, Dec. 5-6, 1996, "Permanent Magnet Motors".
- 94. Invited short course at Texas Instruments INC., Dallas, TX, Jan. 26, 1996, "Switched Reluctance Motor Drives".
- 95. Invited short course at LeTourneau Inc., Longview, TX, Jan. 12, 1996, "Design and Control of Switched Reluctance Motors".
- 96. Invited short course at General Motors Mesa Desert Proving Ground, Phoenix, AZ, Oct. 27, 1995, "Electric Drives for Electric and Hybrid Vehicles".
- 97. Invited short course at General Motors Milford Proving Ground, Detroit, MI, Sep. 8, 1995, "Electric Drives for Electric and Hybrid Vehicles".
- 98. Invited short course at IEEE Applied Power Electronics Conference and Exposition, March 4, 1995, Dallas, "Electric Drives for Electric and Hybrid Vehicles".
- 99. Invited Speaker at IEEE Industry Applications Society, Dallas Section, "Power electronics and Electric Machines-A Technology Review, Feb. 21, 1995.

Journal Papers:

- 1. D. Talebi, M.C. Gardner, and **H.A. Toliyat**, An Asynchronously Excited Brushless Wound Field Synchronous Machine," To appear in IEEE Journal of Emerging and Selected Topics.
- 2. M. Johnson, M. Gardner, **H.A. Toliyat**, "A Parameterized Linear 3D Magnetic Equivalent Circuit for Analysis and Design of Radial Flux Magnetic Gears–Part II: Implementation," To appear in IEEE Transactions on Energy Conversion.
- 3. M. Johnson, M. Gardner, **H.A. Toliyat**, "A Parameterized Linear 3D Magnetic Equivalent Circuit for Analysis and Design of Radial Flux Magnetic Gears–Part I: Implementation," To appear in IEEE Transactions on Energy Conversion.
- 4. M. Gardner, M. Johnson, B. Praslicka, **H.A. Toliyat**, "Optimization of Coaxial Magnetic Gear Design and Magnet Material Grade at Different Temperatures and Gear Ratios," To appear in IEEE Transactions on Energy Conversion.
- 5. A.G. Yepes, J. Doval-Gandoy, and **H.A. Toliyat**, "Comparison of Stator Winding Connection in Multiphase Drives under Healthy Operation and With One Open Converter Leg," To appear in IET journal on Electric Power.
- 6. Q. Khan, S.S. Refaat, H. Abu-Rub, **H.A. Toliyat**, and M. Olesz, and A. Darwish, "Characterization of Defects Inside the Cable Dielectric with Partial Discharge Modeling," IEEE Transactions on Instrumentation and Measurement, Vol. 70, 2021.
- 7. O.C. Kivanc, S.B. Ozturk, , and **H.A. Toliyat**, "On-line Dead Time Compensator for PMSM Drive Based on Current Observer," Elsevier, Engineering Science and Technology, An International Journal of, May 26, 2021.
- 8. A.G. Yepes, J. Duval-Gandoy, and **H.A. Toliyat**, "Strategy with Smooth Transitions and Improved Torque-Speed Region and Stator Copper Loss for Two-Level Asymmetrical Six-Phase Induction Motor Drives under Switch Faults," IEEE Transactions on Power Electronics, Vol. 36, No. 2, Feb. 2021, pp. 1954-1969.
- 9. A.G. Yepes, J. Doval-Gandoy, and **H.A. Toliyat**, "Improvement in DC-Link Utilization with Reduced Current and Torque Deterioration for Five-Phase Machines with Circulating-Current Filters, IEEE Transactions on Industrial Electronics, Vol. 68, No. 2, Feb. 2021, pp. 960-971.

- K. Al Jaafari, and H.A. Toliyat, "Performance Analysis of Synchronous Generators under Stator Windings Ground Faults near the Star Point - Experimental Verification," IEEE Transactions on Energy Conversion, Vol. 35, No. 3, Sep. 2020, pp. 1402-1410.
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- M. Moosavi, F. Naghavi, and H.A. Toliyat, "A Scalable Soft-Switching Photovoltaic Inverter with Full-Range ZVS and Galvanic Isolation," IEEE Transactions on Industry Applications, Vol. 56, No. 4, Jul/Aug 2020, pp. 3919-3931.
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- 14. A. Yepes, J. Doval-Gandoy, and **H.A. Toliyat**, "Multifrequency Current Control for n-phase Machines Including Antiwindup and Distortion-Free Saturation with Full DC-Bus Utilization," IEEE Transactions on Power Electronics, Vol. 34, No. 10, Oct. 2019, pp. 9891-9905.
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- 19. A. Negahdari, A.G. Yepes, J. Doval-Gandoy, and **H.A. Toliyat**, "Efficiency Enhancement of Multiphase Electric Drives at Light-Load Operation Considering Both Converter and Stator Copper Losses," IEEE Transactions on Power Electronics, Vol. 34, No. 2, Feb. 2019, pp. 1518-1525.
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- M. Johnson, M. Gardner, H. A. Toliyat, S. Englebretson, W. Ouyang and C. Tschida, "Design, Construction, and Analysis of a Large Scale Inner Stator Radial Flux Magnetically Geared Generator for Wave Energy Conversion," IEEE Transactions on Industry Applications, Vol. 54, No. 4, July/Aug. 2018, pp. 3305-3314.

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- 39. S. Pakdelian, Y. Deshpande, and **H.A. Toliyat**, "Design of an Electric Machine Integrated with the Trans-Rotary Magnetic Gear," IEEE Transactions on Energy Conversions, Vol. 30, No. 3, Sep. 2015, pp. 1180-1191.
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- 42. B. Farhangi, and H.A. Toliyat, "Modeling and Analyzing Multi-port Isolation transformer Capacitive Components for Onboard Vehicular Power Conditioners," IEEE Transactions on Industrial Electronics, Vol. 62, No. 5, May 2015, pp.3134-3142.
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Conference Papers:

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- 2. S. Hasanpour, M. Johnson, M. Gardner, and **H.A. Toliyat**, "Comparison of Surface Permanent Magnet and Consequent Pole Radial Flux Cycloidal Magnetic Gears," To be presented at ECCE2021, Vancouver, Canada, Oct. 10-14, 2021.
- 3. D. Talebi, M.C. Gardner, **H.A. Toliyat**, A. Crapo, and P. Knauer, "Design of an Extremely Efficient, Rare-Earth Free, 5 kW Motor in a NEMA 210 Frame," To be presented at ECCE2021, Vancouver, Canada, Oct. 10-14, 2021.
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- 11. A. Darwish, S.S. Refaat, H. Abu-Rub, and **H.A. Toliyat**, "Partial Discharge Signal Propagation in Three-Phase Gas-Insulated Switchgear: CIGRE Recommendations-Based Analysis," Proceedings of the ECCE 2020, Detroit, MI, Oct. 11-15, 2020.
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- 13. Q. Khan, S.S. Refaat, H. Abu-Rub, and **H.A. Toliyat**, "Computational Model of Aging Dependability in Polymeric Cable Insulation," Proceedings of the IEEE Conference on Electrical Insulation and Dielectric Phenomena (CEIDP), 2020.
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- 340. R. Ghazi, **H.A. Toliyat**, S.M.R. Rafiei, "A Simple Fuzzy Logic Based Modulator for Sinusoidal PWM Inverters," Proceedings of the Third Iranian Conference on Electrical Engineering (ICEE'95), University of Science and Technology, Tehran, Iran, May 15-18, 1995, 29-35.
- H. A. Toliyat, and T. A. Lipo, "Transient Analysis of Cage Induction Machines Under Stator, Rotor Bar and End Ring Faults," IEEE-PES Summer Meeting Conference, Paper # 94SM361-6EC, July 1994.

- 342. H.A. Toliyat, and T.A. Lipo, "Analysis of Concentrated Winding Induction Machines for Adjustable Speed Drive Applications-Experimental Results," IEEE-PES Winter Meeting Conference, Paper # 94WM028-1EC, February 1994.
- 343. **H.A. Toliyat**, and S.M.R. Rafiei, "Instability and Chaos in Buck Converters- Two Dimensional Mapping," Proceedings of the Second Iranian Conference on Electrical Engineering (ICEE'94), Tarbiat Modaress University, Tehran, Iran, 1995.
- 344. S.M.R. Rafiei, **H.A. Toliyat**, and R. Ghazi, "A Fuzzy Pulse Width Modulator for Power Converters," Proceedings of the International Conference on Application of Fuzzy Systems (ICAFS'94), University of Tabriz, Tabriz, Iran, Oct. 14-17, 1994, pp. 101-110.
- 345. K. Rasul-Zadeh, and **H.A. Toliyat**, "Design and Fabrication of Induction Generators and Corresponding Static Converters for Wind Power Plants," (in Persian), Proceedings of the 8th International Power System Conference (PSC' 95), Tehran, Iran.
- 346. **H.A. Toliyat**, and J. Sadeh, "An Improved Fuzzy Logic Based PSS for Power System Stability Enhancement," Proceedings of the 9th International Power System Conference (PSC'94), St.-Petersburg State Technical University, St. Petersburg, Russia, 1994.
- X. Luo, Y. Liao, H.A. Toliyat, A. El-Antably, and T.A. Lipo, "Multiple Coupled Circuit Modeling of Induction Machines," IEEE-IAS Annual Meeting Conference, Toronto, Ontario, Canada, Oct. 2-8, 1993, pp. 203-210.
- 348. **H.A. Toliyat**, and M.M. Rahimian, "Transient and Steady State Analysis of Induction Machines Under Internal Faults," Research Report (in Persian), Department of Electrical Engineering, Ferdowsi University-Mashhad, Mashhad, Iran, June 1993.
- 349. **H.A. Toliyat**, M.M. Rahimian, and T.A. Lipo, "Analysis and Modeling of Five Phase Converters for Adjustable Speed Drive Applications," Proceedings of the 5th European Conference on Power Electronics and Applications (EPE'93), Sept. 13-16, 1993, pp. 194-199.
- 350. **H.A. Toliyat**, A. Hosseini, "Parameter Estimation Algorithm Using Spectral Analysis for Vector Controlled Induction Motor Drives," Proceedings of the IEEE International Symposium on Industrial Electronics (ISIE'93), Budapest, Hungry, June 1-3, 1993, pp. 90-95.
- 351. **H.A. Toliyat**, and M.M. Rahimian, "Transient Analysis of Induction Machines Under Internal Faults," Proceedings of the First Iranian Conference on Electrical Engineering (ICEE'93), Amir-Kabir University of Technology, Tehran, Iran, May 18-21, 1993.
- 352. H.A. Toliyat, and M.R. Rafiei, "Analysis and Compensation of Nonlinear Systems in Power Electronics," (in Persian), Proceedings of the First Iranian Conference on Electrical Engineering (ICEE'93), Amir-Kabir University of technology, Tehran, Iran, May 18-21, 1993.
- 353. H.A. Toliyat, M.M. Rahimian, S. Bhattacharya, and T.A. Lipo, "Transient Analysis of Induction Machines Under Internal Faults Using Winding Functions," Proceedings of the Third International Conference on Electrical Rotating Machines-ELROMA'92, Bombay, India, Jan. 15-16, 1992, Session IA, Paper #8.
- 354. **H.A. Toliyat**, M.M. Rahimian, and T.A. Lipo, "dq Modeling of Five Phase Synchronous Reluctance Machines Including Third Harmonic of Air-Gap MMF," Proceedings of the IEEE-IAS Annual Meeting Conference, October 1991, pp. 231-237.
- 355. **H.A. Toliyat**, T.A. Lipo, and J.C. White, "Analysis of a Concentrated Winding Induction Machine for Adjustable Speed Drive Applications- part I (Motor Analysis)," IEEE-PES Winter Meeting, 1991.

- 356. **H.A. Toliyat**, T.A. Lipo, and J.C. White, "Analysis of a Concentrated Winding Induction Machine for Adjustable Speed Drive Applications- part II (Motor Design and Performance)," IEEE-PES Winter Meeting, 1991.
- 357. **H.A. Toliyat**, L.Y. Xue, and T.A. Lipo, "A Five Phase Reluctance Motor with High Specific Torque," IEEE-IAS Annual Meeting Conference, October 1990, pp. 207-213.
- 358. M.A. Choudhry, and **H.A. Toliyat**, "Design of Decentralized Modulation Controllers in a Multiterminal AC/DC System using Dynamic Compensators," Proceedings of the North American Power Symposium, Ithaca, New York, Oct. 13-14, 1986, pp. 239-249.

Technical Reports:

- 1. A Low Cost Inverter with Battery Interface for Photovoltaic Utility System, California Energy Commission, July 2013.
- 2. A Smart Induction Motor with High Specific Torque, Office of Naval Research, July 2002.
- 3. Measurements of Electrical Power Inputs to Variable Speed Motors and their Solid State Power Converters, ASHRAE, RP-1095, July 2002.
- 4. The Technical and Economic Feasibility of a Freight Pipeline System in Texas- Year 2 Report, Texas Transportation Institute, The Texas A&M University System, TTI: 9-1519, September 2001
- 5. Feasibility Study of a Converter Optimized Induction Motor. Palo Alto, California; Electric Power Research Institute, January 1989, EPRI Final Report 2624-02.

Graduate Students Supervised or under Supervision:

Ph.D. Degrees

- 1. Logan Smith, Ph.D. student.
- 2. Seyed Mehdi Seyedi, Ph.D. student.
- 3. Bryton Praslicka, Ph.D. student.
- 4. Logan Smith, Ph.D. student.
- 5. Andrew Miller, Ph.D. student.
- 6. Farid Naghavi, Ph.D. student.
- 7. Mesaad Albader, Ph.D. student.
- 8. Ahmad Darwish, Ph.D. student.
- 9. Shima Hasanpour, Ph.D. student.
- 10. Dorsa Talebi, Ph.D. student.
- 11. Shrikesh Sheshaprasad, Ph.D. student.
- 12. Qasim Khan, Ph.D. student.
- 13. Matthew Gardner, Numerical and Experimental Analysis of Magnetic Gears, Ph.D. Dissertation, Texas A&M University, College Station, TX, August 2019.

- 14. Ajay Morya, Wide Bandgap Device Based Multiphase Motor Drive with High Acceleration Capability, Ph.D. Dissertation, Texas A&M University, College Station, TX, Dec. 2018.
- 15. Amir Negahdari, Efficiency and Reliability Enhancement of Multiphase Drive Schemes for Six-Phase Synchronous Motors, Ph.D. Dissertation, Texas A&M University, College Station, TX, Dec. 2018.
- Niloofar Torabi, Real-Time Machine Learning Based Open Switch Fault Detection and Isolation for Multilevel Multiphase Drives, Ph.D. Dissertation, Texas A&M University, College Station, TX, May 2018.
- 17. Bahareh Anvari, Design of Out Runner Electric Machines for Green Energy Applications, Ph.D. Dissertation, Texas A&M University, College Station, TX, Dec. 2017.
- 18. Morteza Moosavi, Soft-Switching High-Frequency Link Converters with Reduced Voltage Stress, Ph.D. Dissertation, Texas A&M University, College Station, TX, Dec. 2017.
- 19. Hussain A.I.A. Hussain, Linear Permanent Magnet Machines for Oil Pumping System, Ph.D. Dissertation, Texas A&M University, College Station, TX, May 2017.
- 20. Abdulkadir Bostanci, A System-based Modeling and Simulation of a Floating Production Storage and Offloading (FPSO) Electric Power Systems and Core Loss Analysis on a Small Scale Synchronous Generator and Induction Motor, Ph.D. Dissertation, Texas A&M University, College Station, TX, May 2017.
- 21. Matthew C. Johnson, Design and Analysis of axial and Radial Flux Magnetic gears and Magnetically Geared Machines, Ph.D. Dissertation, Texas A&M University, College Station, TX, May 2017.
- 22. Khalid Jaafari, Electromagnetic Analysis of Stator Ground Faults in Synchronous Generators, Ph.D. Dissertation, Texas A&M University, College Station, TX, Aug. 2016.
- 23. Vivek M. Sundaram, Reliable Multiphase Induction Motor Drives, Ph.D. Dissertation, Texas A&M university, College Station, TX, May 2016.
- 24. Jae-Bum Park, Multi-Phase fault Tolerant PMSM Drive System, Ph.D. Dissertation, Texas A&M University, College Station, TX, May 2015.
- 25. Yateendra Deshpande, Automated Design Optimization of Synchronous Machines: Development and Application of a Generic Fitness Evaluation Framework, Ph.D. Dissertation, Texas A&M University, College Station, TX, Dec. 2014.
- 26. Siavash Pakdelian, Trans-Rotary Magnetic Gear for Wave Energy Application, Ph.D. Dissertation, Texas A&M University, College Station, TX, Dec. 2014.
- 27. Robert Vartanian, Permanent Magnet Assisted Synchronous Reluctance Machine (PMa-SynRM) Design and Performance Analysis for Fan and Pump Applications, Ph.D. Dissertation, Texas A&M University, College Station, TX Aug. 2014.
- 28. Babak Farhangi, Power Conditioning for Plug-In Hybrid Electric Vehicles, Ph.D. Dissertation, Texas A&M University, College Station, TX Aug. 2014.
- 29. Hamidreza Keyhani, Fault-Tolerant Partial-Resonant High-Frequency AC-Link Converters and Their Applications, Ph.D. Dissertation, Texas A&M University, College Station, TX, May 2014.
- 30. Mahshid Amirabadi, Soft-Switching High-Frequency AC-Link Universal Power Converters with Galvanic Isolation, Ph.D. Dissertation, Texas A&M University, College Station, TX, August 2013.
- 31. Paul S. Moses, Ph.D. Thesis, Curtin University, Perth, Australia, Co-chair with Dr. M. Masoum, December 2011.

- 32. Mohammad B. Ebrahimi, Ph.D. Thesis, University of Tehran, Tehran, Iran, Co-chair with Dr. J. Faiz, 2011.
- 33. Nicolas Frank, Analysis of the Concentric Planetary Magnetic Gear, Ph.D. Dissertation, Texas A&M University, College Station, TX, May 2011.
- 34. Seungdeog Choi, Robust Condition Monitoring & Fault Diagnosis of Variable Speed Induction Motor Drives, Ph.D. Dissertation, Texas A&M University, College Station, TX, December 2010.
- 35. Jeihoon Baek, Robust Generator System using PM Assisted Synchronous Reluctance Generator with Current-Fed Drive, Ph.D. Dissertation, Texas A&M University, College Station, TX, December 2009.
- 36. Salman Talebi, Advanced High-Speed Flywheel Energy Storage Systems for Pulsed Power Applications, Ph.D. Dissertation, Texas A&M University, College Station. TX, December 2008.
- 37. Salih Baris Ozturk, Direct Torque Control of Permanent Magnet Synchronous Motors with Non-Sinusoidal Back-EMF, Ph.D. Dissertation, Texas A&M University, College Station, TX, May 2008.
- 38. Bilal Akin, Low Cost Motor Drive Embedded Fault Diagnosis Systems, Ph.D. Dissertation, Texas A&M University, College Station, TX, August 2007.
- 39. Shehab Ahmed, Compact Harsh Environment Energy Conversion Systems, Ph.D. Dissertation, Texas A&M University, College Station, TX, May 2007.
- 40. Payman Niazi, Permanent Magnet Assisted Synchronous Reluctance Motor Design and Performance Improvement, Ph.D. Dissertation, Texas A&M University, College Station, TX, December 2005.
- 41. Sang-Shin Kwak, Design and Analysis of Modern Three-Phase AC/AC Power Converters for AC Drives and Utility Interface, Ph.D. Dissertation, Texas A&M University, College Station, TX, May 2005.
- 42. Leila Parsa, Performance Improvement of Permanent Magnet AC Motors, Ph.D. Dissertation, Texas A&M University, College Station, TX, May 2005.
- 43. Lei Hao, Permanent Magnet AC Motor High-Speed Operation using Hybrid Observers, Ph.D. Dissertation, Texas A&M University, College Station, TX, December 2002.
- 44. Masoud Hajiaghajani, Fault Diagnosis of Electric Machines, Ph.D. Dissertation, Texas A&M University, College Station, TX, December 2002.
- 45. Tilak Gopalarathnam, New Solutions for Improved Unipolar-Excited Brushless Motor Drive, Ph.D. Dissertation, Texas A&M University, College Station, TX, May 2002.
- 46. Ruhe Shi, Vector Control of Five-Phase Synchronous Reluctance Machine with the Third Harmonic Current Injections for High Specific Torque, Ph.D. Dissertation, Texas A&M University, College Station, TX, December 2001.
- 47. Huangsheng Xu, Enhanced Rotor Field Oriented Control of Five-Phase Induction Motor with the Combined Fundamental and Third Harmonic Currents, Ph.D. Dissertation, Texas A&M University, College Station, TX, December 2001.
- 48. Shailesh Waikar, A Low-Cost Low-Loss Brushless Permanent Magnet Motor Drive, Ph.D. Dissertation, Texas A&M University, College Station, TX, May 2001.
- 49. Karim Abbaszadeh, Ph.D. Thesis, Amir-Kabir University of Technology, Tehran, Iran, Co-chair with Dr. J. Milimonfared.

- 50. Homayoun Meshgin-Kelk, 3-D Magnetic Equivalent Circuit Modeling of Induction Machines including the Rotor Bar Faults, Ph.D. Dissertation, Amir-Kabir University of Technology, Tehran, Iran, November 2000, Co-chair with Dr. J. Milimonfared.
- 51. Rajmohan Bharadwaj, Adaptive State Filtering with Neural Network for Sensorless Induction Motor Speed Estimation, Ph.D Dissertation, Texas A&M University, College Station, TX, December 2000, Co-chair with Dr. A.G. Parlos.
- 52. Subhasis Nandi, Fault Analysis for Condition Monitoring of Induction Motors, Ph.D. Dissertation, Texas A&M University, College Station, TX, May 2000.
- 53. Khwaja M. Rahman, Design and Control of Switched Reluctance Motor for Electric and Hybrid Electric Vehicle Application, Ph.D. Dissertation, Texas A&M University, College Station, Texas, December 1998, Co-chair with Dr. M. Ehsani.
- 54. S.M.R Rafiei, An Optimal and Flexible Control Strategy for Active Filtering and Power Factor Correction under Non-Sinusoidal Line Voltage, Ph.D. Dissertation, Ferdowsi University of Mashhad, Mashhad, Iran, May 2000, Co-chair with Dr. R. Ghazi.

M.S. Degrees

- 1. Yuming Chen, M.S. student.
- 2. Scott Tran, M.S. student, Co-Chair: L. San Andres.
- 3. Yichi Zhang, Efficiency Improvements of an Axial Flux Permanent Magnet Motor, M.S. thesis, Texas A&M University, College Station, TX, August 2019.
- 4. Amir Negahdari, Modeling and Experimental Verification of Adaptive 100% Stator Ground Fault Protection Schemes for Synchronous Generators, M.S. thesis, Texas A&M University, College Station, August 2017.
- 5. Yongqi Li, Real-Time Torque Ripple Minimization of Outer Rotor Switched Reluctance Motor, M.S. thesis, Texas A&M University, College Station, May 2016.
- 6. Esra Ozkentli, High Frequency Effects of Variable Frequency Drives (VFD) on Electrical Submersible Pump (ESP) Systems, M.S. thesis, Texas A&M University, College Station, August 2012.
- 7. Hussain Abdullah Hussain, Reduction of Shaft Voltages and Bearing Currents in Five Phase Induction Motor, M.S. Thesis, Texas A&M University, College Station, May 2012.
- 8. Vivek M. Sundaram, Diagnosis and Isolation of Air Gap Eccentricities in Closed-Loop Controlled Doubly-Fed Induction Generators, M.S. Thesis, Texas A&M University, College Station, May 2011.
- 9. Anil Chakali, Sensorless Speed Control of Permanent Magnet-Assisted Synchronous Reluctance Motor (PMa-SynRM), M.S. Thesis, Texas A&M University, College Station, December 2009.
- 10. Anand Balakrishnan, Soft Switched High Frequency AC-Link Converter, M.S. Thesis, Texas A&M University, College Station, December 2008.
- 11. Salih b. Ozturk, Modeling, Simulation and Analysis of Low-Cost Direct Torque Control of PMSM using Hall-Effect Sensors, M.S. Thesis, Texas A&M University, College Station, December 2005.
- 12. Rahul V. Khopkar, DC-DC Converter Current Source Fed Naturally Commutated Brushless DC Motor Drive, M.S. Thesis, Texas A&M University, College Station, August 2003.

- 13. Nasser Qahtani, Non-linear Analysis of advanced High-Phase Number Induction Machines for Adjustable Speed Drive Applications, M.S. Thesis, Texas A&M University, College Station, May 2002.
- 14. Rami Dabbousi, A 3-Phase AC to AC Matrix Converter using the Venturini Method, M.S. Thesis, Texas A&M University, College Station, Texas, May 2002.
- 15. Tahmid Ur Rahman, Parameter estimation of vector controlled induction machine, M.S. Thesis, Texas A&M University, College Station, Texas, December 2001.
- 16. Shehab Ahmed, Sensorless Performance Evaluation of Induction Motors, M.S. Thesis, Texas A&M University, College Station, Texas, December 2000.
- 17. Deepak S. Shet, Sensorless Position Estimation in Sinusoidal Permanent Magnet Synchronous Motor, M.S. Thesis, Texas A&M University, College Station, Texas, December 1998.
- 18. Nadira Sultana, Performance Analysis of Brushless Permanent Magnet Motor (BPM) using Load Commutated Inverter, M.S. Thesis, Texas A&M University, College Station, Texas, December 1997.
- 19. Nabil A. Al-Nuaim, Performance Analysis of Synchronous Machines under Dynamic Eccentricity, M.S. Thesis, Texas A&M University, College Station, Texas, December 1996.
- 20. S.Mohammad Reza Rafiei, "Active Power Filters using Fuzzy Controllers," M.S. Thesis, Ferdowsi University of Mashhad, Mashhad, Iran, May 1995, Co-chair with Dr. R. Ghazi.
- Nader Sargolzaei, "A Detailed Electric Machines Modeling Including Space Harmonics Using Winding Function Method," M.S. Thesis, Ferdowsi University of Mashhad, Mashhad, Iran, January 1995.
- 22. Javad Sadeh, "Power System Stability Enhancement Using Fuzzy Logic Control," M.S. Thesis, Ferdowsi University of Mashhad, Mashhad, Iran, January 1995.
- 23. Ali Hosseini, "On-line Parameter Estimation of Vector Controlled Induction Motor Drives," M.S Thesis, Ferdowsi University of Mashhad, Mashhad, Iran, August 1993.

B.S. Degrees

- 1. Marshall Avery, 2020.
- 2. Pouya Esfahani. 2020.
- 3. Daniel Zamarron, 2019.
- 4. Ellen Dangtran, 2019.
- 5. Jared Haley, 2019.

Visiting Scholars

- 1. Dr. Matthew Gardner, University of Texas Dallas, Sep. 2019- July 2020.
- 2. Jae-Ryung Lee, March 12, 2018 March 10, 2019, Hyundai Motor Group, Seoul, South Korea.
- 3. Dr. Alejandro Gomez-Yepes, Aug. 1, 2016 Aug. 30, 2018, University of Vigo, Vigo, Spain.
- 4. Dr. Yateendra Deshpande, Jan. 2015 Aug. 2015, Texas A&M University, College Station, TX.
- 5. Dr. Poopak Roshanfekr Fard, Jan. 2015 June 2015, Chalmers University, Gothenburg, Sweden.
- 6. Prof. Dong-Myung Lee, Feb. 2012-Sep. 2012, Hongik University, Seoul, Korea.

- 7. Prof. Hasan Moradi, Nov. 2010-August 2011, Shahid Beheshti University, Tehran, Iran.
- 8. Prof. Peter Omand Rasmussen, May-July 2008, Aalborg University, Denmark.
- 9. Dr. Yuttana Kumsuwan, Oct. 2007- March 2008, Chiangmai University, Thailand.
- 10. Dr. Jung-Chul Kim, LG Electronics, 2006-June 2008, Korea.
- 11. Prof. Oh Yang, School of Electronics and Information Engineering, Cheong Ju University, March 2006-March 2007, Korea.
- 12. Dr. Nam-Hun Kim, Department of Electrical Engineering, Yeungnam University, Sep. 2004-July 2007, Korea.
- 13. Dr. Reginaldo Sousa Miranda, Sep. 2006-Dec. 2006, Federal University of Campina Grande, Brazil.
- 14. Prof. Euzeli Cipriano dos Santos Junior, Sep. 2006- March 2007, Federal University of Campina Grande, Brazil.
- 15. Dr. Chang-Ho Choi, June 2003-July 2006, POSCON Co., Korea.
- 16. Dr. Isaac Soares de Freitas, Sep. 2006-Aug. 2007, Federal University of Campina Grande, Brazil.
- 17. Prof. Chang Seop Koh, February 2003-May 2004, Chungbuk National University, Korea.
- 18. Prof. Houcine Zeroug, October 1, 2002-February 2004, Department of Electrical Engineering, Faculty of Electrical Engineering, U.S.H.B, Algiers, Algeria, Fulbright Scholar.
- 19. Prof. Seok-Kwon Jeong, March 2001-February 2003, School of Mechanical Engineering, Pukyong National University, Korea
- 20. Dr. Syed Mohammad Madani, October 2000-January 2003, Department of Electrical Engineering, Eindhoven University, Netherlands.
- 21. Prof. Sergio Cruz, September 2002- January 2003, Department of Electrical and Computer Engineering, Coimbra, Portugal.
- 22. Prof. Karim Abbaszadeh, January 2002-December 2002, Department of Electrical Engineering, Amir-Kabir University of Technology, Tehran, Iran.
- 23. Prof. Haithem Abu-Rub, January 2001- December 2001, Department of Electrical Engineering, Bir Zeit University, West Bank, Israel, Fulbright Scholar.
- 24. Prof. Mohab Hallouda, July 2000-September 2000, Department of Electrical Engineering, Cairo University, Egypt.
- 25. Dr. Ali S. Ba-thunya, Feb. 2000-December 2000, Department of Electrical Engineering, University of Aden, Yemen.
- 26. Prof. Kexin Wei, July 2000-December 2001, Tianjin Professional College, China.
- 27. Dr. Jin Hur, July 1999-September 2000, Department of Electrical Engineering, Hanyang University, Seongdong-Gu, Korea.
- 28. Prof. Homayoun Meshgin-Kelk, January 2000-August 2000, Department of Electrical Engineering, Amir-Kabir University of Technology, Tehran, Iran.

Membership in Professional and Honorary Societies:

1. Associate Editor, IEEE Journal of Emerging and Selected Topics in Power Electronics.

- 2. Member, Technical Committee, 11th International Conference on Power Electronics, Drive Systems, and Technologies (PEDSTC 2020), Tehran, Iran, Feb. 4-6, 2020.
- 3. Member, Advisory Board in the IES-IEEE 14th International Conference on Compatibility, Power Electronics and Power Engineering (CPE-POWERENG2020), Setubal, Portugal, April 1-3, 2020.
- 4. Member, Technical Program Committee, IEEE International Power Electronics and Application Conference and Exposition-PEAC'2018, Shenzhen, China, Nov. 4-7, 2018.
- 5. Member, International Advisory Board, IEEE CPE-POWERENG 2018 (12th International Conference on Compatibility, Power Electronics and Power Engineering), Doha, Qatar, April 10-12, 2018.
- 6. Member, International steering Committee, IEEE International Conference on Power Electronics, Drives and Energy Systems (IEEE PESES 2016, Trivandrum/Kovalam, Kerala, India, Dec. 14-17, 2016.
- 7. **Co-Chair International Steering Committee**, IEEE International Future Energy Electronics Conference (IFEEC), Kaohsiung, Taiwan, May 21-24, 2017.
- 8. **Nominating Chair**, IEEE Industry Applications Society, Industrial Power Conversion Systems Department (IPCSD).
- 9. Member of International Steering Committee, IEEE International Future Energy Electronics Conference (IFEEC), Taipei, Taiwan, Nov. 1-4, 2015.
- 10. Member of the Advisory Committee, IEEE-IEMDC 2015, Coeur d'Alene, ID, May 10-13, 2015.
- Member of scientific Committee, Joint 1st International Conference on Applied Automation and Industrial Diagnostic (ICAADI 2015) and the 2nd International Conference on Power Electronics and Their Applications (ICPEA 2015), Djelfa, Algeria,
- 12. Member of Technical Committee, The Fifth Power Electronics, Drive Systems & Technologies Conference (PEDSTC'14), Tehran, Iran, Feb. 5-6, 2014.
- 13. **Guest Co-Editor**, IEEE Journal of Emerging and Selected Topics in Power Electronics, Special Issue on Advanced Control of Electric Motor Drives, December 2013.
- 14. **Co-Chair International Steering Committee**, IEEE International Future Energy Electronics Conference (IFEEC), Tainan, Taiwan, Nov. 3-6, 2013.
- 15. Member of the Steering Committee, Innovations in Energy, Power and Electrical Machines Conference (IEPEM-2013), Istanbul, Turkey, September 5-7, 2013.
- 16. **Chair**, IEEE-PES EMC Motor Subcommittee Working Group on Condition Monitoring of Electrical Machines, Jan. 2011 present.
- 17. Member of the International Scientific Committee, 13th Scientific Conference Electric Power Engineering 2012, Brno, Czech Republic, May 23-25, 2012.
- 18. Member of Technical Program Committee, 2nd Power Electronic, Drive Systems & Technologies Conference (PEDSTC2012), Feb 16-17, 2012, Tehran, Iran.
- 19. Session Chair, IEEE-IEMDC 2011, Miami, FL.
- 20. Member of Program Committee of EPA 2011, Dec. 6-8, 2011, London, England.
- 21. Member of Technical Program Committee of the 2011International Conference & Exhibition on Ecological Vehicles & Renewable Energies, March 31-April 3, 2011, Monaco.

- 22. Member of Technical Program Committee, 2nd Power Electronic, Drive Systems & Technologies Conference (PEDSTC2011), Feb 16-17, 2011, Tehran, Iran.
- 23. Member of the Technical Program Committee of the 2009 IEEE 6th International Power Electronics and Motion Control Conference (IPEMC 2009), May 17-20, 2009, Wuhan, China.
- 24. Member of the International Program Committee of the IASTED International Conference on Modern Nonlinear Theory, Nov. 16-18, 2008, Orlando, FL.
- 25. Member of the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) standard, SSPC41, Standard Methods of Measurement.
- 26. Member of the International Steering Committee of ICEMS'2008, Oct. 17-20, 2008, Wuhan, China.
- 27. Chair Industrial Power Conversion Systems Department of IEEE Industry Applications Society, 2007-2009.
- 28. Vice-Chair Industrial Power Conversion Systems Department of IEEE Industry Applications Society, 2006-2007.
- 29. Chairman, Electric Machines Committee of IEEE Industry Application Society, 2003-2005.
- 30. Member of the Organizing Committee of the 12th Biennial IEEE Conference on Electromagnetic Field Computation (CEFC 2006)
- 31. Member of the International Scientific Committee of 20th International Congress and Exhibition on Condition Monitoring and Diagnostic Engineering Management (COMADEM'2007), Faro, Portugal, June 13-15, 2007.
- 32. Vice-chairman of Electric Machines Committee of the IEEE Industry Applications Society, 2001-2003
- 33. Member of Technical Committee of the 5th International Power Electronics and Motion Control Conference (IPEMC2006), Shanghai, China, August 2006.
- 34. Member of Steering Committee of IEEE-IEMDC Conference, 2003-2005.
- 35. Member of the International Steering Committee, The Eighth International Conference on Electrical Machines and Systems (ICEMS'2005), Sep. 27-29, 2005, Nanjing, China.
- 36. Member of the Technical Program Committee of the 4th International Power Electronics and Motion Control Conference, August 14-16, 2004, Xi'an, China.
- 37. Special Session Chair, 4th International Symposium on Diagnostics for Electric Machines, Power Electronics and Drives (SDEMPED'03), Atlanta, GA, August 24-26, 2003.
- 38. Member of the IEEE-IEMDC'03 Steering Committee, Madison, WI.
- 39. Member of the Technical Program Committee, IAS'02, Pittsburgh, PA.
- 40. Member of IEEE-IAS'02 Technical Program Committee
- 41. Member of IEEE-APEC'02 Program Committee.
- 42. Member of Industrial Drives Committee of the IEEE Industry Applications Society
- 43. Member of the IEEE-IEMDC'01 Organizing Committee.
- 44. Secretary of Induction Machine Subcommittee of Electric Machinery Committee of IEEE Power Engineering Society.
- 45. Member of IEEE-APEC'01 Program Committee.

- 46. Chairman of Standard Subcommittee of Electric Machines Committee of the IEEE Industry Application Society.
- 47. Member of Induction Machinery Subcommittee of Electric Machinery Committee of IEEE Power Engineering Society.
- 48. Member of IEEE-APEC'00 Program Committee.
- 49. Member of the Technical Program Committee of the ICPE'98, Seoul, Korea, Oct. 26-31.
- 50. Member of IEEE-APEC'99 Program Committee.
- 51. Member of IEEE-APEC'97 Program Committee.
- 52. Member of the International Steering Committee of the 1997 IEEE International Symposium on Diagnostics for Electrical Machines, Power Electronics and Drives, Carry-le-Rouet, France.
- 53. Senior Member of IEEE, 1996-2008.
- 54. Member of Sigma Xi, the Scientific Research Society.
- 55. Member of Phi Beta Delta Honor Society for International Scholars.
- 56. Listed in the 2000 Outstanding Scientist of the 20th Century.

University Services:

- 1. **Tenure and Promotion Committee**, Member, Department of Electrical & Computer Engineering, Texas A&M University, Jan. 1, 2020-present.
- 2. Faculty Host for the Summer 2019 International Research Internship Program, Texas A&M University.
- 3. Seminar & Distinguished Speaker Committee, Member, Department of Electrical & Computer Engineering, Texas A&M University, Sep. 1, 2017- Aug. 31, 2020.
- 4. Reviewer for U.S. Department of Energy Office of Technology Transitions, May 2017.
- 5. Reviewer for the Texas A&M University Office of Graduate and Professional Studies (OGAPS) Diversity Fellowship Program, 2017-2018.
- 6. **Tenure and Promotion Committee,** Member, Department of Electrical & Computer Engineering, Texas A&M University, Jan. 1, 2016- Dec. 31, 2017.
- 7. Member of University Honor Program, 2016.
- 8. Reviewer for the Texas A&M University Office of Graduate and Professional Studies (OGAPS) Diversity Fellowship Program, 2016-2017.
- 9. Member of TEES Center for Infrastructure Renewal Hiring Committee, Texas A&M University, 2015.
- 10. **Graduate Studies Committee**, Member, Department of Electrical & Computer Engineering, Texas A&M University, 2013-2014.
- 11. **Undergraduate Studies Committee**, Member, Department of Electrical and Computer Engineering, Texas A&M University, Sep. 1, 2014-Aug. 31, 2017.
- 12. Seminar Committee, Member, Department of Electrical and Computer Engineering, Texas A&M University, Sep. 1, 2015-Aug. 31, 2017.

- 13. **Tenure and Promotion Committee,** Member, College of Engineering, Texas A&M University, Sep. 1, 2010 Aug 30, 2012.
- 14. **Tenure and Promotion Committee,** Member, Department of Electrical & Computer Engineering, Texas A&M University, Jan. 1, 2009- Dec. 31, 2010.
- 15. Awards Committee, Member, Department of Electrical & Computer Engineering, Texas A&M University, 2008-2009.
- 16. College of Engineering Honors and Awards Committee, Member, 2006-2009.
- 17. Faculty Senate, Member, Texas A&M University, 2006 2013.
- 18. Awards Committee, Member, Department of Electrical & Computer Engineering, Texas A&M University, 2005-2006.
- 19. Undergraduate Summer Research Grant Program, Member, 2001 and 2002.
- 20. Served on the Texas A&M University Center for Energy Resources Program, Proposal review panel, 1998.
- 21. Council of Principal Investigators, Member, Texas A&M University.
- 22. Electric Power and Power Electronics (EPPEI) Member.
- 23. Texas A&M Metermens School Lecturer.

Services:

- 1. Reviewer for the US Civilian Research and Development Foundation
- 2. Reviewer for the National Research Foundation (NRF) of South Africa
- 3. Reviewer for IEEE Transactions on Industry Applications.
- 4. Reviewer for IEEE Transactions on Power Electronics.
- 5. Reviewer for IEEE Transactions on Energy Conversions.
- 6. Reviewer for Electric Power Systems Research Journal.
- 7. Reviewer for the Iranian Journal of Electrical and Computer Engineering
- 8. Reviewer for IEEE-APEC 1996-2002 Conferences.
- 9. Reviewer for IEEE Industry Applications Society Annual Meetings.
- 10. Reviewer for IEEE-IEMDC Conferences
- 11. Reviewer for IEEE-PESC Conferences.
- 12. Served on the National Science Foundation SBIR Review Panel, 1997.
- 13. Reviewer for the 5th International Conference on Modeling and Simulation of Electric Machines, Converters and Systems, Saint-Nazaire, France.

Consulting:

- 1. US Hybrid, Torrance, CA, Electric Machines for Air Taxies, Fall 2019.
- 2. Linear Labs, Evaluating Electric Motor, Spring 2016.

- 3. Energy Storage Solutions, Design of Synchronous Reluctance Motor/Generator for High Speed Flywheel Energy Storages, Fall 2012.
- 4. Vestas Technology R&D Americas, Fault Diagnosis of Permanent Magnet Machines, Fall 2011.
- 5. TVS Motor Co., Design of Motor Drive for Hybrid Vehicles, Fall 2010-present.
- 6. General Electric, Condition Monitoring and Fault Diagnosis of Electric Machines, Fall 2010.
- 7. FMC Technologies, Evaluating Offshore Power Systems, Fall 2010-Spring 2012.
- 8. Kleiner-Perkins, Evaluating Wind Turbine Generators Technologies, Spring 2010.
- 9. Direct Drive Systems (DDS), Evaluating High Speed Permanent Magnet Technology, Summer 2009.
- 10. Guideline Inc, Chicago, IL, Evaluating business plan, Fall 2007.
- 11. Schlumberger, Houston, TX, Cameron Test Facility power system issues, Summer 2007.
- 12. WEG, Brazil, Electric motors for special applications, Fall 2006.
- 13. General Atomics, San Diego, CA, Fall 2004.
- 14. LG Electronics, Seoul, Korea, Design of electric machines, Summer 2005.
- 15. Schlumberger, Houston, TX, New power converters and electric motors for oil well applications, Fall 2004.
- 16. Calnetix, Cerritos, CA, Power converters for high speed permanent magnet generators, Spring 2004.
- 17. US Hybrid, Torrance, CA, Control of power converters for scooter applications, 2003-2004.
- 18. Research Sciences, Titusville, FL, New converter topologies for auxiliary power supplies, 2003.
- 19. PAR Systems, Shoreview, MN., Sensorless control of permanent magnet machines for robotic applications, 2002.
- 20. Whirlpool Co., Benton Harbor, MI, Power converters and motor drives for washing machines, 1995-1998.
- 21. LeTourneau Inc, Longview, TX, Switched reluctance motor drives for heavy trucks, 1995-1996.
- 22. Vornado, Andover, KS, Suppressing of noise in electric fans, Spring 2001.
- 23. Tech Power Control, Houston, TX, Vector control of induction machines for oil well applications, 2001.
- 24. Delphi Engine and Energy Management Systems, Indianapolis, IN, The design and development of innovative optimization control techniques for single stator-dual rotor machines, 2002.
- 25. Texas Instruments, Inc., Dallas, TX, Power supplies and motor drives for HP color printers, 1996.
- 26. U.S. Electric Car, Inc., Torrance, CA, Switched reluctance motor drives for power steering applications, Fall 1998.
- 27. Diablo Research Co., Sunnyvale, CA, Low-cost motor drives for furnace applications, Spring 1999.
- 28. Kathy Instruments, Houston, TX, Assessment of current sensor accuracy for power converter applications, Fall 1998.
- 29. Goulds Pumps, Auburn, NY, Vector control of three-phase induction machines for pumps applications, Summer 1999.
- 30. Enova, Torrance, CA, Cogging torque reduction of interior permanent magnet motor drives, Summer 2001.

31. National Oil Well, Houston, TX, Power factor correction for power converters, 2001-2003.

Graduate Students Committee Member:

- 1. Lucas Perkins, Advisor: Dr. Palazzolo, Department of Mechanical Engineering.
- 2. Onesi Daniels, M.S. Student, Advisor: M. Ehsani, Department of Electrical and Computer Engineering.
- 3. Xu Feng, M.S. Student, Advisor: M. Ehsani, Co-Advisor: H.A. Toliyat, Department of Electrical and Computer Engineering.
- 4. Anshuman Swain, M.S. student, Advisor: S. Gopalswamy, Department of Mechanical Engineering.
- 5. Zeeshan Khavar, M.S. student, Advisor: W. Kim, Department of Mechanical Engineering.
- 6. Kevin Hodge, M.S. student, Advisor: P. Enjeti, Department of Electrical and Computer Engineering.
- 7. Robert S. Lipham, M.S. student, Advisor: W. Kim, Department of Mechanical Engineering.
- 8. Farid Saemi, M.S. student, Advisor: M. Benedict, Department of Aerospace Engineering.
- 9. Riley S Kilfoyle, M.S. student, Advisor: M. Ehsani, Department of Electrical and Computer Engineering.
- 10. Mine Kaya, Ph.D. student, Advisor: Shima Hajimirza, Department of Mechanical Engineering.
- 11. Sunsoo Kim, Ph.D. student, Advisors: S. Bhattacharyya and R. Bhattacharya, Department of Electrical and Computer Engineering.
- 12. Jiayuan Zhang, Ph.D. student, Advisors: Dr. M. Ehsani and Dr. Wei Zhan, Fault Tolerant Control of PMSM with Inter-Turn Short Circuit, Department of Electrical and Computer Engineering, May 2019.
- 13. Sangjin Han, Ph.D. student, Advisor: S.P. Bhattacharyya, Robust and Optimal PID Controller Synthesis for Liner Time Invariant Systems, Department of Electrical and Computer Engineering, May 2019.
- 14. Yashu Li, Finite Element Analysis of Motor Eccentric Forces and Effects on Vibration, Ph.D. dissertation, Advisor: Dr. A. Palazzolo, Department of Mechanical Engineering, May 2019.
- 15. Xiaojun Li, Design and Development of Next generation Energy storage Flywheel, Ph.D. dissertation, Advisor: Dr. Palazzolo, Department of Mechanical Engineering, May 2018.
- Woolim Hong, Transfemoral Prosthesis Control for Inclined Walking using Impedance Control and Bewier Based Optimization, M.S. thesis, Advisors, S. Bhattacharyya and P. Hur, Department of Electrical and Computer Engineering, Dec. 2017
- 17. Bahaa Eldeen Hafez, Ph.D. dissertation, Advisors: Drs. P. Enjeti and Dr. S. Ahmed, Department of Electrical and Computer Engineering.
- 18. Jose J. Sandoval, Analysis and Design of New Three-Phase ac to dc Rectifier Systems with Higher Frequency Isolation, Ph.D. dissertation, Advisor: Dr. P. Enjeti, Department of Electrical and Computer Engineering, May 2017.
- 19. Gihyeob An, Collision Cone-Based Lane Changing Model for Advantageous Driving, M.S. thesis, Advisor: Dr. S. Bhattacharyya, Department of Electrical and Computer Engineering, Aug. 2017.

- 20. Bradford Stricklin, Design and Control of a High-Precision, High-Power Density Permanent-Magnet ac Motor using a Halbach Magnet Array, M.S. thesis, Advisor: Won-Jong Kim, Department of Mechanical Engineering, Dec. 2017.
- 21. Andrew Nelson, Precision Position Control using an RGB Sensor and Linearized Output Variable-Intensity Color Array, M.S. thesis, Advisor: Won-Jong Kim, Department of Mechanical Engineering, Aug. 2017.
- 22. Young-shin Kwon, Development of Double-Sided Interior Permanent Magnet Flat Linear Brushless Motor and its Control using Linear Optical Potentiometer, Ph.D. dissertation, Advisor: Dr. Wonjong Kim, Department of Mechanical Engineering, Aug. 2016.
- 23. Weiran Dai, Advanced Active Output Filter for Low Acoustic Noise Adjustable Speed Drive (ASD) System, M.S. thesis, Advisor: P. Enjeti, Department of Electrical and Computer Engineering, Aug. 2016.
- 24. Ahmed M.S. Morsy, Design Optimization and Control of High Power Density Converters using Wide Band Gap Devices, Ph.D. dissertation, Advisor: Dr. P. Enjeti, August 2016.
- 25. Vu H. Nguyen, Design and Validation of a Universal Framework for Linear Motors and Multi-axis Stages with Magnetic Levitation, Ph.D. dissertation, Advisor: Dr. Won-Jong Kim, Department of Mechanical Engineering, Dec. 2015.
- 26. Xu Han, Analysis and Simulation of Mechanical Driven Trains by Variable Frequency Drive System, Ph.D. dissertation, Advisor: Dr. Alan Palazzolo, Department of Mechanical Engineering, Texas A&M University.
- 27. Harish S. Krishnamoorthy, Power Electronic Topologies with High Density Power Conversion and Galvanic Isolation for Utility Interface, Ph.D. dissertation, Advisor: Dr. P. Enjeti, May 2015.
- 28. Adrian Israel Colli Menchi, High Efficiency Switching Systems Class-D Amplifier and Buck Converter, Advisor: Dr. E. Sanchez, May 2015.
- 29. Xiaohua Zhang, Small Engine Flash Vapor JP-8 Fuel Injector Testing, Simulation and Development, Dr. Alan Palazzolo, Department of Mechanical Engineering, Texas A&M University, Dec. 2014.
- 30. Ruikang Zhu, Repetitive Control of a Novel Linear Magnetostrictive Actuator, M.S. thesis, Advisor: Dr. Won-jong Kim, Department of Mechanical Engineering, Texas A&M University, Aug. 2014.
- 31. Mesaad Albader, Advanced Three Phase Power Factor Correction Schemes for Utility Interface of Power Electronics Systems, M.S. students, Advisor: Dr. P. Enjeti, Aug. 2014.
- 32. Jose-Christian Silva-Rivas, Control and Optimization of a Compact 6-Degree-of-Freedom Precision Positioner using Combined Digital Filtering Techniques, M.S. student, Advisor: Dr. Won-jong Kim, Department of Mechanical Engineering, Texas A&M University.
- 33. Reza Muhammad Abdullah, Instrumentation Amplifiers for Bio-potential Signal Acquisition, M.S. Student, Advisor: Dr. E. Sanchez.
- 34. Eddy Aeloiza, Analysis and Design of New harmonic Mitigation Approaches, Ph.D. Dissertation, Advisor, Dr. Prasad Enjeti, Department of Electrical and Computer Engineering, Texas A&M University, Dec. 2012.
- 35. Jose Silva, M.S. student, Advisor: Dr. Won-jong Kim, Department of Mechanical Engineering, Texas A&M University, Dec. 2011.
- 36. Jason Wardlow, Energy Harvesting for Self-Powered Wireless Sensors, Ph.D. student, Advisor: Dr. Aydin Karsilayan, Dec. 2011.

- 37. Ang Li, M.E. student, Advisor: Dr. Won-jong Kim, Department of Mechanical Engineering, Texas A&M University, May 2011.
- 38. Divya Balakrishnan, Capacitor-less VAR Compensator Based on a Matrix Converter, M.S. student, Advisor: Dr. Robert Balog, Department of Electrical and Computer Engineering, Texas A&M University, Dec. 2010.
- 39. Naveen Kumar Bibinagar, Robustness of a Ethernet-Based Real-Time Networked Control Sysytem with Multi-Level Client/Server Architecture, M.S. student, Advisor: Dr. Won-jong Kim, Department of Mechanical Engineering, Texas A&M University, Aug. 2010.
- 40. Mohamed El-Nozahi, System and Circuit Design Technologies for Silicon-Based Multi-Band/Multi-Standard Receiver, Ph.D. Dissertation, Advisors: Drs. Kamran Entesari and Edgar Sanchez, Texas A&M University, College Station, Texas, May 2010.
- 41. Ali Sadighi, Ph.D. Dissertation, Advisor: Dr. Won-jong Kim, May 2010.
- 42. Ryan S. Hutcheson, Function-Based Design Tools for Analyzing the Behavior and Sensitivity of Complex Systems during Conceptual Design, Ph.D. Dissertation, Department of Mechanical Engineering, Texas A&M University, College Station, Texas, May 2009, Advisor: Dr. Daniel McAdams.
- 43. Maja Harfman Todorovic, Ph.D. Dissertation, Advisor: Dr. Prasad Enjeti, Dec. 2007.
- 44. Alex Skorcz, M.S. student, Performance Evaluation of an Active Filter Non-Regenerative ac Drive, Advisor: Dr. M. Ehsani, December 2007.
- 45. Leonardo Palma, Design Consideration for DC-DC Converters in Fuel Cell Systems, Ph.D. Dissertation, Texas A&M University, College Station, Texas, December 2006, Advisor: Dr. Prasad Enjeti
- 46. Yamin Qaisar Durrani, "Analysis of Silicon Carbide Based Semiconductor Power Devices and Their Application in Power Factor Correction," Texas A&M University, College Station, TX, May, 2005, M.S. student, Adviser: Dr. Prasad Enjeti
- 47. Sebastien Gay, Contactless Magnetic Brake for Automotive Applications, Ph.D. Dissertation, Texas A&M University, College Station, TX, May 2005, Adviser: Dr. Mehrdad Ehsani.
- 48. Tiejun Hu, "Design and Control of a 6-Degree-of-Freedom Levitated Positioner with High Precision," Ph.D. Dissertation, Department of Mechanical Engineering, Texas A&M University, College Station, TX, May 2005, Adviser: Dr. Won-jong Kim.
- 49. Maja Harfman Todorovic, M.S. student, Texas A&M University, College Station, TX August 2004, Adviser: Dr. Prasad Enjeti.
- 50. Han-Ju Cha, "Analysis and Design of Matrix Converters for Adjustable Speed Drives and Distributed Power Sources," Ph.D. Dissertation, Texas A&M University, College Station, TX, August 2004, Advisor: Dr. Prasad Enjeti.
- 51. Woo-Jin Choi, "New Approaches to Improve the Performance of the PEM Based Fuel cell Power Systems," Ph.D. Dissertation, Texas A&M University, College Station, TX, Advisor: Dr. Prasad Enjeti
- 52. Leonardo Palma, M.S. Thesis, Texas A&M University, College Station, Texas, August 2003, Advisor: Dr. Prasad Enjeti.
- 53. Charles C. Kidder, M.S. Thesis, Texas A&M University, College Station. Texas, December 2002, Advisor: Dr. Kai Chang.

- 54. Avinash G. Dharne, "Increasing the Robustness of the Input-Shaping Method using Adaptive Control," M.S. Thesis, Department of Mechanical Engineering, Texas A&M University, College Station. Texas, December 2002, Advisor: Dr. Suhada Jayasuriya.
- 55. Mohammad A.K. Jaradat, "Line Map Construction Based on Small-Scale Mobile Robot using Single-Sonar Navigation," M.S. Thesis, Department of Mechanical Engineering, Texas A&M University, College Station. Texas, December 2002, Advisor: Dr. Reza Langari.
- 56. Jae-hong Hahn, "Analysis and Design of Modular Three-Phase Power Factor Correction Schemes for Utility Interface," Ph.D. Dissertation, Texas A&M University, College Station, Texas, August 2002, Advisor: Dr. Prasad Enjeti.
- 57. Juan Carlos Juarez, "The Application of Fiber Sensors to the Monitoring of Roller Element Bearing Systems, M.S. Thesis, Texas A&M University, College Station, Texas, August 2002, Advisor: Dr. Henry Taylor.
- 58. Sang-sun Kim, "New Approaches to Mitigate Harmonics: Development of Active Power Filters and Converters Embedded with Harmonic Filtering Functions", Ph.D. Dissertation, Texas A&M University, College Station, Texas, May 2002, Advisor: Dr. Prasad Enjeti.
- 59. Rajesh Gopinath, M.S. Thesis, Texas A&M University, College Station, Texas, Dec. 2001, Advisor: Dr. Prasad Enjeti.
- 60. Hang Wang, "Models for Short Circuit and Incipient Internal Faults in Single-phase, Distribution Transformers", Ph.D. Dissertation, Texas A&M University, College Station, Texas, May 2001, Advisor: Dr. Karen Butler-Perry.
- 61. Kyusung Kim, "Sensorless Fault Diagnosis of Induction Motors," Ph.D. dissertation, Department of Nuclear Engineering, Texas A&M University, College Station, Texas, May 2001, Advisor: Dr. Alex Parlos.
- 62. Jose Luis Duran-Gomez, "New Approaches to Improve the Performance of Adjustable Speed Drive (ASD) Systems under Power Quality Disturbances", Ph.D. dissertation, Texas A&M University, College Station, Texas, December 2000, Advisor: Dr. Prasad Enjeti.
- 63. Ekrem Cengelci, "Multilevel Inverters and Modular Adjustable Speed Drive Systems," Ph.D. dissertation, Texas A&M University, College Station, Texas, August 2000, visor: Dr. Prasad Enjeti.
- 64. Maria D. Bellar, "A Low Cost AC Motor Drive with Power Factor Control", Ph.D. Dissertation, Texas A&M University, College Station, Texas, May 2000, Advisor: Dr. Mehrdad Ehsani.
- 65. Suresh Gopalakrishnan, "Inductance Model Based Sensorless Control of Switched Reluctance Motor Drive for High Performance Applications", Ph.D. Dissertation, Texas A&M University, College Station, Texas, May 2000, Advisor: Dr. Mehrdad Ehsani.
- 66. David L. Sabbagh, "Estimation of the Error for Small-Sample Optimal Binary Filter Design using Prior Knowledge", M.S. Thesis, Texas A&M University, College Station, Texas, Dec. 1999.
- 67. Babak Fahimi, "Control of Vibration in Switched Reluctance Motor Drive", Ph.D. Dissertation, Texas A&M University, College Station, Texas, May 1999, Advisor: Dr. Mehrdad Ehsani.
- 68. James P. Johnson, "Synchronous-Misalignment Detection/Correction Technique of Sensorless BLDC Control", Ph.D. Dissertation, Texas A&M University, College Station, Texas, December 1998, Advisor: Dr. Mehrdad Ehsani.
- 69. Yilcan Guzelgunler, "Sensorless Synchronous Operation of the BLDC Motor", M.S. Thesis, Texas A&M University, College Station, Texas, January 1998, Advisor: Dr. Mehrdad Ehsani.

- Arisitide-Marie Tchamdjou, "An Evaluation of a Parallel-Resonant Current Source Converter for an Electrothermal Thruster", M.S. Thesis, Texas A&M University, College Station, Texas, December 1996, Advisor: Dr. Mehrdad Ehsani.
- 71. Piyush Tandon, "Self-Tuning Control of Switched Reluctance Motor", M.S. Thesis, Texas A&M University, College Station, Texas, May 1996, Advisor: Dr. Mehrdad Ehsani.

Foreign Ph.D. Students Thesis Evaluator:

- 1. Ramu Nair R., Emulation of Wind Turbine and Sensorless Control of Doubly-Fed Induction Generator for Wind Energy Application, Indian Institute of Science, India, Oct. 2020, Advisor: G. Narayanan.
- 2. Akhil Vinayak B., Stator Fault Diagnosis of Inverter-Fed Induction Motor by Means of Machine Learning and Frequency Spectrum Approach, National Institute of Technology Calicut, India, Oct. 2020, Advisor: Jagadanand G.
- 3. Om Prakash Yadav, Stator and Bearing Faults Diagnosis of Induction Motor, National Institute of Technology, India, Dec. 219, Advisor: G.L. Pathuja.
- 4. R. Kushwaha, Power Quality Improvement in Battery Chargers of Light Electric Vehicles, Indian Institute of Technology Delhi, India, Dec. 2019, Advisor: B. Singh.
- 5. Piyush Kant, Power Quality Improvement in Multi-Pulse Converter Fed Multilevel Inverter Based Induction Motor Drives, Indian Institute of Technology Delhi, India, Dec. 2019, Advisor: B. Singh.
- 6. Nguyen Viet Hung, Model-Based Diagnosis and Prognosis of Induction Motors under Stator Winding Fault, Nanyang Technological University, Singapore, Dec. 2017, Advisor: W. Danwei.
- 7. Hossein Mousavian, MHz Resonant DC-DC Converters with First Cycle Control, Queen's University, Canada, Oct. 2017, Advisors: A. Bakhshai, and P. Jain.
- 8. Lilian L. Amuhaya, Design and Optimization of Direct-driven PM Variable-Flux Synchronous Generators for Directly Grid-Connected Slip-Synchronous Wind-Turbines, University of Stellenbosch, South Africa, Dec. 2017, Advisor: M.J. Kamper,
- 9. Anirudh Guha, Dead-Time Induced Oscillations on Voltage Source Inverter-fed Induction Motor Drives, Indian Institute of Science, India, July 2016, Advisor: G. Narayanan.
- 10. Arun Rahul S, Investigation on Hybrid Multilevel Inverters with a Single DC Supply for Zero and Reduced Common Mode Voltage Operation and extended Linear Modulation Range Operation for Induction Motor Drives, Indian Institute of Science, India, July 2016, Advisor; K. Gopakumar
- 11. Arun Dominic D., Performance Investigation of Induction Motor Drives under Sensor Faults, Indian Institute of Technology Roorke, India, July 2016, Advisor: T. Raj Chelliah.
- 12. Hao Ge, Fractional Slot Concentrated Winding Interior Permanent Magnet Machines with Reluctance Torque: Inductance –Based Methodology for Comprehensive Analysis, Design, and Control, McMaster University, Canada, June 2016, Advisor: A. Emadi.
- 13. Sumit Kumar Pramanick, Switched Capacitive Filtering Scheme for Harmonic Suppression in Variable Speed AC Drives, Indian Institute of Science, India, June 2016, Advisor; K. Gopakumar.
- Vijay Kumar Tayal, Robustness Analysis & Control Design of Flexible AC Transmission (FACTS) Based Power Systems, National Institute of Technology, Kurukshetra, India, Aug. 2015, Advisor: J.S. Lather.

- 15. Mohd. Faisal Khan, Modeling and Control of Multi-Phase Induction Generator for Wind Energy Applications, Aligarh Muslim University, Aligarh, India, 2015, Advisor: Mohd. Rizwan Khan
- Kazi Ahsanullah, A Concentrated Wound Interior Permanent Magnet Machine for Direct-Drive Wind Turbine Applications," University of New South Wales, Australia, June 2015, Advisor: M. Rahman.
- 17. Yatender Kumar Chaturvedi, "Analysis of Self-Excited Induction Generator with Unbalanced Load and Excitation," National Institute of Technology, Kurukshetra, Oct. 2014, Advisor: K.S. Sandhu.
- Jaison Mathew, "Investigation on Dodecagonal Multilevel Voltage space Vecotr Structures by Cascading Flying Capacitor and Floating H-bridge Cells," Indian Institute of Science, Bangalore, India, July 2013, Advisor, Dr. Gopakumar.
- 19. Suzan Eren, "Control of a Grid-Connected Voltage Source Inverter with LCL Filter," Queens University, Kingstone, ON, Canada, Sep. 2013, Advisor: Dr. A. Bakhshai.
- 20. Sudhir Sharma, "Power Quality Investigations of Induction Generators under Different Operating Conditions," National Institute of Technology, Kurukshetra, India, Mach, 2012, Advisor: Dr. K.S. Sandhu.
- 21. Jeevanand S., "Intelligent Condition Monitoring of Induction Machines," Department of Electrical Engineering, Indian Institute of Technology Delhi, March 2013, Advisors: Drs. Bhim Singh, and B.K. Panigrahi.
- 22. B. Venugopal Reddy, "Investigations on Circuit Topologies and PWM Schemes for a Four-Level Dual Inverter Fed Open-End Winding Induction Motor Drive,' National Institute of Technology, Warangal, India, Sep. 2012, Advisor: Dr. V.T. Somasekhar.
- 23. Sukhbir Singh, "Dissolved Gas Analysis for Fault Diagnosis of Power Transformers", Ph.D. thesis, National Institue of Technology Kurukshetra, Kutukshetra, India, Feb. 2012, Advisor: Dr. Deeraj Joshi.
- 24. Nkosinathi Gule, "Analysis of Direct Flux and Direct Torque Controlled Multi-phase Cage Induction Machine with Nearly Square Air-gap Flux Density", Ph.D. thesis, Department of Electrical and Electronic Engineering, The University of Stellenbosch, South Africa, Dec 2010, Advisor: Dr. Maarten J. Kamper.
- 25. Rijil Ramchand, "Investigation on Boundary Selection for Switching Frequency Variation Control of Current Error Space Phasor Based Hysteresis Controllers for Inverter FED IM Drives, Ph.D. thesis, Indian Institute of Science, Bangalore, India, Dec. 2010, Advisor:
- 26. Dipankar De, "High Frequency Link Inverters and Multiresonant Controllers, Ph.D. thesis, Indian Institute of Science, Bangalore, India, Dec. 2010, Advisor:
- 27. Meharegzi Tewolde Abreham, "A Matrix Converter-fed Synchronous Motor Drive with an Improved Commutation Technique, Ph.D. thesis, Indian Institute of Technology Kanpur, India, July 2009, Advisor: Dr. S.P. Das
- 28. P. Parthiban, "Performance Investigation of SVM Based CSI FED Induction Motor Drive," Ph.D. thesis, Indian Institute of Technology Roorkee, India, October 2008, Advisor: Dr. S.P. Srivastava.
- 29. Arfat Siddique, "Some Investigations on Condition Monitoring of Three Phase Induction Motors," Ph.D. thesis, Indian Institute of Technology Delhi, India, July 2008, Advisors: Dr. G.S. Yadava, and D. Bhim Singh.
- S. Srinivas, "Investigations on Space Vector Modulations Schemes and Placement of Zero-Vector in a Three-Level Dual-Inverter Fed Open-End Winding Induction Motor Drive," Ph.D. thesis, National Institute of Technology, Andhra Pradesh, India, June 2007, Advisor: Dr. V.T. Somasekhar.

- 31. Rahmatollah Mirzaei, "Soft Switched Multi-phase Tapped-Boost Converter and its Control," Ph.D. thesis, Indian Institute of Science, Bangalore, India, June 2007, Advisor: Dr. V. Ramanarayanan
- 32. N. Lakshminarasamma, "A New Family of Soft Transition DC-DC Converters," Ph.D. thesis, Indian Institute of Science, Bangalore, India, June 2007, Advisor: Dr. V. Ramanarayanan
- 33. Edward Tshitshiri Rakagati, "Torque Performance of Optimally Designed Multi-Phase Reluctance DC Machines," Ph.D. thesis, Department of Electrical and Electronic Engineering, The University of Stellenbosch, South Africa, June 2006, Advisor: Dr. Maarten J. Kamper.
- 34. Tripathi Anshuman, "Stator Flux Based Modulation and Constant Switching Frequency Direct Torque Control of AC Machines," Ph.D. thesis, National University of Singapore, August 2004, Advisor: Dr. V. Ramanarayanan
- 35. M.R. Baiju, "Investigations on Multilevel Inverter Topologies and Modulation Schemes for Induction Motor Drives," Ph.D. thesis, Indian Institute of Science, Bangalore, India, May 2004, Advisor: Dr. K. Gopakumar.
- 36. Krushna Keshaba Mohapatra, "Study on Harmonic Elimination and Suppression Techniques for Variable Speed Operation of Three Phase and Split Phase Open-End Winding Induction Motors," Ph.D. thesis, Indian Institute of Science, Bangalore, India, Sep. 2003, Advisor: Dr. K. Gopakumar.
- 37. Amar Nath Tiwari, "Investigations on Permanent Magnet Synchronous Motor Drive," Ph.D. thesis, Indian Institute of Technology Roorkee, India, April 2003, Advisors: Dr. S.P. Srivastava, Dr. Pramod Agarwal.
- 38. Vinod V. Thomas, "Non-Invasive Techniques for Rotor Fault Detection of Three Phase Squirrel Cage Induction Motors," Ph.D. thesis, Indian Institute of Technology Madras, India, June 2002, Advisors: Dr. Krishna Vasudevan, and Dr. Jagadeesh Kumar.
- 39. Munir Ahmed A.K. Al-Geelani, "Investigations on Cycloconverter Fed Induction Machine System in Generating Mode," Ph.D. thesis, Indian Institute of Technology Roorkee, India, Feb. 2002, Advisor: Dr. S.P. Gupta.
- 40. Debiprasad Panda, "Control Strategies for Sensorless and Low-Noise Operation of Swithced Reluctance Motor," Ph.D. thesis, Indian Institute of Science, Bangalore, India, August 1999, Advisor: Dr. V. Ramanarayanan.
- 41. L. Venkatesha, "Determination of Flux-Linkage Characteristics and Torque Ripple Minimization with Pre-Computed Currents in Switched Reluctance Motor," Ph.D. thesis, Indian Institute of Science, Bangalore, India, June 1999, Advisor: Dr. V. Ramanarayanan.