Bill Diong

Education

PhD, University of Illinois at Urbana-Champaign, 1992.
Major: Electrical Engineering

MS, University of Illinois at Urbana-Champaign, 1988.
Major: Electrical Engineering

BS, University of Illinois at Urbana-Champaign, 1986.
Major: Electrical Engineering

Professional Positions

Academic

Professor Emeritus of Electrical Engineering, Kennesaw State University. (July 1, 2023 - present).

Interim Associate Dean for Research, Southern Polytechnic College of Engineering and Engineering Technology, Kennesaw State University. (July 1, 2022 - June 30, 2023).

Associate Vice President for Research, Kennesaw State University. (January 1, 2020 - June 30, 2022).

Professor, Department of Electrical & Computer Engineering, Kennesaw State University. (August 1, 2017 - June 30, 2023).

MS Applied Engineering program coordinator, Department of Electrical Engineering, Kennesaw State University. (January 1, 2016 - December 31, 2019).

Associate Professor, Department of Electrical Engineering, Kennesaw State University. (August 1, 2011 - July 31, 2017).

Associate Professor, Department of Engineering, Texas Christian University. (January 16, 2005 - May 15, 2011).

Adjunct Associate Professor, Department of Electrical & Computer Engineering, University of Texas at El Paso. (February 15, 2006 - February 14, 2007).

Assistant Professor, Department of Electrical & Computer Engineering, University of Texas at El Paso. (January 16, 1999 - January 15, 2005).

Assistant Professor, Engineering Department, University of Texas - Pan American. (September 1, 1995 - January 15, 1999).

Professional

Research Fellow, AFOSR Summer Faculty Research Program, Wright Labs, Wright-Patterson AFB. (June 1, 1997 - August 15, 1997).

Senior Research Engineer I, Applied Research Organization, Sundstrand Aerospace. (April 6, 1992 - September 1, 1995).

Awards and Honors

Person who made the greatest difference in the life of one or more students this year, Dept of Career Planning and Development. (July 11, 2022).

Outstanding Research and Creative Activity Award (Engineering Applications), Kennesaw State University Foundation. (2018).

Person who made the greatest difference in the life of one or more students this year, Dept of Career Planning and Development. (July 17, 2018).

Person who made the greatest difference in the life of one or more students this year, Dept of Career Planning and Development. (July 5, 2017).

Person who made the greatest difference in the life of one or more students this year, Dept of Career Planning and Development. (August 15, 2016).

Thank-a-Teacher message, Center for Excellence in Teaching and Learning. (December 17, 2015).

Outstanding Service Award, IEEE Fort Worth Section. (2007).

TCU Senior Class Legacy, Texas Christian University. (December 15, 2006).

Fellow, UTEP Center for Effective Teaching and Learning. (August 15, 2003).

Forrest and Henrietta Lewis Professor of Electrical Engineering, University of Texas at El Paso/Lewis Professorship. (August 15, 2000).

Dean Eugene Thomas award for Outstanding ECE Faculty Member of 1999-2000, UTEP Dept of Electrical & Computer Engineering. (May 15, 2000).

Professional Memberships

Institute of Electrical and Electronics Engineers, Senior Member

American Society for Engineering Education, Member

RESEARCH

Published Intellectual Contributions (> 100 publications)

Book, Scholarly-New

Gou, B., Na, W., Diong, B. M. (2016). *Fuel Cells: Modeling, Control, and Applications, 2nd edition*. Boca Raton, FL: CRC Press.

Gou, B., Na, W., Diong, B. M. (2009). *Fuel Cells: Modeling, Control, and Applications*. Boca Raton, FL: CRC Press.

Conference Proceeding

Diong, B. M., Wilson, B. (2023). Programmed PWM of 5- and 7-Level Multilevel Inverters to Meet 5% Voltage Distortion Limit. *Proceedings of IEEE SoutheastCon 2023*. IEEE.

Wilson, B., Diong, B. M., Kalaria, C., Talley, B. (2022). Programmed PWM of Symmetric and Asymmetric Multilevel Inverters for Minimal Output Distortion. *Proceedings of IEEE SoutheastCon 2022* (pp. 501-506). IEEE.

Diong, B., Chin, C., Das, S., Tekes, A., Thain, W. E. (2021). *Enhancing Engineering Students' Troubleshooting Skills*. ASEE Annual Conference.

Kim, Y., Yang, J., Diong, B. M., Yee, T. M. (2020). *Feasibility of a Novel Transit Vehicle Concept - Slim Modular Flexible Electric Bus Rapid Transit (SMFe-BRT)*. International Conference on Transportation and Development 2020.

Privett, E., Segovia-Romero, B., Diong, B. M., Thain, W. E. (2020). 1GHz Wireless Power Transfer to 5V Devices. *Proceedings of IEEE SoutheastCon 2020*.

Kalaria, C., Crawford, A., Diong, B. M. (2020). On the Distortion of Pulse-Width-Modulated Seven-Level Asymmetric Multilevel Inverters. *Proceedings of IEEE SoutheastCon 2020*.

Kalaria, C., Ogunkanmi, V., Hagle, A., Swanbum, R., Diong, B. M. (2019). *On the Distortion of Pulse-Width-Modulated Five-Level Asymmetric Multilevel Inverters*. North American Power Symposium, Wichita, KS.

Lee, H. L., Nadgauda, R., Thain, W. E., Diong, B. M. (2018). *1 GHz charge pump with ultra-low power boost converter for increased output voltage*. IEEE AP-S Symposium on Antennas and Propagation. 1100 South Marietta Pkwy

Bugel, K., Diong, B. M., Juleus, Q., Jacobs, M. (2018). *Single-Phase Hybrid Cascaded H-Bridge and Diode-Clamped Multilevel Inverter: RL Load Case*. IEEE 9th International Symposium on Power Electronics for Distributed Generation Systems.

Diong, B. M., Carlsen, W., Avit, B., McFall, K. S., Tippens, S. (2017). *A Novel Photovoltaic Module With Cell Strands That Track The Sun*. Proc. ASME Power & Energy Conf.. https://doi.org/10.1115/ES2017-3397

Ginn, M., Amuna, F., Colmenares, J.E., Stewart,, A., Diong, B. M., Wang, Y., Yang, J. (2017). *Conceptual Design of a Semi-autonomous Vehicle to Improve Bus Rapid Transit Systems*. 2017 IEEE SoutheastCon.

Diong, B. M., Villette, D., Nafziger, S., Egekonye, W., Minix, T. (2016). *Obtaining Low Distortion Load Voltages from Y-Connected Staircase Modulated Multilevel Inverters for AC Microgrids*. North American Power Symposium, Denver, CO.

Chaulagain, M., Diong, B. M. (2016). Forced Redundant States of 5-Level Single-Phase Diode-Clamped Multilevel Inverters. *IEEE SoutheastCon 2016*.

Diong, B. M., Francis, T., Herndon, M., Tippens, S. (2015). *A new photovoltaic module design paradigm: cell strands that track the sun*. Proc. ASME Power & Energy Conf..

Diong, B. M., Zheng, G., Ginn, M. (2015). Establishing the foundation for energy management on university campuses via data analytics. *IEEE SoutheastCon 2015* (pp. 1–7).

Brosnan, S., Brown, C., Kim, A., Milicev, Z., Weatherly, B., Diong, B. M. (2015). Monitoring of electric utility vehicle operating data over the cellular network. *IEEE SoutheastCon 2015*.

Diong, B. M. (2014). Justification and conceptual design of solar-powered traffic signal systems. *Renewable Energy Research and Application (ICRERA), 2014 International Conference on* (pp. 595–600).

Dofflemyer, L., Diong, B. M. (2013). *Parametric sensitivity of the output voltage distortion of solar-to-grid multilevel inverters*. Proc. IASTED Intl Symp on Power and Energy.

Diong, B. M., Tippens, S. (2013). *Seeking the sun - a student design competition endeavor*. Proc. ASEE Annual Conf., Atlanta, GA.

Diong, B. M. (2013). *Work-in-Progress: videos and video podcasts – what engineering educators want to know, and need to know*. Proc. ASEE Annual Conf., Atlanta, GA.

Diong, B. M. (2012). THD-optimal line-load neutral voltages from three-phase multilevel inverters. *Power Electronics, Drives and Energy Systems (PEDES), 2012 IEEE International Conference on* (pp. 1–5).

Diong, B. M., Dofflemyer, L., Xiao, B., Tolbert, L., others (2012). Hybrid single-phase multilevel inverters as renewable energy interfaces considering THD, modularity and capacitor recharging. *Energy Conversion Congress and Exposition (ECCE), 2012 IEEE* (pp. 1540–1547).

Menendez, R., Diong, B. M., Singh, K., Goldman, M. (2011). Peripheral Airway Effects Of Two ICS/LABA Combinations As Measured By Impulse Oscillometry (IOS) In Young Adults With Asthma. *American Journal of Respiratory and Critical Care Medicine* (vol. 183).

Singh, K., Diong, B. M., Estrada, D. (2011). *Temperature and fuel-flow-rate dependence of the parameters of an equivalent circuit model of DMFC dynamic response* (pp. 139-143). Proc. Intl Conf on Power and Energy Systems and Applications.

Nguyen, T.-U., Diong, B. M., Grainger, J., Boyd, K., Mitchell, J., Cheek, D. (2010). A Second-Order Biomechanical Model of Flow-Mediated Dilation Response in Obese Post-Menopausal Women. *6th World Congress of Biomechanics (WCB 2010). August 1-6, 2010 Singapore* (pp. 867–870). Springer.

Ramos, C., Nazeran, H., Goldman, M. D., Diong, B. M. (2010). Circuit analysis justifies a reduced Mead's model of the human respiratory impedance for impulse oscillometry data. *Engineering in Medicine and Biology Society (EMBC), 2010 Annual International Conference of the IEEE* (pp. 548–552).

Mangum, M., Diong, B. M., Goldman, M. D., Nazeran, H. (2010). Comparison of IOS Parameters to aRIC Respiratory System Model Parameters in Normal and COPD Adults. *26th Southern Biomedical Engineering Conference SBEC 2010, April 30-May 2, 2010, College Park, Maryland, USA* (pp. 251–253). Springer.

Goldman, M. D., Nazeran, H., Ramos, C., Toon, E., Oates, K., Bilton, D., Meraz, E., Hafezi, N., Diong, B. M. (2010). Electrical circuit models of the human respiratory system reflect small airway impairment measured by impulse oscillation (IOS). *Engineering in Medicine and Biology Society (EMBC), 2010 Annual International Conference of the IEEE* (pp. 2467–2472).

Diong, B. M., Goldman, M. D., Nazeran, H. (2010). Respiratory impedance values in adults are relatively insensitive to Mead model lung compliance and chest wall compliance parameters. *26th Southern Biomedical Engineering Conference SBEC 2010, April 30-May 2, 2010, College Park, Maryland, USA* (pp. 201–203). Springer.

Diong, B. M., Grainger, J., Goldman, M., Nazeran, H. (2009). A comparison of linear respiratory system models based on parameter estimates from PRN forced oscillation data. *Engineering in Medicine and Biology Society, 2009. EMBC 2009. Annual International Conference of the IEEE* (pp. 2879–2882).

Nguyen, T.-U., Diong, B. M., Goldman, M. (2009). A study of IOS data using the aRIC+I p model of respiratory impedance. *Engineering in Medicine and Biology Society, 2009. EMBC 2009. Annual International Conference of the IEEE* (pp. 2875–2878).

Diong, B. M., Smith, J., Kolesar, E., Cote, R. (2009). *Remote experimentation with MEMS devices*. Proc. American Society for Engineering Education National Conference.

Meraz, E., Nazeran, H., Goldman, M., Diong, B. M. (2009). Respiratory System Model Parameters Track Changes in Lung Function after Bronchodilation. *25th Southern Biomedical Engineering Conference 2009, 15–17 May 2009, Miami, Florida, USA* (pp. 319–322). Springer.

Meraz, E., Nazeran, H., Goldman, M., Nava, P., Diong, B. M. (2008). Impulse oscillometric features of lung function: towards computer-aided classification of respiratory diseases in children. *Engineering in Medicine and Biology Society, 2008. EMBS 2008. 30th Annual International Conference of the IEEE* (pp. 2443–2446).

Goldman, M., Menendez, R., Diong, B. M., Nazeran, H. (2008). *Impulse oscillometry sensitively measures long and short acting bronchodilator in asthmatic children* (pp. 73–76). Biomedical Engineering Recent Developments, Proceedings of the Twenty Fourth SBEC.

Meraz, E., Nazeran, H., Diong, B. M., Nava, P., Goldman, M. (2008). *Modeling Human Respiratory Impedance in Normal children 5 to 17 years old* (pp. 85–86). Biomedical Engineering Recent Developments, Proceedings of the Twenty Fourth SBEC.

Nguyen, T.-U., Diong, B. M., Nazeran, H., Goldman, M. (2007). A study of IOS data using two mead-related models of respiratory impedance. *Engineering in Medicine and Biology Society, 2007. EMBS 2007. 29th Annual International Conference of the IEEE* (pp. 1078–1081).

Nguyen, T.-U., Diong, B. M. (2007). Evaluation of Two Mead-related Models of Adult Respiratory Impedance Based on IOS Data. *Region 5 Technical Conference, 2007 IEEE* (pp. 303–308).

Meraz, E., Nazeran, H., Diong, B. M., Menendez, R., Ortiz, G., Goldman, M. (2007). Modeling human respiratory impedance in Hispanic asthmatic children. *Engineering in Medicine and Biology Society, 2007. EMBS 2007. 29th Annual International Conference of the IEEE* (pp. 4251–4254).

Arunachalam, S., Diong, B. M. (2006). A parametric model approach to arc fault detection for DC and AC power systems. *Industry Applications Conference, 2006. 41st IAS Annual Meeting. Conference Record of the 2006 IEEE* (vol. 5, pp. 2249–2255).

Barúa, M., Nazeran, H., Nava, P., Diong, B. M., Goldman, M. (2006). Classification of impulse oscillometric patterns of lung function in asthmatic children using artificial neural networks. *Engineering in Medicine and Biology Society, 2005. IEEE-EMBS 2005. 27th Annual International Conference of the* (pp. 327–331).

Rajagiri, A., Diong, B. M. (2006). Evaluation of Augmented RIC Model of Child Respiratory Impedance Based on Impulse Oscillometry Data. *Region 5 Conference, 2006 IEEE* (pp. 291–295).

Baswa, S., Nazeran, H., Nava, P., Diong, B. M., Goldman, M. (2006). Evaluation of respiratory system models based on parameter estimates from Impulse Oscillometry data. *Engineering in Medicine and Biology Society, 2005. IEEE-EMBS 2005. 27th Annual International Conference of the* (pp. 2958–2961).

Hernandez, E., Diong, B. M. (2005). A small-signal equivalent circuit model for PEM fuel cells. *Applied Power Electronics Conference and Exposition, 2005. APEC 2005. Twentieth Annual IEEE* (vol. 1, pp. 121–126).

Martinez, A., Diong, B. M., Arunachalam, S., Dulluru, S. (2005). Arc fault management by solid state switches for enhanced automotive safety. *Twentieth Annual IEEE Applied Power Electronics Conference and Exposition, 2005. APEC 2005.*.

Rajagiri, A., Diong, B. M., Goldman, M., Nazeran, H. (2005). *Can asthma in children be detected by the estimated parameter values of the augmented RIC model?* (vol. 1, pp. 5595–5598). Proc. IEEE Engineering in Medicine and Biology Society Annual Conference.

Barúa, M., Nazeran, H., Nava, P., Diong, B. M., Goldman, M. (2005). *Implementation of Artificial Neural Networks to Classify Impulse Oscillometric Patterns of Lung Function in Asthmatic Children*. Proc. 5th Intl Workshop on Biomedical Signal Interpretation.

Na, W., Gou, B., Diong, B. M. (2005). Nonlinear control of PEM fuel cells by exact linearization. *Industry Applications Conference, 2005. Fourtieth IAS Annual Meeting. Conference Record of the 2005* (vol. 4, pp. 2937–2943).

Diong, B. M., Corzine, K. (2005). WTHD-optimal staircase modulation of single-phase multilevel inverters. *Electric Machines and Drives, 2005 IEEE International Conference on* (pp. 1341–1344).

Kanchubotla, S., Diong, B. M., others (2004). A comparative guide to the main steady-state characteristics of four-element current-source resonant converters. *Energy Conversion Engineering Conference, 2002. IECEC'02. 2002 37th Intersociety* (pp. 28–32).

Woo, T., Diong, B. M., Mansfield, L., Goldman, M., Nava, P., Nazeran, H. (2004). A comparison of various respiratory system models based on parameter estimates from Impulse Oscillometry data. *Engineering in Medicine and Biology Society, 2004. IEMBS'04. 26th Annual International Conference of the IEEE* (vol. 2, pp. 3828–3831).

Joshi, K., De La Cruz, S., Diong, B. M., Williams, D., Nava, P. (2004). A neural network implementation of dual-frequency output control for multilevel inverters. *Computers in Power Electronics, 2004. Proceedings. 2004 IEEE Workshop on* (pp. 203–208).

Barúa, M., Nazeran, H., Nava, P., Granda, V., Diong, B. M. (2004). Classification of pulmonary diseases based on impulse oscillometric measurements of lung function using neural networks. *Engineering in Medicine and Biology Society, 2004. IEMBS'04. 26th Annual International Conference of the IEEE* (vol. 2, pp. 3848–3851).

Carter, W., Diong, B. (2004). Model of a regenerative fuel cell-supported wind turbine AC power generating system. *Industry Applications Conference, 2004. 39th IAS Annual Meeting. Conference Record of the 2004 IEEE* (vol. 4, pp. 2778–2785).

Diong, B. M., Basireddy, S., Corzine, K., Familiant, Y. (2004). Multilevel inverters with equal or unequal sources for dual-frequency induction heating. *Applied Power Electronics Conference and Exposition, 2004. APEC'04. Nineteenth Annual IEEE* (vol. 2, pp. 825–831).

Woo, T., Palafox, G., Diong, B. M., Wicker, R. (2004). Parameter Estimation by Descent and Genetic Algorithm Methods of an In-Vitro Stenosis Bypass Model. *Engineering in Medicine and Biology Society, 2004. IEMBS'04. 26th Annual International Conference of the IEEE* (vol. 2, pp. 3749–3752).

Lopez, R., Diong, B. M. (2004). Simplified control of switched reluctance machines for AC generation. *Industry Applications Conference, 2004. 39th IAS Annual Meeting. Conference Record of the 2004 IEEE* (vol. 1).

Kelly, B. B., Diong, B. M. (2003). A comparative guide to the main steady-state characteristics of four-element voltage-source resonant converters. *System Theory, 2003. Proceedings of the 35th Southeastern Symposium on* (pp. 482–486).

Kanchubotla, S., Diong, B. M., others (2003). Analysis, simulation and testing of a novel 4-element current-source resonant inverter. *System Theory, 2003. Proceedings of the 35th Southeastern Symposium on* (pp. 468–472).

Lorandi, L., Diong, B. M., Nava, P., Solis, F., Menendez, R., Ortiz, G., Nazeran, H. (2003). Parametric sensitivity analysis of human respiratory impedance. *Engineering in Medicine and Biology Society, 2003. Proceedings of the 25th Annual International Conference of the IEEE* (vol. 1, pp. 778–781).

Kanchubotla, S., Diong, B. M. (2003). Steady-state characteristics of two novel 4-element current-source resonant inverters. *Industrial Electronics Society, 2003. IECON'03. The 29th Annual Conference of the IEEE* (vol. 3, pp. 2613–2617).

Bedadala, P., Marquez, A., Diong, B. M. (2002). Analysis, simulation and testing of the σ-CLL current-source resonant inverter. *System Theory, 2002. Proceedings of the Thirty-Fourth Southeastern Symposium on* (pp. 179–183).

Chiu, L.-Y., Diong, B. M. (2002). Small-signal modeling of the current-source parallel resonant DC/DC converter. *Power Electronics Congress, 2002. Technical Proceedings. CIEP 2002. VIII IEEE International* (pp. 84–88).

Diong, B. M., Kubo Della-Piana, C. (2001). Science and engineering laboratory courses: their role, computer technology and effective learning. *Frontiers in Education Conference, 2001. 31st Annual* (vol. 2, pp. F1C–F17).

Hennessey, R., Loya, H., Diong, B. M., Wicker, R. (2000). *LabVIEW-based Automatic Control Systems Laboratory using local and remote experimentation approaches*. Proc. NI Week Conf. and Expo., Austin, TX, USA.

Bustamante, J., Diong, B. M., Wicker, R. (2000). System identification and control design of an alternative fuel engine for hybrid power generation. *Energy Conversion Engineering Conference and Exhibit, 2000.(IECEC) 35th Intersociety* (vol. 1, pp. 329–339).

Bustamante, J., Wicker, R., Diong, B. M. (1999). *Design and Implementation of a V-Twin Engine Throttle Control System for Hybrid Power Generation*. Madison, WI: Proc. Small Engine Tech. Conf. and Expo..

Diong, B. M., Thibodeaux, R. J. (1999). *Analysis, Simulation and Testing of the π-CLC Resonant Converter*. Vancouver, BC, Canada: Proc. Inter-society Energy Conversion Engineering Conf..

Diong, B. M. (1999). *Providing an updated dynamic systems and controls lab experience* (vol. 4, pp. 1). Charlotte, NC: Proc. ASEE National Conference.

Diong, B. (1997). A sliding mode control approach to the benchmark problem for nonlinear control design. *Industrial Electronics, Control and Instrumentation, 1997. IECON 97. 23rd International Conference on* (vol. 1, pp. 68–72).

Diong, B. M. (1997). On designing the control vectors in simplex-type sliding mode control systems. *American Control Conference, 1997. Proceedings of the 1997* (vol. 3, pp. 2150–2154).

Diong, B. M. (1997). On the design of simplex control for plants with bounded disturbances. *System Theory, 1997., Proceedings of the Twenty-Ninth Southeastern Symposium on* (pp. 108–111).

Diong, B., Medanic, J. (1992). State feedback simplex control design for systems with non-matching disturbances and uncertainties. *American Control Conference, 1992* (pp. 3267–3271).

Diong, B., Medanic, J. (1990). Robust implementation of a variable structure control scheme. *Decision and Control, 1990., Proceedings of the 29th IEEE Conference on* (pp. 3458–3463).

Journal Article, Academic Journal

Castillo, R., Diong, B. M., Biggers, P. (2017). Single-Phase Hybrid Cascaded H-Bridge and Diode-Clamped Multilevel Inverter with Capacitor Voltage Balancing. *IET Power Electronics*, 10, ., Impact Factor: 3.575

Singh, K., Diong, B. M., Estrada, D., Nguyen, B. (2014). Temperature and fuel-flow-rate dependence of the parameters of an equivalent circuit model of DMFC dynamic response. *Alternative Energy, 3*, 1-9, .

Diong, B. M., Singh, K., Menendez, R. (2013). Effects of two inhaled corticosteroid/long-acting beta-agonist combinations on small-airway dysfunction in mild asthmatics measured by impulse oscillometry. *Journal of Allergy and Asthma, 6*, 109–116, .

Diong, B. M., Sepahvand, H., Corzine, K. (2013). Harmonic distortion optimization of cascaded H-bridge inverters considering device voltage drops and noninteger DC voltage ratios. *Industrial Electronics, IEEE Transactions on, 60*(8), 3106–3114, ., Impact Factor: 5.468

Menendez, R., Singh, K., Diong, B. M., Goldman, M. (2011). Onset of Action of Two ICS/LABA Combinations as Measured by Impulse Oscillometry (IOS) in Young Adults with Asthma. *Journal of Allergy and Clinical Immunology, 127*(2), AB157, .

Meraz, E. G., Nazeran, H., Ramos, C. D., Nava, P., Diong, B. M., Goldman, M. D., Goldman, C. A. (2011). Analysis of impulse oscillometric measures of lung function and respiratory system model parameters in small airway-impaired and healthy children over a 2-year period. *Biomed Eng Online, 10*(1), 21, .

Diong, B. M., Rajagiri, A., Goldman, M., Nazeran, H. (2009). The augmented RIC model of the human respiratory system. *Medical & biological engineering & computing, 47*(4), 395–404, .

Goldman, M., Meraz, E., Nazeran, H., Diong, B. M. (2008). ABNORMALITY OF OSCILLOMETRIC RESISTANCE AND REACTANCE IS GREATER IN HISPANIC THAN ANGLO CHILDREN IN EL PASO, TX. *CHEST Journal, 134*(4_MeetingAbstracts), p140002–p140002, .

Nazeran, H., Nava, P., Maduko, E., Meraz, E., Diong, B. M., Goldman, M. (2008). ENHANCING THE AUTOMATED DIAGNOSTIC CAPABILITIES OF IMPULSE OSCILLOMETRY IN ASTHMATIC CHILDREN.

Menendez, R., Goldman, M., Diong, B., Nazeran, H. (2008). Impulse Oscillometry (IOS) measures effects of short and long acting Beta-Agonists (SABA, LABA) on Lung Mechanics in 2-5 year old children with asthma. *Journal of Allergy and Clinical Immunology, 121*(2), S211, .

Diong, B. M., Nazeran, H., Nava, P., Goldman, M. (2007). Modeling human respiratory impedance. *Engineering in Medicine and Biology Magazine, IEEE, 26*(1), 48–55, .

Na, W., Gou, B., Diong, B. M. (2007). Nonlinear Control of PEM Fuel Cells by Exact Linearization. *Industry Applications, IEEE Transactions on, 43*(6), 1426-1433, .

Diong, B. M., Nazeran, H., Crockett, A., others (2006). Analysis of the Extended RIC Model of Respiratory Impedance in Adults. *Australasian Physical & Engineering Sciences in Medicine, 29*(1), 130, .

Nazeran, H., Goldman, M. D., Nava, P., Diong, B. M., Barua, M., Mansfield, L., Crockett, A. (2005). Forced oscillation: Neural networks can advance clinical utility of impulse oscillometry in the assessment of lung function in asthmatic children. *International J. of Medical Implants and Devices*, .

Diong, B. M., Wicker, R., Della-Piana, C. K., Quintana, R. (2004). A laboratory designed to enhance students' interest in and learning of controls. *International Journal of Engineering Education, 20*(4), 628–637, .

Chiu, L.-Y., Diong, B. M., Gemmen, R. S. (2004). An improved small-signal model of the dynamic behavior of PEM fuel cells. *Industry Applications, IEEE Transactions on, 40*(4), 970–977, .

Lorandi, L., Hernandez, E. A., Diong, B. M. (2004). Parametric Sensitivity Analysis of Fuel Cell Dynamic Response. *SAE Transactions Journal of Aerospace*, 2024–2032, .

Diong, B. M. (2004). Sliding-mode control design for a class of systems with non-matching nonlinearities and disturbances. *International Journal of Systems Science, 35*(8), 445–455, .

Nemir, D., Martinez, A., Diong, B. M. (2004). Arc fault management using solid state switching. *SAE Transactions Journal of Aerospace*, 1932–1942, .

Diong, B. M., Corzine, K., Basireddy, S., Lu, S. (2003). Multilevel inverter-based dual-frequency power supply. *Power Electronics Letters, IEEE, 1*(4), 115–119, .

Diong, B. M., Perez, M., Della-Piana, C. K., Wicker, R. (2003). Remote experimentation with a wind tunnel system for controls education. *International Journal of Engineering Education, 19*(3), 460–467, .

Diong, B. M., Perez, M., Wicker, R. (2001). Tele-experimentation: the emerging approach to science and engineering lab education. *age, 6*, 1, .

Diong, B., Medanic, J. (1997). Simplex-type variable structure controllers for systems with non-matching disturbances and uncertainties. *International Journal of Control, 68*(3), 625–656, .

Diong, B., Medanic, J. (1992). Dynamic output feedback variable structure control for system stabilization. *International Journal of Control, 56*(3), 607–630, .

Technical Report

McClure, J., Chianelli, R., Diong, B. M. (2006). *Catalyst, Diffuser, and Transient Response Improvement for Proton Exchange Membrane Fuel Cells (CD-ROM)*. DTIC Document.

Presentations Given

Peterson, S., Smith, S., Diong, B. M., 23rd Annual Colloquium on International Engineering Education, ""Internationalizing Engineering: First Steps at a Public R2 University"," University of Rhode Island, virtual. (October 2020).

Diong, B. M., Georgia Institute of Transportation Engineers Summer Seminar, "What's Up with Autonomous Vehicles?," Georgia Institute of Transportation Engineers, St Simons Island. (July 17, 2017).

Nguyen, T. (Presenter & Author), Carlsen, W. (Presenter & Author), Phejlada, S. (Presenter & Author), Manders, E. (Presenter & Author), Riofrio, C. (Presenter & Author), Manning, D. (Presenter & Author), Silvestri, A. (Author Only), Diong, B. M. (Author Only), Tippens, S. (Author Only), McFall, K. S. (Author Only), National Sustainable Design Exposition, "Ray Catchers! Improving the Energy Collection Performance of Photovoltaic Panels," U.S. Environmental Protection Agency, Washington, DC. (April 2015).

Francis, T. (Presenter & Author), Daly, A. (Presenter & Author), Chaulagain, M. (Presenter & Author), Guevara, P. (Presenter & Author), Diong, B. M. (Author Only), Tippens, S. (Author Only), National Sustainable Design Exposition, "Increasing photovoltaic panel power output by having the solar cells track the sun," U.S. Environmental Protection Agency, Washington, DC. (April 2013).

Contracts, Grants and Sponsored Research (> $2.6 million in awarded funds)

Contract

Diong, B. M., Contract, "Project to Assess the Energy Consumption and Safety Aspects of a Low-Voltage ATCC (Phase 1)", Sponsored by McCain, Inc., Private, **$13,734.00, Funded**. (January 25, 2022 - August 24, 2022).

Diong, B. M., Contract, "Project to Quantify Energy Savings by McCain Low-Voltage ATCC with Schneider BBS Compared to Existing High-Voltage Traffic Cabinet with BBS", Sponsored by McCain, Inc. and Schneider Electric USA, Inc., Private, **$12,359.00, Funded**. (March 12, 2018 - December 11, 2019).

Diong, B. M., Contract, "Onset of action of two asthma medications as characterized by lung model parameter estimates", Sponsored by GlaxoSmithKline/Southwest Pulmonary Research (subcontract), Private, **$9,232.00, Funded**. (March 1, 2009 - February 28, 2010).

Diong, B. M., Contract, "Analysis of Impulse Oscillometry test data for adults with COPD to benchmark an airflow perturbation device", Sponsored by GlaxoSmithKline/Southwest Pulmonary Research (subcontract), Private, **$4,439.00, Funded**. (March 1, 2008 - February 28, 2009).

Diong, B. M., Contract, "Arc fault quenching for mission critical systems", Sponsored by DoD Air Force SBIR Phase II program (subcontract), Federal, **$126,946.00, Funded**. (August 15, 2004 - August 14, 2007).

Diong, B. M., Contract, "Arc fault quenching for mission critical systems", Sponsored by DoD Air Force SBIR Phase I program (subcontract), Federal, **$31,225.00, Funded**. (July 15, 2003 - April 14, 2004).

Fellowship

Diong, B. M., Fellowship, "Improving the performance of an efficient, compact and lightweight class of power electronic systems", Sponsored by Forrest O. and Henrietta Lewis Professorship, Other, **$12,000.00, Funded**. (September 1, 2000 - August 31, 2002).

Diong, B. M., Fellowship, "Research Fellow, Summer Faculty Research Program", Sponsored by Air Force Office of Scientific Research & Wright Labs, WPAFB, Dayton, OH, Federal, **$10,000.00, Funded**. (June 1, 1997 - August 14, 1997).

Grant

Kogler, G. (Principal), Ashuri, T. (Co-Principal), Diong, B. (Co-Principal), Grant, "Bioengineering Research and Interdisciplinary Training – ESTEEMED (BRITE)", Sponsored by Eunice Kennedy Shriver National Institute of Child Health & Human Development, Federal, **$1,384,959.00, Funded**. (July 7, 2023 – April 30, 2027).

Ashuri, T. (Co-Principal), Diong, B. (Co-Principal), Kogler, G. (Principal), Grant, "Interdisciplinary Bioengineering Research Training Program in Orthotics, Prosthetics and Rehabilitation", Sponsored by National Institutes of Health, Federal, $1,239,521.00, Not Funded. (June 15, 2021 - June 14, 2026).

Chin, C. (Principal), Diong, B. (Co-Principal), Das, S. (Co-Principal), Thain, W. (Co-Principal), Grant, "Longitudinal Interventions for Enhanced Troubleshooting Skills and Engineering Career Readiness", Sponsored by National Science Foundation (DUE - IUSE), Federal, $171,212.00, Not Funded. (December 1, 2022 - July 31, 2025).

Diong, B. M., Steiner, H. H., McFall, K. S., Grant, "Research Aimed at Improving Senior Design", Sponsored by National Science Foundation, Federal, $138,360.00, Not Funded. (2020).

Lai, J. (Principal), Diong, B. M. (Co-Principal), C. M. (Co-Principal), Grant, "Power Engineering Training Program with Wide Bandgap Power Electronics Practicing Experience", Sponsored by DOE - Traineeship In Power Engineering program, Federal, $2,500,000.00, Not Funded. (January 1, 2016 - December 31, 2020).

Diong, B. M. (Principal), Lee, H. L. (Co-Principal), Sooklal, V. K. (Co-Principal), Grant, "Self-Moving Lane Barriers (Phase 1)", Sponsored by Georgia Department of Transportation, State, $207,800.00, Not Funded. (June 15, 2018 - June 14, 2020).

Diong, B. M. (Principal), Chin, C. (Co-Principal), Das, S. (Co-Principal), Tekes, A. (Co-Principal), Thain, W. E. (Co-Principal), Grant, "Enhancing Engineering Students' Troubleshooting Skills", Sponsored by CETL FY20 Faculty Learning Community (FLC), Kennesaw State University, **$750.00, Funded**. (August 2019 - May 2020).

Lee, H. L. (Principal), Diong, B. M. (Co-Principal), Grant, "Reduce Carbon Emissions by Wireless Power Transfer (Phase II)", Sponsored by Environmental Protection Agency P3 Awards Phase II, Federal, **$69,183.00, Funded**. (April 15, 2018 - April 14, 2020).

Diong, B. M. (Principal), Wang, Y. (Co-Principal), McFall, K. S. (Co-Principal), Yang, J. (Co-Principal), Grant, "A New Vehicle Concept To Provide Better Rapid Transit At Reduced Cost (Phase 2)", Sponsored by Georgia Department of Transportation, State, $325,800.00, Not Funded. (March 13, 2018 - March 13, 2020).

Diong, B. M. (Principal), Smith, S. (Co-Principal), Peterson, S. (Co-Principal), Grant, "Increasing the internationalization of KSU Engineering via German partnerships", Sponsored by Internationalization Projects to Impact Students program, Kennesaw State University, **$5,000.00, Funded**. (December 10, 2018 - May 31, 2019).

Diong, B. M. (Principal), Wang, Y. (Co-Principal), Yang, J. (Co-Principal), Grant, "A New Vehicle Concept To Provide Better Rapid Transit At Reduced Cost (Phase 1)", Sponsored by Georgia Department of Transportation, State, **$175,499.00, Funded**. (June 14, 2016 - October 31, 2018).

Lee, H. L. (Principal), Diong, B. M. (Co-Principal), Grant, "Reduce Carbon Emissions by Wireless Power Transfer (Phase I)", Sponsored by Environmental Protection Agency P3 Awards Phase I, Federal, **$14,953.00, Funded**. (August 15, 2016 - August 14, 2017).

Diong, B. M. (Principal), Wang, Y. (Co-Principal), Grant, "Slim-Modular-Flexible-Electric Bus", Sponsored by OVPR Pilot Grant program, Kennesaw State University, **$10,000.00, Funded**. (February 1, 2016 - September 1, 2016).

Diong, B. M. (Principal), McFall, K. S. (Co-Principal), Tippens, S. (Co-Principal), Grant, "Achieving increased photovoltaic panel energy collection with cell-strings that track the sun", Sponsored by Environmental Protection Agency P3 Awards Phase I, Federal, **$15,000.00, Funded**. (September 1, 2014 - August 31, 2015).

McFall, K. S. (Co-Principal), Diong, B. M. (Co-Principal), Tippens, S. (Principal), Grant, "Enhanced Solar Panel Energy Collection through Independent Tracking Cells", Sponsored by Environmental Protection Agency Phase II P3 Awards, Federal, $67,645.00, Not Funded. (March 2015).

Diong, B. M. (Principal), Zheng, G. (Co-Principal), Grant, "Campus power consumption analytics for improved conservation and efficiency", Sponsored by Office of Academic Affairs Small Grants program, Kennesaw State University, **$12,000.00, Funded**. (January 2014 - June 2014).

Diong, B. M. (Principal), Tippens, S. (Co-Principal), Grant, "Increasing photovoltaic panel power output by having the solar cells track the sun", Sponsored by Environmental Protection Agency P3 Awards Phase I, Federal, **$15,000.00, Funded**. (September 1, 2012 - August 31, 2013).

Diong, B. M. (Principal), Grant, "Videos and video podcasts as a teaching/learning tool", Sponsored by SPSU CTE SoTL Research Mini-grant, Kennesaw State University, **$750.00, Funded**. (April 2012 - December 2012).

Diong, B. M. (Co-Principal), Nazeran, H. (Principal), Nava, P. (Co-Principal), Grant, "Computer-based instrumentation for processing, analysis and classification of phononeumograms: towards automatic early detection of asthma in infants", Sponsored by Texas Tobacco Settlement Funds program, State, **$24,650.00, Funded**. (March 15, 2004 - December 31, 2004).

Diong, B. M. (Co-Principal), Nazeran, H. (Co-Principal), Nava, P. (Principal), Grant, "Computer-aided modeling, characterization and classification of respiratory diseases on the US-Mexico border", Sponsored by Texas Tobacco Settlement Funds program, State, **$20,500.00, Funded**. (March 15, 2003 - December 31, 2003).

Diong, B. M., McClure, J. (Principal), Chianelli, R. (Co-Principal), Grant, "Catalyst research, diffuser development and dynamics modeling for direct conversion PEM fuel cells",

Sponsored by Ballistic Missile Defense Organization BAA 2001-01, Federal, **$260,000.00, Funded**. (September 15, 2001 - September 14, 2003).

Diong, B. M., Grant, "Hybrid Electric Vehicle DC/DC converter-based battery charging system – Phase II", Sponsored by Ford Motor Co., Private, **$5,000.00, Funded**. (September 1, 2002 - December 31, 2002).

Diong, B. M., Grant, "Hybrid Electric Vehicle DC/DC converter-based battery charging system – Phase I", Sponsored by Ford Motor Co., Private, **$5,000.00, Funded**. (January 15, 2002 - May 15, 2002).

Diong, B. M., Myers, J. (Co-Principal), Grant, "Enhancing and expanding a Senior Project laboratory's capabilities", Sponsored by Agilent Technologies Foundation, Private, **$115,564.00, Funded**. (August 15, 2000 - August 14, 2001).

Diong, B. M. (Principal), Wicker, R., Zadoks, R., Grant, "A laboratory for state-of-the-art education of Electrical and Mechanical Engineering students in dynamic systems and control", Sponsored by NSF Course, Curriculum and Laboratory Improvement program, Federal, **$108,485.00, Funded**. (July 15, 1999 - July 14, 2001).

Diong, B. M. (Principal), Della-Piana, C. (Co-Principal), Grant, "Science and Engineering laboratory courses: Their role, computers and effective teaching/learning methods", Sponsored by UTEP CETaL Effective Teaching/Learning Grants program, **$8,541.00, Funded**. (May 15, 2000 - May 14, 2001).

Diong, B. M., Zadoks, R. (Co-Principal), Wicker, R. (Co-Principal), Grant, "Computer network for regular and Internet-based controls experiments", Sponsored by Hewlett-Packard Foundation, Private, **$27,430.00, Funded**. (December 15, 1999 - December 14, 2000).

Diong, B. M. (Principal), Wicker, R. (Co-Principal), Grant, "Remote experimentation in dynamic systems and control for distance education and research", Sponsored by NASA NRTS Internet-based Education and Research program (sub-award), Federal, **$9,991.00, Funded**. (November 15, 1999 - May 14, 2000).

Diong, B. M. (Principal), Bose, S. (Co-Principal), Freeman, R. (Co-Principal), Grant, "Dynamic systems and Controls laboratory", Sponsored by NSF Course, Curriculum and Laboratory Improvement program, Federal, **$104,558.00, Funded**. (August 1, 1997 - July 31, 1999).

Diong, B. M. (Co-Principal), Thompson, M. (Principal), Grant, "Digital Signal Processing laboratory equipment for Communications and Controls education", Sponsored by Texas Instruments Foundation, Private, **$27,430.00, Funded**. (January 15, 1998 - January 14, 1999).

Sponsored Research

Chin, C. (Principal), Diong, B. (Co-Principal), Das, S. (Co-Principal), Thain, W. (Co-Principal), Sponsored Research, "Longitudinal Interventions for Enhanced Troubleshooting Skills and Engineering Career Readiness", Sponsored by National Science Foundation (DUE - IUSE), Federal, $124,579.00, Not Funded. (2021 - June 14, 2024).

Karim, M. A., Diong, B. M., Sponsored Research, "Design and Optimization of UASB/Microbial Fuel Cell System for Energy Generation", Sponsored by OVPR, Kennesaw State University, $15,000.00, Not Funded. (April 6, 2020).

Karim, M. A., Diong, B. M., Sponsored Research, "Energy Generation from Brewery Wastewater Treatment", Sponsored by NSF, Federal, $329,834.00, Not Funded. (February 1, 2020).

Crawford, A. (Principal), Diong, B. M. (Other), Sponsored Research, "Hybrid Seven-level Multi-level Inverter", Sponsored by KSU Office of Undergraduate Research, Kennesaw State University, **$461.00, Funded**. (October 1, 2019 - December 15, 2019).

Roberts, P. (Principal), Diong, B. M. (Other), Sponsored Research, "Wireless Power Transfer Research", Sponsored by KSU Office of Undergraduate Research, Kennesaw State University, **$560.00, Funded**. (February 26, 2019 - May 31, 2019).

Diong, B. M. (Principal), Sponsored Research, "Electric vehicle drive system data logger (Test Mule) project", Sponsored by Wesley International, Private, **$6,500.00, Funded**. (September 2014 - December 2014).

Research Activity

Diong, Billy M, "Cascaded-H-Bridge Multilevel Inverters", On-Going, Academic.

TEACHING

Teaching Experience

At Kennesaw State University (2011 – 2023)

ECET 7504 (Grad), Research, 2 courses.
EE 2302, Circuit Analysis II, 3 courses.
EE 3401, Engineering Electronics, 12 courses.
EE 3601, Electric Machines, 28 courses.
EE 3602, Electric Power Systems, 6 courses.
EE 3603, Electronic Power Conversion, 2 courses.
EE 3903, SpTp- Electronic Power Conversion, 7 courses.
EE 3904, SpTp: Tech Elect (Power Elect), 2 courses.
EE 4201, Control Systems, 1 course.
EE 4400, DS: Power Inverters, 19 courses.
EE 4490, Electric Drives, 2 courses.
EE 4603, Electric Drives, 1 course.
EE 4801, Undergrad Research EE, 3 courses.
EE 4802, Undergraduate Research in EE, 4 courses.
EE 4803, Undergraduate Research in EE, 11 courses.
EE 4904, SpTp-Tech Elect(Elect. Drives), 2 courses.
EE 6615 (Grad), Emerging Vehicle Technologies, 5 courses.
EE 6800 (Grad), Master's Project, 1 course.
ENGR 4402, Engineering Ethics, 7 courses.

At Texas Christian University (2005 – 2011)

ENGR 10402, Digital Logic.
ENGR 20404, Network Analysis I
ENGR 20413, Network Analysis II
ENGR 30623, Control Systems I

At The University of Texas at El Paso (1999 – 2005)

EE 2351 – Networks
EE 3340 – Linear Integrated Circuits
EE 4171 – DSP Control Lab, ECE department
EE 4352 – Power Electronics, ECE department

EE 4364 – Systems and Control, ECE department
EE 5302 (Grad) – Linear Systems Analysis, ECE department
EE 5390 (Grad) – Special Topics: Power Electronics and Motor Drives
MECH 4111 – Controls Lab
MECH 4311 – Automatic Control

At The University of Texas – Pan American (now UTRGV, 1995 – 1999)

ELEE 2420 - Network Theory I
ELEE 3370 - Power Electronics
ELEE 4308 - Electromechanical Systems
ELEE 4321 - Automatic Control
ELEE 4361 - Senior Design I
ELEE 4362 - Senior Design II

Directed Student Learning

At Kennesaw State University

Directed Individual/Independent Study, Department of Electrical and Computer Engineering Department, EE, 4400, 3.0 credit hours, "Minimal Distortion of Programmed PWM of 5-level & 7-level Asymmetric Cascaded H-Bridge Multilevel Inverters", Completed. (August 2021 - December 2021).
Advised: Wilson, Blake

Directed Individual/Independent Study, Department of Electrical and Computer Engineering Department, EE, 4400, 3.0 credit hours, "Minimal Distortion of Programmed PWM of 5-level & 7-level Asymmetric Cascaded H-Bridge Multilevel Inverters", Completed. (January 2021 - May 2021).
Advised: Talley, Brantley

Directed Individual/Independent Study, Department of Electrical and Computer Engineering Department, EE, 6800, 3.0 credit hours, "On the Distortion of Phase-Disposition Sine-Triangle Pulse-Width-Modulated Asymmetric Multilevel Inverters", Completed. (August 17, 2020 - December 17, 2020).
Advised: Kalaria, Charul

Directed Individual/Independent Study, Department of Electrical and Computer Engineering Department, EE, 4400, 3.0 credit hours, "Oral Minimal Model for Gestational Diabetes", Completed. (August 17, 2020 - December 17, 2020).
Advised: Peters, Sarah

Supervised Research, Department of Electrical and Computer Engineering Department, 0.0 credit hours, "Programmed PWM of 1-phase Symmetric and Asymmetric Cascaded H-Bridge Multilevel Inverters", Completed. (January 13, 2020 - May 16, 2020).
Advised: Kalaria, Charul

Directed Individual/Independent Study, Department of Electrical and Computer Engineering Department, EE, 4400, 3.0 credit hours, "Wireless power transfer on aircraft", Completed. (January 13, 2020 - May 13, 2020).
Advised: Clayton, Bradley

Directed Individual/Independent Study, Department of Electrical and Computer Engineering Department, EE, 4400, 3.0 credit hours, "Minimal Distortion of 1-phase PWMed 5-level & 7-level Asymmetric Cascaded H-Bridge Multilevel Inverters", Completed. (August 2019 - December 2019).
Advised: Crawford, Austin

Directed Individual/Independent Study, Department of Electrical and Computer Engineering Department, EE, 4400, 3.0 credit hours, "Wireless power transfer on aircraft", Completed. (August 2019 - December 2019).
Advised: Privett, Eli, Segovia-Romero, Bryan

Supervised Research, Department of Electrical and Computer Engineering Department, "Minimal Distortion of SPWM Asymmetric 7-level Cascaded H-Bridge Multilevel Inverters", Completed. (August 20, 2019 - December 20, 2019).
Advised: Kalaria, Charul

Directed Individual/Independent Study, Department of Electrical and Computer Engineering Department, EE, 4400, 3.0 credit hours, "Wireless power transfer on aircraft", Completed. (June 2019 - July 2019).
Advised: Alsalma, Saud, Long, Jeremiah, Whelan, Jason

Directed Individual/Independent Study, Department of Electrical and Computer Engineering Department, EE, 4400, 3.0 credit hours, "Minimal Distortion of 1-phase PWMed 5-level Asymmetric Cascaded H-Bridge Multilevel Inverters", Completed. (June 2019 - July 2019).
Advised: Simms, Will, Benton, Konstantin

Supervised Research, Department of Electrical and Computer Engineering Department, "Minimal Distortion of SPWM Asymmetric 5-level Cascaded H-Bridge Multilevel Inverters", Completed. (May 15, 2019 - July 31, 2019).
Advised: Kalaria, Charul

Directed Individual/Independent Study, Department of Electrical and Computer Engineering Department, EE, 4400, 3.0 credit hours, "Wireless power transfer on aircraft", Completed. (January 2019 - May 2019).
Advised: Roberts, Patrick

Directed Individual/Independent Study, Department of Electrical and Computer Engineering Department, EE, 4400, 3.0 credit hours, "1-phase Hybrid Cascaded H-Bridge/Diode-Clamped Multilevel Inverter closed-loop capacitor voltage balancing", Completed. (January 2019 - May 2019).
Advised: Ogunkami, Victor

Supervised Research, Department of Electrical and Computer Engineering Department, "SPWM of 1-phase Hybrid Cascaded H-Bridge/Diode-Clamped Multilevel Inverter with capacitor voltage balancing", In-Process. (January 7, 2019 - May 10, 2019).
Advised: Kalaria, Charul

Directed Individual/Independent Study, Department of Electrical and Computer Engineering Department, EE, 4400, 3.0 credit hours, "1-phase Hybrid Cascaded H-Bridge/Diode-Clamped Multilevel Inverter closed-loop capacitor voltage balancing", Completed. (August 2018 - December 2018).
Advised: Hagle, Avery

Directed Individual/Independent Study, Department of Electrical and Computer Engineering Department, EE, 4400, 3.0 credit hours, "Wireless power transfer on aircraft", Completed. (August 2018 - December 2018).
Advised: Sinclair, Heath

Directed Individual/Independent Study, Department of Electrical and Computer Engineering Department, EE, 4400, 3.0 credit hours, "1-phase Hybrid Cascaded H-Bridge/Diode-Clamped Multilevel Inverter closed-loop capacitor voltage balancing", Completed. (August 2018 -

December 2018).
Advised: Swanbum, Ryne

Supervised Research, Department of Electrical and Computer Engineering Department, "SPWM of 1-phase Hybrid Cascaded H-Bridge/Diode-Clamped Multilevel Inverter with capacitor voltage balancing", In-Process. (August 14, 2018 - December 14, 2018).
Advised: Kalaria, Charul

Directed Individual/Independent Study, Department of Electrical and Computer Engineering Department, EE, 4400, 3.0 credit hours, "Wireless power transfer on aircraft", Completed. (June 2018 - August 2018).
Advised: Eve, Alex

Directed Individual/Independent Study, Department of Electrical and Computer Engineering Department, ECET, 7504, 4.0 credit hours, "Grid-Tied Voltage Source Inverter Controlled by Hysteresis current control method", Completed. (January 2018 - May 2018).
Advised: Yoseph, Fikru

Directed Individual/Independent Study, Department of Electrical and Computer Engineering Department, EE, 4400, 3.0 credit hours, "Analysis and design of a semi-autonomous bus' sensing, motor control and radio control (for the experimental prototype) systems". (January 2018 - May 2018).
Advised: Sinclair, Heath

Directed Individual/Independent Study, Department of Electrical and Computer Engineering Department, EE, 4400, 3.0 credit hours, "Wireless power transfer on aircraft", Completed. (January 2018 - May 2018).
Advised: Al-hawwari, Moe, Zaher, Abdullah

Supervised Research, Department of Electrical and Computer Engineering Department, "Analysis and design of a semi-autonomous bus' sensing, motor control and radio control (for the experimental prototype) systems". (January 2018 - May 2018).
Advised: Brown, Corey

Directed Individual/Independent Study, Department of Electrical and Computer Engineering Department, EE, 4400, 3.0 credit hours, "Analysis and design of a semi-autonomous bus' sensing, motor control and radio control (for the experimental prototype) systems". (August 2017 - December 2017).
Advised: Zhang, Chixiang

Directed Individual/Independent Study, Department of Electrical and Computer Engineering Department, EE, 4400, 3.0 credit hours, "Analysis and design of a semi-autonomous bus' sensing, motor control and radio control (for the experimental prototype) systems". (August 2017 - December 2017).
Advised: Rempe, Logan

Supervised Research, Department of Electrical and Computer Engineering Department, "Analysis and design of a semi-autonomous bus' sensing, motor control and radio control (for the experimental prototype) systems". (August 14, 2017 - December 14, 2017).
Advised: Brown, Corey

Supervised Research, Department of Electrical and Computer Engineering Department, "Analysis and design of a semi-autonomous bus' sensing, motor control and radio control (for the experimental prototype) systems". (August 14, 2017 - December 14, 2017).
Advised: Boyzo, Fernando

Supervised Research, Department of Electrical and Computer Engineering Department, "Analysis and design of a semi-autonomous bus' sensing, motor control and radio control (for the experimental prototype) systems". (May 15, 2017 - July 31, 2017).
Advised: Brown, Corey

Directed Individual/Independent Study, Department of Electrical and Computer Engineering Department, EE, 4400, 3.0 credit hours, "Analysis and design of a semi-autonomous bus' sensing, motor control and radio control (for the experimental prototype) systems". (May 2017 - July 2017).
Advised: Murray, Chrystiano

Directed Individual/Independent Study, Department of Electrical and Computer Engineering Department, EE, 4400, 3.0 credit hours, "1-phase Hybrid Cascaded H-Bridge/Diode-Clamped Multilevel Inverter closed-loop capacitor voltage balancing", Completed. (May 2017 - July 2017).
Advised: Bugel, Kristen

Directed Individual/Independent Study, Department of Electrical and Computer Engineering Department, EE, 4400, 3.0 credit hours, "Analysis, design and construction of a semi-autonomous bus' chassis (for the experimental prototype)". (May 2017 - July 2017).
Advised: Toby, Shawn

Directed Individual/Independent Study, Department of Electrical and Computer Engineering Department, ECET, 7504, 4.0 credit hours, "Cybersecurity Threats to Ghana's Power Grid and Their Mitigation", Completed. (January 2017 - May 2017).
Advised: Amuna, Fredrick

Directed Individual/Independent Study, Department of Electrical and Computer Engineering Department, EE, 4400, 3.0 credit hours, "Analysis and design of a semi-autonomous bus' sensing, motor control and radio control (for the experimental prototype) systems". (January 2017 - May 2017).
Advised: Nelson, Nick

Directed Individual/Independent Study, Department of Electrical and Computer Engineering Department, EE, 4400, 3.0 credit hours, "1-phase Hybrid Cascaded H-Bridge/Diode-Clamped Multilevel Inverter closed-loop capacitor voltage balancing", Completed. (January 2017 - May 2017).
Advised: Juleus, Quirstan

Supervised Research, Department of Electrical and Computer Engineering Department, "Analysis and design of a semi-autonomous bus' sensing, motor control and radio control (for the experimental prototype) systems". (January 9, 2017 - May 12, 2017).
Advised: Amuna, Fredrick

Supervised Research, Department of Electrical and Computer Engineering Department, "Analysis and design of a semi-autonomous bus' sensing, motor control and radio control (for the experimental prototype) systems". (January 9, 2017 - May 12, 2017).
Advised: Colmenares, Jesus

Directed Individual/Independent Study, Department of Electrical and Computer Engineering Department, EE, 4400, 3.0 credit hours, "1-phase Hybrid Cascaded H-Bridge/Diode-Clamped Multilevel Inverter closed-loop capacitor voltage balancing", Completed. (August 2016 - December 2016).
Advised: Biggers, Preston

Directed Individual/Independent Study, Department of Electrical and Computer Engineering Department, EE, 4400, 3.0 credit hours, "1-phase Hybrid Cascaded H-Bridge/Diode-Clamped Multilevel Inverter closed-loop capacitor voltage balancing", Completed. (August 2016 - December 2016).
Advised: Castillo, Richard

Supervised Research, Department of Electrical and Computer Engineering Department, "Analysis and design of a semi-autonomous bus' sensing, motor control and radio control (for the experimental prototype) systems". (August 15, 2016 - December 15, 2016).
Advised: Amuna, Fredrick

Supervised Research, Department of Electrical and Computer Engineering Department, "Analysis and design of a semi-autonomous bus' sensing, motor control and radio control (for the experimental prototype) systems". (August 15, 2016 - December 15, 2016).
Advised: Colmenares, Jesus

Directed Individual/Independent Study, Department of Electrical and Computer Engineering Department, EE, 4400, 3.0 credit hours, "1-phase Hybrid Cascaded H-Bridge/Diode-Clamped Multilevel Inverter closed-loop capacitor voltage balancing", Completed. (May 2016 - July 2016).
Advised: Castillo, Richard

Supervised Research, "Analysis and design of a semi-autonomous bus' sensing, motor control and radio control (for the experimental prototype) systems". (May 16, 2016 - July 30, 2016).
Advised: Amuna, Fredrick

Supervised Research, "Modeling of a bus' dynamic responses when operating with 2-wheel drive independent hub motors". (May 16, 2016 - July 30, 2016).
Advised: Machavolu, Iswarya

Directed Individual/Independent Study, Department of Electrical and Computer Engineering Department, EE, 4400, 3.0 credit hours, "3-phase Hybrid Cascaded H-Bridge/Diode-Clamped Multilevel Inverter open-loop testing", Completed. (January 2016 - May 2016).
Advised: Koster, William

Directed Individual/Independent Study, Department of Electrical and Computer Engineering Department, EE, 4400, 3.0 credit hours, "3-phase Hybrid Cascaded H-Bridge/Diode-Clamped Multilevel Inverter power circuit", Completed. (August 2015 - December 2015).
Advised: Abia-Bassey, Joshua

Directed Individual/Independent Study, Department of Electrical and Computer Engineering Department, EE, 4400, 3.0 credit hours, "3-phase Hybrid Cascaded H-Bridge/Diode-Clamped Multilevel Inverter control program", Completed. (August 2015 - December 2015).
Advised: Koster, William

Directed Individual/Independent Study, Department of Electrical and Computer Engineering Department, EE, 4803, 3.0 credit hours, "3-phase Diode-Clamped Multilevel Inverter power circuit", Completed. (January 2015 - May 2015).
Advised: Abia-Bassey, Joshua

Directed Individual/Independent Study, Department of Electrical and Computer Engineering Department, EE, 4803, 3.0 credit hours, "3-phase Diode-Clamped Multilevel Inverter control program", Completed. (January 2015 - May 2015).
Advised: Lyu, Weifeng

Yearly Advising Summary

2022-2023, 3 undergraduate students advised, 0 graduate students advised, 6 hours spent advising for the year, Helping students make decisions about their classes, major, internships & co-ops, and job offers. Writing grad school and job references for graduating students, and answering recruiter calls.

2021-2022, 30 undergraduate students advised, 1 graduate students advised, 40 hours spent advising for the year, Helping students make decisions about their classes, major, internships & co-ops, and job offers. Writing grad school and job references for graduating students, and answering recruiter calls.

2020-2021, 30 undergraduate students advised, 1 graduate students advised, 40 hours spent advising for the year, Helping students make decisions about their classes, major, internships & co-ops, and job offers. Writing grad school and job references for graduating students, and answering recruiter calls.

2019-2020, 30 undergraduate students advised, 1 graduate students advised, 60 hours spent advising for the year, Helping students make decisions about their classes, major, internships & co-ops, and job offers. Writing grad school and job references for graduating students, and answering recruiter calls.

2018-2019, 40 undergraduate students advised, 18 graduate students advised, 80 hours spent advising for the year, Helping students make decisions about their classes, major, internships & co-ops, and job offers.

2017-2018, 50 undergraduate students advised, 18 graduate students advised, 80 hours spent advising for the year, Helping students make decisions about their classes, major, internships & co-ops, and job offers.

2016-2017, 48 undergraduate students advised, 15 graduate students advised, 80 hours spent advising for the year, Helping students make decisions about their classes, major, internships & co-ops, and job offers.

2015-2016, 45 undergraduate students advised, 0 graduate students advised, 50 hours spent advising for the year, Helping students make decisions about their classes, major, internships & co-ops, and job offers.

2014-2015, 45 undergraduate students advised, 0 graduate students advised, 50 hours spent advising for the year, Helping students make decisions about their classes, major, internships & co-ops, and job offers.

SERVICE (at Kennesaw State University)

Institutional Service

University

Committee Member, Presidential Commission on Sustainability, approximately 10 hours spent for the year, elected, Pro Bono. (November 18, 2021 - Present).

Committee Member, Presidential Task Force on Race, approximately 10 hours spent for the year, appointed, Pro Bono. (November 18, 2021 - Present).

Task Force Chair, Vivarium Working Group, approximately 80 hours spent for the year, appointed, Pro Bono. (March 31, 2022 - September 15, 2022).

Committee Member, Administrative Effectiveness Council, approximately 40 hours spent for the year, appointed, Pro Bono. (January 2021 - June 30, 2022).

Committee Member, Policy Process Council, approximately 12 hours spent for the year, appointed, Pro Bono. (August 2020 - June 30, 2022).

Committee Member, Radiation Safety Committee, approximately 30 hours spent for the year, appointed, Pro Bono. (August 2020 - June 30, 2022).

Committee Member, Selection committee for “Outstanding Research and Creative Activity” award, approximately 10 hours spent for the year, appointed, Pro Bono, served ex-officio. (March 1, 2020 - June 30, 2022).

Faculty Advisor, KSU Electric Vehicle student competition team, approximately 50 hours spent for the year, Pro Bono. (June 2014 - February 2022).

Committee Member, Search committee for “University Ombuds”, approximately 20 hours spent for the year, appointed, Pro Bono. (September 1, 2021 - December 5, 2021).

Committee Member, Search committee for “Animal Care Facility Director”, approximately 20 hours spent for the year, appointed, Pro Bono. (August 1, 2021 - December 5, 2021).

Chairperson, Search committee for “Director of Research in the KSU CARES program and (Open Rank) Professor”, approximately 80 hours spent for the year, appointed, Pro Bono. (December 1, 2020 - May 2021).

Committee Chair, Search committee for “Director of Research in the A.L. Burruss Institute and (Open Rank) Professor”, approximately 80 hours spent for the year, appointed, Pro Bono. (December 1, 2020 - May 2021).

Committee Member, Interdisciplinary STEM Un-conference organizing committee, approximately 20 hours spent for the year, Pro Bono. (January 2021 - March 2021).

Session Chair, Local Leadership session, 2020 Annual EQUINOX Symposium, approximately 10 hours spent for the year, appointed, Pro Bono. (March 15, 2021).

Committee Member, Provost’s initiative to improve research-related processes, approximately 30 hours spent for the year, appointed, Pro Bono. (November 1, 2019 - August 2020).

Ex-Officio Member, KSU Intellectual Property Committee, approximately 160 hours spent for the year, appointed, Pro Bono. (January 1, 2020 - June 30, 2020).

Committee Member, KSU Intellectual Property Committee, approximately 40 hours spent for the year, appointed, Pro Bono. (April 1, 2017 - December 31, 2019).

Committee Member, Graduate Council, approximately 30 hours spent for the year, appointed, Pro Bono. (June 1, 2016 - December 31, 2019).

Faculty Advisor, KSU Sun Seekers student competition team, approximately 80 hours spent for the year. (December 2011 - November 2017).

University Senate Service, Faculty Senate, approximately 40 hours spent for the year, elected. (August 2015 - December 2016).

College

Committee Member, PhD program research equipment purchase, approximately 12 hours spent for the year, Pro Bono. (October 26, 2021 - Present).

Chairperson, Search committee for “Assistant Professor of Engineering in Smart Infrastructure” position, approximately 80 hours spent for the year, appointed, Pro Bono. (September 1, 2022 - January 9, 2023).

Committee Member, College Promotion and Tenure, approximately 8 hours spent for the year, appointed, Pro Bono. (August 2016 - May 2019).

Committee Member, Curriculum, approximately 40 hours spent for the year, appointed. (August 2015 - May 2019).

Committee Member, SPCEET Dean search committee, approximately 60 hours spent for the year, appointed, Pro Bono. (October 15, 2018 - March 31, 2019).

Committee Member, SPCEET Associate Dean search committee, approximately 16 hours spent for the year, appointed, Pro Bono. (August 2017 - May 2018).

Department

Committee Member, Department Faculty Council, approximately 12 hours spent for the year, elected, Pro Bono. (January 1, 2021 - Present).

Committee Member, ECE Dept Chair search committee, approximately 40 hours spent for the year, appointed, Pro Bono. (January 1, 2020 - May 31, 2020).

Committee Member, Curriculum, approximately 20 hours spent for the year, appointed. (August 2019 - December 2019).

Committee Member, EE Full Time Faculty search committee, approximately 16 hours spent for the year, appointed. (August 2017 - May 2018).

Committee Member, Faculty and Staff Evaluation of Administrators (FSEA) Committee, approximately 4 hours spent for the year, appointed, Pro Bono. (August 2016 - May 2017).

Committee Member, MTRE Promotion and Tenure, approximately 4 hours spent for the year, appointed. (August 2016 - May 2017).

Committee Member, Industrial Advisory Board, approximately 4 hours spent for the year, appointed. (August 2015 - May 2017).

Committee Member, Dept Faculty Council, approximately 4 hours spent for the year, appointed. (August 2015 - December 2016).

Committee Member, EE Part Time Faculty selection committee, approximately 8 hours spent for the year, appointed. (June 2016 - July 2016).

Committee Chair, EE Promotion and Tenure, approximately 20 hours spent for the year, appointed. (August 2015 - May 2016).

Professional Service

Reviewer, Journal Article, IEEE Transactions on Power Electronics, approximately 4 hours spent for the year, Pro Bono. (January 7, 2022 - January 8, 2022).

Reviewer, Journal Article, IEEE Transactions on Power Electronics, approximately 4 hours spent for the year, Pro Bono. (May 27, 2021 - May 28, 2021).

Reviewer, Journal Article, IEEE Transactions on Power Electronics, approximately 4 hours spent for the year, Pro Bono. (February 6, 2021 - February 7, 2021).

Reviewer, Journal Article, IEEE Transactions on Industrial Electronics, approximately 4 hours spent for the year, Pro Bono. (July 1, 2020 - July 5, 2020).

Reviewer, Conference Paper, IEEE Southeastcon 2020, approximately 4 hours spent for the year, Pro Bono. (January 20, 2020 - January 21, 2020).

Reviewer, Journal Article, IEEE Transactions on Industrial Electronics, approximately 4 hours spent for the year, Pro Bono. (December 25, 2019 - December 29, 2019).

Reviewer, Journal Article, IET Power Electronics, approximately 3 hours spent for the year, Pro Bono. (December 24, 2019).

Session Chair, 2019 North American Power Symposium, Wichita, KS, approximately 2 hours spent for the year, appointed, Pro Bono. (October 15, 2019).

Reviewer, Ad Hoc Reviewer, External T&P Reviewer for Dr. Deidra Hodges of The University of Texas at El Paso, El Paso, TX, USA, approximately 8 hours spent for the year, Pro Bono. (August 2019 - September 2019).

Reviewer, Journal Article, IEEE Transactions on Power Electronics, approximately 4 hours spent for the year, Pro Bono. (August 5, 2019).

Reviewer, Journal Article, IET Power Electronics, approximately 4 hours spent for the year, Pro Bono. (March 7, 2019).

Reviewer, Journal Article, CPSS Transactions on Power Electronics and Applications, approximately 4 hours spent for the year, Pro Bono. (November 2018 - December 2018).

Reviewer, Journal Article, IEEE Transactions on Industrial Electronics, approximately 4 hours spent for the year, Pro Bono. (November 1, 2018 - November 23, 2018).

Reviewer, Journal Article, IEEE Journal of Emerging and Selected Topics in Power Electronics, approximately 4 hours spent for the year, Pro Bono. (September 2018 - October 2018).

Reviewer, Conference Paper, IEEE International Symposium on Power Electronics for Distributed Generation Systems 2018, approximately 10 hours spent for the year, Pro Bono. (March 9, 2018 - March 19, 2018).

Reviewer, Ad Hoc Reviewer, External T&P Reviewer for Dr. Rami Haddad of Georgia Southern University, Statesboro, GA, USA, approximately 8 hours spent for the year, Pro Bono. (August 2017 - September 2017).

Reviewer, Conference Paper, Applied Power Electronics Conference 2018, approximately 8 hours spent for the year, Pro Bono. (August 1, 2017 - August 22, 2017).

Reviewer, Journal Article, IEEE Transactions on Industrial Electronics, approximately 4 hours spent for the year, Pro Bono. (March 2017 - May 2017).

Reviewer, Conference Paper, Intl Transportation Electrification Conf 2017, approximately 8 hours spent for the year, Pro Bono. (January 10, 2017 - January 31, 2017).

Conference-Related, 2016 Asian Conference on Energy, Power and Transportation Electrification, Singapore, Singapore, approximately 12 hours spent for the year, appointed, Pro Bono. (February 2016 - October 2016).

Session Chair, 2016 North American Power Symposium, Denver, CO, approximately 2 hours spent for the year, appointed. (September 19, 2016).

Reviewer, Journal Article, IET Power Electronics, approximately 3 hours spent for the year, Pro Bono. (June 24, 2016).

Reviewer, Conference Paper, IEEE Energy Conversion Congress & Exposition 2016, approximately 4 hours spent for the year, Pro Bono. (June 16, 2016 - June 23, 2016).

Session Chair, IEEE Southeastcon 2016, Norfolk, VA, approximately 2 hours spent for the year, appointed. (April 1, 2016).

Reviewer, Conference Paper, Intl Transportation Electrification Conf 2016, approximately 1 hours spent for the year, Pro Bono. (January 12, 2016).

Reviewer, Conference Paper, Intl Transportation Electrification Conf 2016, approximately 1 hours spent for the year, Pro Bono. (January 9, 2016).

Reviewer, Conference Paper, Intl Transportation Electrification Conf 2016, approximately 1 hours spent for the year, Pro Bono. (January 7, 2016).

Reviewer, Journal Article, IETE Journal of Research, approximately 3 hours spent for the year, Pro Bono. (December 9, 2015).

Reviewer, Journal Article, IEEE Transactions on Power Electronics, approximately 3 hours spent for the year, Pro Bono. (October 6, 2015).

Reviewer, Journal Article, IET Power Electronics, approximately 3 hours spent for the year, Pro Bono. (August 29, 2015).

Reviewer, Journal Article, IEEE Transactions on Power Electronics, approximately 3 hours spent for the year, Pro Bono. (August 5, 2015).

Reviewer, Journal Article, International Journal of Emerging Electric Power Systems, approximately 3 hours spent for the year, Pro Bono. (July 9, 2015).

Reviewer, Journal Article, IEEE Transactions on Industrial Electronics, approximately 3 hours spent for the year, Pro Bono. (May 6, 2015).

Public Service

Project judge, Fulton County Regional Science and Engineering Fair, Sandy Springs, GA, approximately 3 hours spent for the year, Pro Bono, Regional. (February 19, 2016).

Program/Faculty Direction/Coordination

Program Direction, M.S. Applied Engineering program coordination, approximately 10 Faculty/Staff Involved, Amount of Funding Involved: 0. (January 1, 2016 - December 31, 2019).

MSAE Program Coordination, Improve KSU annual assessment, approximately 1 Faculty/Staff Involved, Amount of Funding Involved: 0. (September 1, 2019 - September 30, 2019).

Program Direction, Curriculog proposal for Program name change to MSECE with addition of On-campus delivery format and Thesis option, approximately 1 Faculty/Staff Involved, Amount of Funding Involved: 0. (July 1, 2019 - August 31, 2019).

Program Direction, Curriculog proposal for Master's Thesis course, approximately 1 Faculty/Staff Involved, Amount of Funding Involved: 0. (October 9, 2017 - October 16, 2017).

Program Direction, Curriculog proposal for Program name change to MSEE with addition of On-campus delivery format and Thesis option, approximately 1 Faculty/Staff Involved, Amount of Funding Involved: 0. (October 1, 2017 - October 16, 2017).

MSAE Program Coordination, Improve KSU annual assessment, approximately 1 Faculty/Staff Involved, Amount of Funding Involved: 0. (September 16, 2017 - September 30, 2017).

Program Direction, Marketing Campaign Spring 2016 outreach, approximately 1 Faculty/Staff Involved. (August 20, 2016 - August 31, 2016).

MSAE Program Coordination, Improve KSU training Faculty/Staff Involved. (March 22, 2016).

Development Activities Attended

Workshop, "Leading as An Assistant/Associate Dean: An Online Bootcamp," Academic Impressions, Virtual. (May 15, 2023 – June 26, 2023).

Conference Attendance, "2021 APLU Annual Meeting," American Society for Engineering Education (ASEE), Virtual. (November 15, 2021 - November 17, 2021).

Conference Attendance, "2021 ASEE Annual Conference," American Society for Engineering Education (ASEE), Virtual. (July 26, 2021 - July 29, 2021).

Conference Attendance, "IEEE SoutheastCon 2021," IEEE, Virtual. (March 12, 2021 - March 13, 2021).

Conference Attendance, "2020 IEEE Global Humanitarian Technology Conference," IEEE. (October 29, 2020 - November 1, 2020).

"Careers Hiring training," HR, Kennesaw State University, Kennesaw, GA, United States. (July 22, 2020).

Conference Attendance, "NCCI 2020 Annual Conference," Network for Change and Continuous Innovation. (July 8, 2020 - July 9, 2020).

Conference Attendance, "IEEE SoutheastCon 2020," IEEE. (March 28, 2020 - March 29, 2020).

Seminar, "Research on Power Electronics at Nanyang Tech Univ & MMC Introduction," IEEE Power Electronics Atlanta Section Chapter, ATLANTA, GA, United States. (October 9, 2019).

Seminar, "3rd Annual Energy Thought Leaders Symposium," Center for Distributed Energy (CDE), Georgia Tech, ATLANTA, GA, United States. (August 27, 2019).

"Information security training." (August 23, 2018).

Workshop, "Perspectives on Global Issues Workshop - Sustainability," KSU Office of Academic Affairs, Otzenhausen, Germany. (May 10, 2018 - May 18, 2018).

"Conflict of Interest Training - 2018." (March 2, 2018).

Conference Attendance, "Electric Vehicles & the Southeast Grid," Southern Company, Braselton, GA. (November 15, 2017).

Webinar, "Advanced Li-ion & Beyond Li-ion Batteries 2018-2028," IDTechEx, Cambridge, UK. (September 14, 2017).

Workshop, "T&P Reviewer Workshop," VPAA's Office, Kennesaw, Georgia, United States. (August 8, 2017).

Conference Attendance, "SAE World Congress Experience," SAE, Detroit, MI. (April 4, 2017 - April 6, 2017).

"Information security training." (December 16, 2016).

Conference Attendance, "Electric Vehicles & the Southeast Grid," Southern Company, Braselton, GA. (November 10, 2016).

"Financial Learning Exchange Training - 2016." (November 7, 2016).

Seminar, "Smart Cities - Leveraging Next Gen Transportation," Wireless Technology Forum, ATLANTA, GA, United States. (October 20, 2016).

Technology Training, "Hobson's Radius student contact management program," KSU Graduate School, Marietta, GA, USA. (September 16, 2016).

"Clery Training - Annual." (August 7, 2016).

Technology Training, "SAS User Orientation for Grant PIs," Office of Research, Kennesaw, GA. (July 27, 2016).

"Employee General Safety Training - 2016." (May 28, 2016).

Workshop, "Multicultural Training for Advisors," KSU Office of Academic Affairs, and the Wellstar College Advising Center, Kennesaw, GA, USA. (January 19, 2016).

"USG Ethics." (January 12, 2016).

"Information security training." (December 18, 2015).

Workshop, "Digital Measures Training," KSU Office of Academic Affairs, Marietta, GA, USA. (December 4, 2015).

Workshop, "Training for Grad Application Review," KSU Graduate School, Marietta, GA, USA. (October 16, 2015).

Workshop, "SPCEET Safety Training," SPCEET, Marietta, GA, USA. (September 18, 2015).

"Clery Training - Annual." (July 2, 2015).

"Originator Training in Curriculog." (May 4, 2015).

"Curriculum Committee Member Training in Curriculog." (February 6, 2015).

ADMINISTRATION AND LEADERSHIP (at Kennesaw State University)

Associate Dean for Research, July 1, 2022 - June 30, 2023. Primary duties include the following: 1) assisting the Dean of SPCEET in providing college-wide leadership and direction for the support and expansion of disciplinary and interdisciplinary research, scholarship, and creative activities, and grant and contract activities; 2) working closely with the college's Department chairs, other colleges' Associate/Assistant Deans of Research and the Office of Research to achieve the college's goals to support and increase research, scholarship, and creative activities, and grant and contract activities and accomplishments. The main goals, which support the KSU Roadmap to R2 Success' thrust of 'Promote Interdisciplinary Research With Relevance', and associated initiatives are:
• Increase external funding - by providing college resources to initiate broad-based scholarly activity and to create opportunities for collaboration among departments and colleges.
• Enhance research centers - by expanding them, and developing policies and strategies to optimize their operations.
• Enhance research infrastructure - by expanding research facilities and spaces for interdisciplinary research.
• Foster inclusive scholarship - by adopting modified Boyer's model of scholarship.

Associate Vice President for Research, January 1, 2020 - June 30, 2022. Primary duties include the following: 1) assisting the Vice President for Research in providing university-wide leadership and direction for the support and expansion of disciplinary and multidisciplinary research, scholarship, and creative activities, and grant and contract activities; 2) working closely with the academic deans and the assistant/associate deans of research especially, and collaborating with offices across the university to coordinate research initiatives and resolve research-related matters, in order to carry out the mission of the Office of Research (OoR); 3) supporting and facilitating the research and sponsored project efforts of KSU's faculty, staff (especially postdoctoral researchers), and students by promulgating and promoting appropriate policies and programs, and directing their implementation; 4) aiding the OoR's efforts in the areas of stimulating (interdisciplinary) multi-investigator research collaborations, and organizing professional development activities for new and continuing researchers.

MS Applied Engineering program coordinator, August 1, 2015 - December 31, 2019. Carried out initial setup and thereafter daily operation of the MS Applied Engineering program (including student admissions, course advising, Master's project topic selection and approval). Also performed program assessment and improvement planning. During Fall 2017, also prepared proposals to request substantive changes to the program: 1) change of program name from MS Applied Engineering to MS Electrical Engineering with corresponding change in CIP code, 2) addition of face-to-face delivery to existing online delivery format, and 3) addition of Thesis option to existing Coursework and Project options for obtaining degree. During 2019, also prepared proposal to change program name from MS Applied Engineering to MS Electrical & Computer Engineering with corresponding change in CIP code.