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Assistant Professor of Mechatronics Engineering Technology
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a. Professional Preparation

University of El Minia Cairo, Egypt	Electrical Engineering	BS,2001
Tennessee State University Nashville, TN	Electrical Engineering	ME,2009
Tennessee State University Nashville, TN	Computer Information System Engineering	Ph.D., 2013

b. Appointments

2015-Present Assistant Professor of Engineering Technology, Purdue University Northwest, Hammond, IN, 46323
2013 – 2015 Research Associate and Postdoc at Tennessee State University, Nashville, TN
2009 – 2015 Adjunct Faculty at Austin Peay State University, Clarksville, TN
2007– 2013 Senior Research Scientist and Teaching Aassistances at Tennessee State University, Nashville, TN

c. Product

i. **Mikhail, M**, (2019), *Final Phase of Design, Test, and Evaluation of a Portable Programmable Logic Controller Trainer,* Proceedings of the 2019 American Society for Engineering Education Annual Conference & Exposition, June 16-19, Tampa, FL
ii. **Mikhail, M** and Wickrema, C. (2019). *Developing Dynamic Navigation Software for a Laser Guided Autonomous Mobile Robot*, Presented at IEEE Southeast Con-17, April 10-April 13, Huntsville, AL. URL: http://ieeexplore.ieee.org/document/7925336/
iii. **Mikhail, M**. (2019). *Advanced Signal Processing for Decision Making and Decision-Fusion Software Systems for Aircraft Structural Health Monitoring* , Presented at IEEE Southeast Con-17, April 10-April 13, Huntsville, AL. URL: *http://ieeexplore.ieee.org/document/7925336/*
iv. **Mikhail, M**, (2019), *Enhancing College of Technology and Engineering Technology Programs with Industrial Robotics Concentration,* Proceedings of the 2019 American Society for Engineering Education Annual Conference & Exposition, June 16-19, Tampa, FL
v. **Mikhail, M**, (2019), *Virtual Robot Labs for Programming Industrial Robot Course,* Proceedings of the 2019 American Society for Engineering Education Annual Conference & Exposition, June 16-19, Tampa, FL

vi. Alavizadeh, A., **Mikhail, M**, (2019), *Design and development of portable pneumatic trainers to teach basic PLC wiring and programming*, Proceedings of the 2019 American Society for Engineering Education Annual Conference & Exposition, June 16-19, Tampa, FL

vii. **Mikhail, M.** and Wang, A. (2018), *Lab-Design of FANUC Robot Operation for Engineering Technology Major Students,* Proceedings of the 2018 American Society for Engineering Education Annual Conference & Exposition, June 24-27, Salt Lake City, UT

viii. Alavizadeh, A., and **Mikhail, M**. (2018*)*, Proceedings of the 2017 *Developing PLC-based pneumatic lab activities for an undergraduate course on fluid power,* American Society for Engineering Education Annual Conference & Exposition, June 24-27, Salt Lake City, UT

ix. **Mikhail, M** and Carmack, N. (2017). *Development of Navigation Software System for Obstacle Avoidance using Laser Sensor,* Presented at IEEE Southeast Con-17, March 30-April 3, Charlotte, NC. URL: http://ieeexplore.ieee.org/document/7925336/

x. **Mikhail, M.** and Alavizadeh, A. (2017), *Enhancing a Programmable Logic Controller Course using Portable Trainers,* Proceedings of the 2017 American Society for Engineering Education Annual Conference & Exposition, June 25-29, 2017, Columbus, Ohio

xi. **Mikhail, M**. and Engle, C. (2017), *Enhancing Machine Design Course with an Integrated Vending Machine System.* Proceedings of the 2017 American Society for Engineering Education Annual Conference & Exposition, June 25-29, 2017, Columbus, Ohio.

xii. Alavizadeh, A., and **Mikhail, M**. (2017*), Integrating Measurement Instruments in Pneumatic Lab Activities*. Proceedings of the 2017 American Society for Engineering Education Annual Conference & Exposition, June 26-29, 2017, June 25-29, 2017, Columbus, Ohio.

xiii. Carmack, N. and **Mikhail, M** (2016). *Development of Navigation Software System for Obstacle Avoidance*, Presented at IEEE Southeast Con-16, March 30-April 3, Norfolk, VA. URL: http://ieeexplore.ieee.org/document/7506713/

xiv. **Mikhail, M**. and Alavizadeh, A. (2016), *Incorporating a Software System for Robotics Control and Coordination in Mechatronics undergraduate curriculum.* Proceedings of the 2016 American Society for Engineering Education Annual Conference & Exposition, June 26-29, 2016, New Orleans, Louisiana.

xv. **Mikhail, M**. and Neff, G. (2016), *A Non-Commercial Pneumatic Trainer with PLC Control*. Proceedings of the 2016 American Society for Engineering Education Annual Conference & Exposition, June 26-29, 2016, New Orleans, Louisiana.

xvi. Alavizadeh, A., Ortega, M.J. and **Mikhail, M**. (2016), *Teaching Modeling and Simulation in Industrial Engineering Technology Programs*: A National Survey Paper. Proceedings of the 2016 American Society for Engineering Education Annual Conference & Exposition, June 26-29, 2016, New Orleans, Louisiana.

xvii. Terrell, K, Sabatto,S and **Mikhail, M** .(2015) *Intelligent Fuzzy Controller for Lateral Control of Aircraft Model*s, Presented at the IEEE SoutheastCon-15, April 4-7,Jacksonville, FL. URL: http://ieeexplore.ieee.org/document/7132967/

xviii. **Mikhail, M**, Sabatto,S and Terrell,K . (2015) .*Reconfigurable Controller for Control of Longitudinal Aircraft Model Operating Under Uncertainty* presented at the IEEE SoutheastCon-15, April 4-7, Jacksonville, FL. URL: http://ieeexplore.ieee.org/document/7132966/

xix. Sabatto,S, **Mikhail, M**, Bodruzzaman, DeSimio, M,and Derriso,M(University of Dayton Research Institute, Dayton-Air force Research laboratory- AFB). (2013) .*Multistage Fuzzy Inference System for Decision Making and Fusion in Fatigue Crack Detection of Aircraft Structures* Published at The American of Institute and Aerospace Astronomic Conference (AIAA) Conference, Los Angeles, CA. URL: https://arc.aiaa.org/doi/abs/10.2514/6.2013-4902

xx. Sabatto,S, and Bodruzzaman,M, and **Mikhail, M**. (2013). *Statistical Approach to Online Prognostics of Turbine Engine Component* , Accepted Published and presented at the IEEE SoutheastCon-13, Jacksonville, FL. URL: http://ieeexplore.ieee.org/document/6567479/

xxi. Abdulla Al-Salah, Saleh Zein-Sabatto, Bodruzzaman,M, and **Mikhail, M**.(2013). *Two-level Fuzzy Inference System for Aircraft's Structural Health Monitoring* Published at the IEEE SoutheastCon-13, Jacksonville, FL. URL: http://ieeexplore.ieee.org/document/6567360/

xxii. **Mikhail, M,** Sabatto,S, and Bodruzzaman,M.(2012). *Decision Fusion Methodologies in Structural Health Monitoring Systems*. Published and Presented at IEEE, Orlando, FL. URL:http://ieeexplore.ieee.org/document/6197066/

xxiii. Sabatto,S, **Mikhail, M** and Bodruzzaman,M.(2012). *Analysis Of Fusion Algorithms Characteristics In Handling Decision Uncertainties* Published at The Evolutionary And Bio-Inspired Computation Conference of The SPIE Conference Baltimore, MD. URL: http://spie.org/Publications/Proceedings/Paper/10.1117/12.919731

xxiv. Sabatto, S**, Mikhail, M** and Bodruzzaman,M.(2012) .*Decision Fusion Methodologies Understanding With Applications to Structural Health Monitoring*. Published at The American of Institute and Aerospace Astronomic Conference (AIAA) Conference, Los Angeles, CA. URL: https://arc.aiaa.org/doi/abs/10.2514/6.2012-2401

xxv. **Mikhail, M**, Sabatto, S, and Bodruzzaman,M.(2011). *Information and Decision Fusion Systems for Aircraft Structural Health Monitoring*. Published and Presented at Fifth IEEE SoutheastCon, Nashville, TN URL: http://ieeexplore.ieee.org/document/5752973/

d. Synergistic Activities

1. INSGC, Indiana Space Grant Consortium, Spring 2019
2. INSGC, Indiana Space Grant Consortium, Spring 2017
3. PRF, Purdue Research Foundation, Summer 2016
4. Lead Research Team for US Air Force Research Laboratory (AFRL) for State Awareness for Increased Autonomy Autonomous Ground Vehicles
5. Develop and design wireless distributed engine control for Boeing Research and Technology Company, Monitoring Ph.D. and Masters Students along their research and Thesis Also Monitoring and Guiding underground Student for their capstone projects, 2013-2015