Industry Partnership: Enhancing Recruitment Through Increasing the Advisory Board Merit-Based Scholarships

Since its establishment in 1997, the Advisory Board has generously continued to provide expert advice and professional and financial support to upgrade ETM programs. With the board’s guidance and support, the Engineering Technology programs (Construction Management and Civil, Electronics and Computer, and Mechanical and Manufacturing) earned ATMAE accreditation in 1998 (reaccredited in 2002, 2008, and 2014) with the Master of Science in Engineering and Technology Management initially accredited in 2014. The faculty are preparing for a reaccreditation visit in 2020 and also preparing the online completer Technology Management (BSTM) program for initial accreditation.

Our graduating seniors continually achieve more than a 90% pass rate on the Certified Technology Manager exam administered by ATMAE. Continued alumni success in careers, employers’ demand for advanced technological skills as well as MSETM graduates’ success in pursuing doctoral degrees with fellowships in leading institutions such as Syracuse University, Iowa State University, New Jersey Institute of Technology, among others, has resulted in significant growth in our programs.

To meet the needs of industrial corporations in the region for highly skilled employees, our programs prepare students with advanced problem solving skills in Mechanical, Manufacturing, Simulation, Robotics, and OSHA and Fanuc Certification. The 21st Century Center for Manufacturing Systems faculty/staff are prepared to offer consulting services and workshops such as SolidWorks, Mechatronics, Lean Systems, and Six-sigma Certification for industries and KCTCS institutions. The Employers’ feedback indicates that our graduates are prepared to fill technological problem solving positions such as engineering manager, quality engineer, system analyst, production engineer, project manager, database administrator, software engineer, and computer graphics among others.

In collaboration with the advisory board, the faculty continue to modify and strengthen the existing programs’ curricula and develop new program opportunities in Systems Integration Engineering, Mechatronics, Computer Science, Software Engineering, and Data Sciences. The ETM faculty are planning to prepare our graduates for professional engineering certification (PE) through the development of a Systems Integration engineering program. The computer science faculty are revising the CS program to align the curriculum with ABET Computing Commission standards.

Major accomplishments have become possible with the Advisory Board’s dedication of time and expertise as well as strong financial support for the programs. In order to solve complex technological problems encountered in the technology-driven workplace, we must recruit and educate a diverse cohort of students who are capable of developing stronger STEM-based quantitative and analytical skills. To attract such motivated and academically prepared students, the Advisory Board has focused on strengthening the merit-based Advisory Board Scholarship with a goal to increase the scholarship endowment from approximately $80,000 to $250,000 by December 2019.

David Smith, Board Chair and Ahmad Zargari, SEIS
Dr. Heba Elgazzar and Asim Chaudhry had their research on “Design and Implementation of a Hybrid Face Recognition Technique” presented and published at the 2019 IEEE Computing and Communication Workshop and Conference.

Dr. Elgazzar and Craig Coppola had their work on “Social Networks Analytics using Machine Learning” accepted for presentation and publication at the National Conference for Undergraduate Research (NCUR 19). Dr. Elgazzar’s URF student, Mr. Craig Coppola, was accepted in NSF Research Experiences for Undergraduates (REU) in Parallel and Distributed Computing at Auburn University, May-August 2019.

Dr. Cheng Cheng’s paper “A highly sensitive aptasensor for on-site detection of lipopolysaccharides in food” is scheduled to be published in issue 6 of Electrophoresis. This paper is also selected and will be highlighted as the cover picture of the journal.

Dr. Cheng’s journal paper “Rapid detection of ultra-trace nanoparticles based on ACEK enrichment for semiconductor manufacturing quality control” was published in Microfluidics and Nanofluidics. Dr. Cheng also presented with his student at Posters-at-the-Capitol on February 21, 2019, at the Capitol Rotunda in Frankfort, KY.

Dr. Steve Stubbs served as the Technology Bowl event chair for the second consecutive year at the EKTSA Regional Competition hosted by the Department of Engineering and Technology Management on March 1, 2019. Dr. Stubbs has also been actively involved with Morehead State University’s Meet MSU recruiting events and SOAR registrations to help recruit students into the Department.

Dr. Stubbs has been involved in curriculum changes to meet the needs of the students in the Industrial Education program. The curriculum change process will make sure the students have the requisite knowledge to be excellent teachers once they graduate.

Dr. Sherif Rashad received the Best Paper Award from the 9th Annual IEEE Computing and Communication Workshop and Conference (IEEE CCWC 2019) for his paper titled “Comparing ANN, SVM, and HMM based Machine Learning Methods for American Sign Language Recognition using Wearable Motion Sensors” which was co-authored by Rabeet Fatmi, Sherif Rashad, and Ryan Integlia.

Dr. Rashad also presented with his student at Posters at the Capitol event on February 21, 2019. Dr. Rashad will participate in the 2019 Bluegrass Higher Education Consortium Academic Leadership Academy (ALA). Dr. Rashad will be also serving as the campus liaison.

Dr. Kouroush Jenab and his student Luke Sizemore presented their research “Automatic Catheter Irrigation System (ACIS)” at the Posters at the Capitol event on February 21 in Frankfort, KY. Dr. Jenab also presented “Embedded Reliability in Design Thinking Concept for Aerospace” at the NASA Academy of Aerospace Quality 2018 Workshop in the NASA Safety Center at the Ohio Aerospace Institute.

In December, Dr. Jenab attended FAME training in St. Charles, Missouri with Dr. Qingzhou Xu, Mr. Sam Mason, and Mr. Jason Stepp. Dr. Jenab also judged the Technology Problem Solving event at the EKTSA Regional Competition and will be attending the KYTSA State Competition in April to serve as a judge.

Dr. Jorge Ortega Moody facilitated an agreement with Schneider Electric for the donation of SCADA software for nine workstations with a total value of $57,807. He has continued work on his Indoor Smart Greenhouse and the development of an autonomous tractor system.

Dr. Moody started an initiative with industry partners to contract Departmental services for help with automation projects. Most of the work so far has been services consisting of consulting and programming PLCs, generating funds of $5,000.00 for the department. He has also begun negotiations for projects with GE Appliances (Louisville KY) and BPR (Mexico) for the implementation of Virtual Reality Systems in their respective training departments.
S. Sareh (Sara) Ahmadi

S. Sareh (Sara) Ahmadi, from Iran, is an ETM Graduate Assistant. She received her Bachelor’s Degree in Electrical Engineering followed by a Masters Degree in Electrical Engineering, field of control, in Iran.

Presently, Sara is pursuing a second Master’s degree in Engineering and Technology Management at MSU. Her research interests are in intelligent control systems, data mining, machine learning, statistical and data analysis. She is conducting research in different applications of machine learning methods for intrusion detection in computer networks and authentication of smartphone users for her Master’s thesis.

Lindsay Childs

Lindsay Childs, from Hillsboro, Kentucky, is an ETM Graduate Assistant. She graduated from MSU in December 2017 with a BSET in Electronics and Computer Engineering Technology. She is pursuing an MSETM degree. Lindsay is assisting professors by using her knowledge of Lean Manufacturing, Industrial Safety, DC and AC circuits, and Computer Networking. She is also the Graduate Mentor for the department’s Robotics Team. Lindsay is also currently serving as the Student Representative on the Board of Directors for ATMAE. While finishing her degree, she is also working at Regal Beloit as an Engineering Intern where she is completing her thesis.

Abdullah Alharbi

Abdullah Alharbi, from Saudi Arabia, is an ETM Graduate Assistant. He graduated from MSU in December 2018 with a BSET in the Construction Management and Civil Engineering Technology track. Abdullah is now pursuing a Master’s Degree in Engineering and Technology Management. He is currently assisting students with their lab work in the field. Abdullah is an international student representative in the Student Government Association at MSU. He is also Secretary of the Associated General Contractors student chapter at MSU.

Yevgeniy Byeloborodov

Yevgeniy Byeloborodov, from Kiev, Ukraine, is an ETM Graduate Assistant, a member of ATMAE and the Robotics Team pursuing an MSETM degree. He graduated from National Technical University of Ukraine “Igor Sikorsky Kyiv Polytechnic Institute” in 2014 with a Bachelors in Aeronautical Engineering and from MSU in 2017 with a Masters degree in Space Systems Engineering. He is assisting professors and staff in Automation, Manufacturing, Computer Aided Design, and Virtual Reality applications. He was a team lead on satellite subsystems development such as structure, attitude control, and determination system and wiring harness in 3 different spacecraft projects - first PocketQube, 2U and 6U CubeSats. He then led and conducted assembly and participated in the integration and testing of the 2U CubeSat CXBN-2.

Cody Mitchell

Cody Mitchell, from Clay City, Kentucky, is a Graduate Assistant for the Department of Engineering and Technology Management. He graduated from Morehead State University in May of 2018 with a Bachelor’s in Computer Science and Mathematics. He is pursuing a Master’s in Engineering and Technology Management with an emphasis in Computer Information Systems and Analytics.

Cody is aiding instructors in Computer Science and Computer Information Systems courses with his knowledge in said subjects; occasionally teaching as well. He has started working on his thesis which is establishing new methods in Alzheimer’s detection with Dr. Heba Elgazzar as his advisor. His academic interests include clinical informatics, big data, data analysis, data mining, and machine learning.

Molom-Ochir Mijid

Molom-Ochir Mijid, from Erdenet, Mongolia, is a Graduate Assistant in the Department of Engineering and Technology Management. He previously worked as a senior electrical engineer in a mining company. He graduated with a Bachelors in Mining Electro Mechanic Engineering with honors from the Mongolian Technical University in Ulaanbaatar, Mongolia. He came to the United States to study English as a third language.

Molom is working toward a Master of Science in Engineering and Technology Management. His interests are in DC and AC circuits, microcontrollers, PLCs, robotics, power electronics, and electrical drives.

Krishna Kanumuru

Krishna Kanumuru is a graduate student in the MSETM program. He received a BS in Electronics and Communication Engineering and an MS in Space Systems Engineering. He assisted the software team for the CXBN-2 satellite in the Space Science Center. He is interested in electronics, automation, and machine learning systems.

Mutlaq Alammaj

Mutlaq Alammaj, from Saudi Arabia, graduated from Morehead State University in May 2018 with a BA in Computer Information System. He is a Graduate Assistant in ETM working toward an MS in Engineering and Technology Management.
Andrew Crowe graduated from MSU in 2008 with a bachelor’s in Computer Science. While at Morehead, Andrew joined Kentucky Space’s KySat project as a programmer for the initial version of ground station software.

After graduating, Andrew leveraged the skills he learned from the KySat project into a software development career in defense contracting. He worked at Manned Flight Simulator (MFS) on Patuxent River Naval Air Station in Southern Maryland as a C/C++ engineer on flight simulators for various military helicopters. After some time, Andrew relocated to Dayton, Ohio to work on video and metadata software for Unmanned Aerial Vehicles (UAV), commonly referred to as “drones”.

Several years later, Andrew made the move back to Lexington, KY to work for a promising startup that focused on streaming video content. The startup was partially acquired by Limelight Networks, a globally renowned Content Distribution Network, with Andrew at the head of the new Lexington office. At Limelight, he has grown to lead multiple video delivery products as a lead engineer and occasionally a manager. The latest venture is “Limelight Realtime Streaming” which delivers live video anywhere on the planet with sub-second latency.

Limelight has since expanded from four initial employees in central Kentucky to over a dozen and continues to be impressed with the local knowledge and passion for quality. Whether he’s working in downtown Lexington, or from his farm in Versailles, Andrew is focused on expanding opportunities for engineering in the area while maintaining the core values that make central Kentucky great: honesty, integrity, and a love of nature.

Chuck Dugan began working for East Kentucky Power Cooperative (EKPC) in 1982 at Spurlock Power Station in Maysville, KY in Operations and Maintenance. In 1985 he received an Associate in Applied Science in Electrical Technology from the University of Kentucky at Maysville Community College.

In 1991, Chuck advanced to System Operator at EKPC in Winchester, KY operating the generation and transmission system. This system consists of approximately 3000 Mega Watts of generation from Coal, Gas, Hydro, Solar, and landfill gas units and includes approximately 2900 miles of transmission with voltages ranging from 69 KV to 345 KV. During this time, he received Reliability Coordinator Certification from North American Electric Reliability Corporation (NERC).

Chuck graduated from MSU in 1997 with a BS in Industrial Technology with an emphasis in Electrical Technology. He became the supervisor of the EKPC Balancing Authority in 1999. In 2007 he gained the position of Manager of Generation and Transmission Operations and NERC Compliance at EKPC.

In 2012, EKPC began integration of its Generation and Transmission assets into the PJM Interconnection as the project manager of the Integration. Chuck advanced to Manager of Market Operations where he manages Market and FERC Policy for EKPC. Chuck served as the Chair of the PJM Liaison Committee and Vice Chair of the PJM Members Committee in 2018 and currently serves as the Chair of the PJM Members Committee for 2019.

During his career at EKPC, Chuck has been fortunate to experience the evolution of the North American Power Grid. The industry has seen changes to its fuel sources which were primarily coal and nuclear, to include gas, and renewable resources. The transmission grid has evolved from one of local service to a system that can reliably transfer electricity over a large geographic area. The education and instruction from the staff at MSU were instrumental to the success in his career.

Brad Schneider is a 2012 honor graduate of Morehead State University, where he obtained his Bachelor of Science with a double major in Computer Science and Mathematics. Upon graduating, he began his career at SRC, Inc. in Fairborn, Ohio, where he is currently employed as a Lead Software Engineer.

At SRC Brad supports a variety of programs within the domains of signals intelligence and electronic warfare for both U.S. Government and international customers. His duties include contributing to the full software development lifecycle, from the requirements process through design, implementation, and testing, actively engaging customers and providing demonstrations and support. His experience includes leading teams in the development of desktop and service-oriented web applications for waveform characterization and visualization, data modeling, and simulation.

In 2017 Brad obtained his Master of Science in Computer Science from Wright State University, where he is currently enrolled as a Ph. D. student in Computer Science and Engineering. His research interests include video-based activity detection and analysis with an emphasis on wearable sensor systems.
ALUMNI spotlight

**Nathan Compton**

Nathan Compton is a recent graduate from Morehead State University’s fall class of 2018, earning his Bachelor of Science in Electronics and Computer Engineering Technology in the Department of Engineering and Technology Management.

While at Morehead State, Nathan was a member of the Pi Kappa Phi Fraternity as well as the ATMAE Student Chapter. With the help and support of his exceptional professors and advisors at Morehead State, Nathan was able to acquire internships where he had the opportunity to develop and use the skills and knowledge he learned in the classroom to excel and be successful in the workplace.

During his first internship, Nathan was given the opportunity to work at St. Claire Regional Medical Center in Morehead, Kentucky, in the Bio-Medical Engineering department. He was able to obtain a great deal of technical knowledge as well as experience in the medical setting. Nathan was able to find his true passion while carrying out his last internship at the Kenworth Truck Company in Chillicothe, Ohio, a PACCAR Company. He worked in the Quality Engineering department and was able to learn many aspects of quality in the manufacturing environment.

Immediately after graduation, Nathan will begin his career at the Peterbilt Motor Company in Denton, Texas, another PACCAR Company, as an Electrical Engineer.

**Eric McCann**

Eric McCann is a 2007 MSU graduate with a Bachelor of Science in Computer Science.

Eric is currently a Software Marketing Manager for Lexmark, where he specializes in software project management and offering development for messaging our software and service capabilities to customers. The project management of these offerings includes customer requirements, market trends and industry analysis, as well as feedback on currently delivered solutions.

By managing the software lifecycle, Lexmark brings new products to market, enhances and evaluates current offers, and removes offers from the market when applicable.

**Dr. John R. Haughery**

Dr. John R Haughery (MS ETM, 2014) recently accepted a position of Assistant Professor of Manufacturing Technology and Engineering in the Department of Biosystems Engineering (ABE) at Iowa State University, Ames, IA. In this position, Dr. Haughery is excited to continue to engage with students, collaborate with industry, serve the Association of Technology, Management, and Applied Engineering (ATMAE) profession, advance his research agenda, and support the mission and vision that has made the ABE department the preeminent agricultural and biosystems engineering programs in the nation.

Reflecting on his time at Morehead State University, Dr. Haughery is filled with fond memories (hiking around Eagle lake with son Porter and wife Cori) and beautiful falls in the Rowan County. Additionally, the education and experience gained in his Masters of Science in Engineering and Technology Management program (2014) in the Department of Engineering and Technology Management (ETM), uniquely positioned Dr. Haughery to excel in his teaching and research. Specifically, he was able to acquire valuable teaching and service experience, namely as a teaching assistant or instructor of record in EEC 141/141L, EEC 241/241L, EMM 103/103L, EMM 186/186L, EMM 270/270L, ETM 600, and ETM 603 in the ETM department, as well as serve as a student representative on the College of Science and Technology’s Graduate Curriculum Committee.

On a national level, Dr. Haughery had numerous opportunities to present and publish with ETM faculty and serve professionally as a student representative on ATMAE’s Board of Accreditation. All of these opportunities gave Dr. Haughery the skills, abilities, and competencies to be successful in his education and career.

Dr. Haughery’s technical experience and research interests include scholarship of teaching and learning (SoTL) in the areas of student motivation and engagement; and advanced manufacturing systems and human-machine interactions. Dr. Haughery received his BS in Industrial Technology: Electronic/Control Systems from Millersville University of Pennsylvania (2006), after which he spent over eight years as a control systems integrator and project manager at Multi-Dimensional Integration, PA. He holds an MS in Engineering and Technology Management from Morehead State University, KY (2014) and a Ph.D. in Industrial and Agricultural Technology from Iowa State University, IA (2017).
ETM Students Excel on the Certified Technology Manager (CTM) Exam

Morehead State University’s Engineering and Technology Management (ETM) Fall 2018 graduating class achieved a 92.68% pass rate on the Certified Technology Manager (CTM) Exam, with 38 out of 41 students attaining a passing score. The CTM Exam is nationally administered through the Association of Technology, Management and Applied Engineering (ATMAE) to certify graduates of ATMAE accredited programs. The Department of Engineering and Technology Management has been accredited by ATMAE since 1998, with reaccreditation achieved through 2020.

A minimum score of 95 out of 160 in the categories of Leadership, Self-Management, Systems, Processes, Operations, People, Project, Quality, Risk and Safety is currently required to qualify for certification. CTM is the initial certification status awarded to applicants who meet ATMAE’s requirements for certification. CTM certification holders may report continuing education activity to qualify for Certified Senior Technology Manager (CSTM) status. ATMAE Certification recognizes expertise in a specific field, a mark of distinction that sets the certification holder apart. ATMAE Certification provides external validation of knowledge and competence in the discipline.

MSU’s Engineering and Technology Management students take the Certified Technology Manager (CTM) exam prior to graduation in their senior year. The Chair of the ATMAE Board of Certification reports that the historical average national pass rate for the CTM exam is 67% and MSU’s ETM students earned over 92% pass rate in Fall 2018. We are proud of ETM faculty and graduating seniors for their success,” said School of Engineering and Information Systems Associate Dean Dr. Ahmad Zargari.

Dr. Sherif Rashad Receives Best Paper Award IEEE CCWC 2019

Dr. Sherif Rashad received the Best Paper Award from the 9th Annual IEEE Computing and Communication Workshop and Conference (IEEE CCWC 2019) for his recent co-authored paper. Dr. Rashad presented the paper at the conference in January 2019 and it was also published as a full paper by IEEE.

The paper titled “Comparing ANN, SVM, and HMM based Machine Learning Methods for American Sign Language Recognition using Wearable Motion Sensors” was co-authored by Rabeet Fatmi, Sherif Rashad, and Ryan Integlia.

Dr. Rashad was also invited to chair two sessions at the 9th Annual IEEE Computing and Communication Workshop and Conference (IEEE CCWC 2019). The first session was on Cloud Computing & Security and the second session was on Blockchain & Internet of Things (IoT).

Dr. Heba Elgazzar’s Paper Published in International Journal (IJCSIT)

Dr. Heba Elgazzar of Morehead State University’s Department of Computer Science and Information Systems and Adel Elmaghrawy of the Department of Computer Engineering and Computer Science at the University of Louisville have published a paper in the September 2018 edition of the International Journal of Computer Science and Information Technology (IJCSIT).

The paper, “Evolutionary Centrality and Maximal Cliques in Mobile Social Networks”, introduces an evolutionary approach to enhance the process of finding central nodes in mobile networks. This can provide essential information and important applications in mobile and social networks. This evolutionary approach considers the dynamics of the network and takes into consideration the central nodes from previous time slots. The pair also studied the applicability of maximal cliques algorithms in mobile social networks and how it can be used to find the central nodes based on the discovered maximal cliques. The experimental results are promising and show a significant enhancement in finding the central nodes.
SEIS Students Participate at Posters at the Capitol

Dr. Kourosh Jenab, Dr. Cheng Cheng, and Dr. Sherif Rashad and their undergraduate research students attended the Posters-at-the-Capitol event on Thursday, Feb. 21, at the Capitol Rotunda in Frankfort: to present their research work.

Joshua Webb and Dr. Sherif Rashad Associate Professor of Computer Science presented their research titled “Design and Implementation of an Innovative System for Automatic Recognition of ASL using Machine Learning.”

Luke Sizemore and Dr. Kourosh Jenab, Assistant Professor of Engineering And Technology Management presented their research “Automatic Catheter Irrigation System (ACIS).”

Allie Skaggs and Dr. Cheng Cheng, Assistant Professor of Engineering And Technology Management presented on the topic of “A Multi-Variable Sensing Platform for Water Quality Monitoring in the Distribution Network.”

Computer Science Programming Team Competes at ICPC

On November 3, 2018, Dr. Sherif Rashad accompanied a programming team of three Computer Science students, Mr. Craig Coppola, Mr. Tristan Jordan, and Mr. Joshua Webb, to Louisville, KY to participate in the Midcentral Region of the International Collegiate Programming Competition (ICPC). The team performed excellently during the competition and solved four problems during the five-hour programming time limit.

At the site, the programming team finished tied for fourth place based on the number of problems completed and ninth place overall. The set of problems presented to the teams are designed and meant to be of a high level of difficulty to challenge the ability of the students. The Association for Computing Machinery (ACM) student chapter at MSU conducted an internal competition for students as a preparation for the competition.

According to Dr. Rashad, “It was an overall excellent experience for our students during the practice sessions and the contest as they were confident about their programming skills.” The members of the SEIS Computer Science programming team were co-coached by Dr. Sherif Rashad and Dr. Heba Elgazzar.

Moody and Stepp Coach Craft Robotics in Huntsville

The Craft Robotics Team of the Craft Academy at Morehead State University traveled to Huntsville Alabama March 13-16, 2019 to participate in the Rocket City Regional, hosted at the Von Braun Center. Craft Robotics coaches Dr. Jorge Ortega Moody and Mr. Jason Stepp of the Department of Engineering and Technology Management accompanied Craft Academy students Chase Ballard, Cole Bell, Clay Berryman, Cole Danzer, Emma Humphress, Lottie Maynard, William McIntosh, Sara Olmsted, Michael White, Sydney Winters, and Jake Williams on the trip.

Fifty-five teams from twelve states, including six teams from Kentucky, and one team from Brazil attended the competition. The team finished in 45th place in their first competitive experience. This was a great learning opportunity for the Craft Robotics team, as they were able to compete with and against teams with years of experience in First Robotics events.
Advisory Board Scholarship Makes First Award to Freshman Matthew Guilfoil

The Department of Engineering and Technology Management (ETM) awarded their first Advisory Board Scholarship to Morehead State University Freshman Matthew Guilfoil in the amount of $2500 in spring 2019. The Advisory Board merit-based scholarship endowment was established to help recruit and retain qualified Engineering Technology and Engineering Management undergraduate students.

Mr. Randy Norwood (Past Chair of SEIS Advisory Board) wrote, “As a graduate, employer, and friend of IET, I am pleased to mention that in several decades, the Department of Industrial and Engineering Technology has touched the lives of more than 1500 students. Through their education in IET (ETM) Department, they became highly skilled employees for the economic enterprise system in the region and beyond.” Regal Beloit and Mr. Norwood still feel that this is an important part of the relationship between ETM and the Advisory Board as they have announced a gift of $25,000 to be dispersed over the next five years.

Matthew Guilfoil is a freshman at Morehead State University enrolled in the Engineering Management program with hopes of pursuing a Master’s Degree in Mechanical Engineering or Material Science. He attended Lafayette High School in Lexington Kentucky where he was enrolled in the pre-engineering program and graduated with a weighted GPA of 3.97 and a 3.4 unweighted GPA. Matthew attained an ACT of 29 with a 30 in Math and 31 in Science.

In high school, Matthew played football and baseball for Lafayette and he currently plays football for Morehead State. Matthew is honored to be able to continue playing a sport that he loves while earning a degree to prepare for his future. During his senior year and the summer before college, he interned at CGL Companies, a nationwide architect and engineering firm.

Matthew is currently in the second semester of his freshman year at MSU, finishing his first semester with a 3.2 GPA. Unfortunately, the university does not award football scholarships; and with the time commitment for football, he is unable to get a job to help pay for tuition. He is very appreciative to the School of Engineering and Information Systems Advisory Board to be the recipient of the first awarded Advisory Board scholarship.

ETM Faculty and Staff Attend FAME Training

Dr. Kouroush Jenab, Dr. Qingzhou Xu, Mr. Sam Mason, and Mr. Jason Stepp attended the 2018 AMT Academy, MCE-5: Machine Reliability training, which is the final course for the Federation for Advanced Manufacturing Education (FAME), in St. Charles MO. The training took place December 11 through December 12, 2018, at State Technical College of Missouri at the Lewis & Clark Career Center.

The Machine Reliability training focused on a practice for machines and systems which: lengthens Mean-Time-Between-Failure (MTBF), Prepares more effective back-up when failure does occur, teaches a disciplined, problem-solving approach for sustained machine operation, and uses a Reliability Centered Maintenance approach focusing on Failure Mode Analysis.

The group completed one hands-on project during the training that utilized FMEA on a single product as an introduction to the process. The second day of the training focused on using FMEA on a larger system that incorporated multiple machines and conveyor systems.

The purpose of the Federation for Advanced Manufacturing Education (FAME) is to be the driving force for developing world-class technical talent for manufacturing and other employers of technical workers. FAME strives to be a powerful conduit between industry and education.
ETM Receives Funding to Purchase Equipment

With the support of Morehead State University and the School of Engineering and Information Systems Advisory Board, the Department of Engineering and Technology Management has been able to purchase new equipment to upgrade the laboratories in the Department of Engineering and Technology Management. Funding was made available in December to purchase items from the Department’s needs list. Three of the four items from the list have been purchased and are being utilized by faculty and students in the labs.

The equipment purchased has upgraded the PLC Lab Equipment for 21st Century Center for Manufacturing Systems. This equipment will be used to mount PLCs on the Fanuc Robotics Training Carts in Reed Hall to teach students to interface robots with conveyors, CNC equipment, etc.

The funds also allowed the Department to purchase 16 Oculus Rift Systems for the PLC Lab in 21st Century Center. The Oculus Rift systems will be used to allow students to interface PLCs to a virtual production environment so students can learn to program PLCs in a more complex production environment.

Funds were also made available for the purchase of upgrading the band saws in the Lloyd Cassity Manufacturing and the 21st Century Center Materials Testing laboratories. The funding has allowed the Department to purchase two horizontal and one vertical band saw to upgrade the saws in the labs.

The final purchase, still to be completed, will be used on the addition of a new laser cutting/engraving machine for 21st Century Center for Manufacturing Systems. The laser cutting/engraving machine will be used to introduce students to the use of lasers in manufacturing.

Construction Management Students Visit Rowan County PVA

Construction Management and Civil Engineering Technology Instructor Mr. Joe Curd has made visiting the Rowan County PVA and Rowan County Clerk’s offices an important part of the curriculum of the ECC 410 Construction Surveying course. The students are taught to research property deeds and find plats for surveying use.

On February 5, 2019, the students visited the Rowan County PVA Office and on February 6, 2019, they visited the Rowan County Clerk’s Office to learn about their office’s public land records.

The class was informed about the PVA GIS mapping system and public land and building information by PVA, Carmen Swim’s staff. Newly elected Elwood Caudill’s staff provided a tour of the Clerk’s land records vault and instructed them on how to access public records.
Jon Foley set to become DRMA chairman in 2020

By Thomas Gnau, Dayton Daily News Staff Writer

MORAINEx Millennials have typically shunned manufacturing, leaving companies to struggle to find qualified younger workers to replace retiring Baby Boomers. Those companies may need someone like Jonathan Foley.

At 34, Foley is a millennial is in charge of daily operations at Moraine’s Rack Processing. And as Dayton Region Manufacturers Association first vice chairman, Foley will become DRMA’s chairman next year.

DRMA leaders point to him as an example that the right young people can find a good life in manufacturing. Don Clouser, current chairman of DRMA’s trustees, calls Foley “a good guy.”

“He’s one of those people who gets it,” said Clouser, vice president and general manager at Champion GSE in Springfield. “He gets manufacturing. He understands the thrill of manufacturing, of creating something.”

Manufacturers are struggling to fill 2.5 million to 3.5 million job openings — hastened by the retirement of Baby Boomers — and one study says only 30 percent of parents would consider guiding their child to industry.

DRMA member have consistently identified the search for qualified workers as their No. 1 priority. In the association’s annual surveys, members have singled out that priority as their top concern for six years running.

“There aren’t a lot of people who took this path on their own,” Foley said. Millennials grew up being told that college is the path for them. “You go to high school, you go to a four-year university, you get a degree,” he said. “We’ll all become doctors and lawyers.”

Not Foley. He did take the college route, attending Sinclair Community College and Morehead State University in Kentucky. But he also grew up wanting to work with his hands, first eyeing construction as a possible career — until he landed a part-time job at Select Industries in Dayton at age 20. That was all it took.

“I fell in love with it,” Foley said. The allure of operating machines, of crafting something that lasts, took hold right away. “You can say, ‘Hey, I built that,’” he said. “Manufacturing is everything,” he added. “Everything is made.”

Foley filled in for a boss at a DRMA meeting several years back. He found himself sitting next to Angelia Erbaugh, DRMA president. The need for right employees came up right away in conversation. “She (Erbaugh) just kind of laughed,” Foley recalled. “Little did I know who I was talking to — or what I was getting myself into.” Erbaugh had a simple question for Foley: “Would you like to do something about that?”

“Jon is young, bright, and energetic,” Erbaugh told the Dayton Daily News. “He brings a different perspective to the DRMA board, which further enhances the effectiveness of our great leadership team.”

Soon enough, Foley was knee deep in DRMA events and committee work, including a committee devoted to helping members create the next generation of workers. Dubbed the “Growing the Workforce Pipeline” committee, the group has worked at putting manufacturers in schools and bringing educators and students into shops and businesses to show them what manufacturing is today.

Foley was leading that committee soon enough, chairing it for five years. Foley believes he had been able to relate to younger people. “They’re more likely to pay attention, listen to, hear what I have to say, versus someone who’s 60 years old.”

His message to students is simple: With hard work and the right skills, you can make a decent middle-class living in manufacturing. And you don’t need to shoulder tens of thousands in college debt to get these jobs.

Clouser says Foley is good at bringing people together. “He has a natural leadership style that works,” Clouser said.
ETM Hosts 22nd Annual EKTSA Regional Competition

Morehead State University’s Department of Engineering and Technology Management was the host of the 22nd annual EKTSA regional competition on March 1, 2019. TSA chapters brought 129 students, and 14 faculty advisors from Morgan County High School, Rowan County Senior High School, Raceland Worthington High School, Fleming County High School, Highlands High School, Bath County High School, iLEAD Academy, Mason County High School, and Raceland Worthington Middle School to participate in different events. The purpose of this event is to prepare and evaluate the participating students’ projects before going to the state competition, allowing the students to improve their projects for state competition based on the feedback they receive from MSU faculty and staff.

The event started with the EKTSA student officers, President Andrew Stepp, Vice-President Tristan Cundiff, Secretary Hunter Correll, Sergeant-at-Arms Andrew Jones, Treasurer Jared Turley, Reporter Jaycie Bussell, and Historian Gabby Hill, conducting the TSA opening ceremonies. After the opening ceremony, students dispersed to the Lloyd Cassity Building and Reed Hall to compete in different events. During these competitions, students mingled with their friends and had interaction with the ETM faculty.

The Highland chapter had an impressive performance with 13 different awards including 5 first place, 6 second place, and 2 third place. Bath County came in a close second with 9 different awards: 4 first place, 3 second place, and 2 third place ranks. Morgan County students won 7 awards: 4 first place, 1 second place, and 2 third place while Fleming County pulled in 5 awards: 3 first place and 2 second place. Students from Rowan County won 4 total awards: 2 first place, 1 second place, and 1 third place while students from Raceland Worthington received 3 awards with 2 first place and 1 third place. Mason County High School and iLEAD Academy each received 1 first place, 1 second place, and 1 third place award.

The EKTSA Regional Committee and Student Officers welcomed and gave thanks to two unique visitors to the competition this year. Kentucky Technology Student Association State President Hunter West and Sergeant-at-Arms Marty Helms. The group was also visited by Mr. Mark Harrell, Engineering Consultant with the Kentucky Department of Education and Director of KYTSA.

The Student Officers offered a special thanks to the faculty and staff (Dr. Steve Stubbs, Dr. William Grise, Dr. Qingzhou Xu, Dr. Cheng Cheng, Dr. Kouroush Jenab, Dr. Sahar Ghanem, Mr. Sam Mason, Mr. Jason Stepp, and Mr. Joe Curd) Graduate Students (Yosselin Castro Islas, Lindsay Childs, Abdullah Alharbi, Yevgeniy Byeloborodov, Sareh Ahmadi and Krishna Kanumuru) and student volunteers (Brenton Anderson and Haley Winters) for making this event possible.
Asim Chaudhry

Asim Chaudhry has been accepted into the Computer Science PhD program at the University of Louisville. He is a Fall 2018 MSETM graduate in the area of Computer Science and Engineering. He is also an undergraduate student in the area of Computer Science and Management. Asim Chaudhry has been accepted into the Computer Science PhD program at the University of Louisville. He is a Fall 2018 MSETM graduate in the area of Computer Science and Engineering. Asim Chaudhry has been accepted into the Computer Science PhD program at the University of Louisville. He is a Fall 2018 MSETM graduate in the area of Computer Science and Engineering.

October 25, 2019

The next SEIS Advisory Board meeting will be held on November 2-3, 2019, at the Von Braun Center in Huntsville, AL.

Dr. Jorge Ortega Moody and Mr. Jason Stepp served as coaches for the Craft Robotics Team at the Rocket City Regional Competition held at the Von Braun Center in Huntsville, AL. The ETM Senior Project mid-term presentation will take place in LC 315 following the SEIS Advisory Board meeting.

The annual conference of the Association of Technology, Management and Applied Engineering will take place November 6-8, 2019, at the Sheraton Charlotte Hotel in Charlotte, NC.

For your information, the ETM Senior Project mid-term presentation will take place in LC 315 following the SEIS Advisory Board meeting.

Asim Chaudhry has been accepted into the Computer Science PhD program at the University of Louisville. He is a Fall 2018 MSETM graduate in the area of Computer Science and Engineering. Asim Chaudhry has been accepted into the Computer Science PhD program at the University of Louisville. He is a Fall 2018 MSETM graduate in the area of Computer Science and Engineering. Asim Chaudhry has been accepted into the Computer Science PhD program at the University of Louisville. He is a Fall 2018 MSETM graduate in the area of Computer Science and Engineering.

For your information, the ETM Senior Project mid-term presentation will take place in LC 315 following the SEIS Advisory Board meeting.

The annual conference of the Association of Technology, Management and Applied Engineering will take place November 6-8, 2019, at the Sheraton Charlotte Hotel in Charlotte, NC.