STRENGTH IN NUMBERS

- **7,000** Engineering Students
- **$114 MILLION** Campaign Success
- **1200+** Engineers Graduating Per Year
- **230** Tenure System Faculty
- **82%** Employed in the Midwest
- **63%** Employed in Michigan
- **96%** Of Graduates Reported a Career Outcome
- **$60 MILLION** Research Expenditures
- **100+** Employers Hired MSU Engineering Graduates

*see page 3
Welcome President Stanley

Samuel L. Stanley Jr., MD, became MSU’s 21st president on Aug. 1, 2019. He joined us from Stony Brook University, where he was president for 10 years.

I was honored to be on the 18-person search committee and to participate in the national search process that included 22 campus-wide input sessions and an online form for comments. Our search introduced us to Dr. Stanley, who served as president at Stony Brook from 2009-2019. He has nearly 15 years of higher education leadership experience.

After earning his medical degree from Harvard Medical School, he completed his residency-physician training at Massachusetts General Hospital. He then went to Washington University in St. Louis for a fellowship in infectious diseases, eventually becoming a professor in the Departments of Medicine and Molecular Microbiology and one of the nation’s highest recipients of NIH funding. He was appointed Vice Chancellor for Research at Washington University in 2006, serving in that position until he was appointed president at Stony Brook.

President Stanley has a strong commitment to access and equity that keeps students at the center of his mission. Please join me in welcoming him as he settles into his new role as a Spartan.

Also, join me in thanking our friend Satish Udpa, the former MSU Executive Vice President for Administration and former dean of the College of Engineering, who served as president at Stony Brook from 2009-2019. He has nearly 15 years of higher education leadership experience.

Let me begin by acknowledging that our growth and success would not be possible without your support. I am humbled and grateful for the number of alumni and other supporters who came forward in our recently completed Empower Extraordinary capital campaign.

While we entered the campaign with a goal of $80 million for the College of Engineering, our final total topped $114 million from 8,000 donors. With your dedicated help, the campaign added more than 20 new endowed faculty positions (the most of any unit on campus). These new endowed positions will grow and strengthen our expertise in key areas of engineering, contribute to student success, and add to our academic reputation. Our campaign success also contributed to the goal-breaking success of MSU’s total of $1.8 billion that will help ensure that Spartans are empowered to achieve the extraordinary.

(See more on pages 14 and 15.)
Beyond statistics, our strength in numbers is reflected in the achievements of our faculty, staff and students.

We celebrated 25 years of Design Day this past year—featuring the creative and innovative abilities of our students. Thousands of Spartan Engineering students have presented final projects and used their skills to think on their feet during this twice-a-year showcase that serves as the capstone of their MSU education.

For the past 10 years, our students have all begun their journey in the Engineering CoRe Experience. Director Timothy Hinds notes that the program was created to build the whole engineer—and brings the real world into classroom and residential environments to reinforce the relevance of engineers for solving global challenges.

Several from the college were recognized for top professional awards, which you can read more about on pages 16-19. A small sampling of honors includes:

- Joydeep Mitra, associate professor of electrical and computer engineering, was awarded the IEEE Power & Energy Society Roy Billinton Power System Reliability Award. One award is made internationally each year.

- John Verboncoeur, associate dean for research and professor of electrical and computer engineering and computational mathematics, science and engineering, received the 2018 Richard F. Shea Distinguished Member Award from IEEE’s Nuclear and Plasma Science Society. He is also the 2019 recipient of the IEEE Plasma Science and Applications Committee Award. Only one award of each type is presented internationally each year.

- Anil Jain (45 years at MSU) was recognized for 50 years of advancing the study of pattern recognition internationally with an honorary doctorate from the Autonomous University of Madrid during ceremonies in Spain last September. He is a member of the National Academy of Engineering.

- John Verb onionceur, associate dean for research and professor of electrical and computer engineering and computational mathematics, science and engineering, received the 2018 Richard F. Shea Distinguished Member Award from IEEE’s Nuclear and Plasma Science Society. He is also the 2019 recipient of the IEEE Plasma Science and Applications Committee Award. Only one award of each type is presented internationally each year.

- Percy Pierre, (28 years at MSU) served as an engineer, researcher, administrator, faculty member, and “History Maker” was recognized when he retired last year. Pierre was the very first African-American to earn a PhD in electrical engineering. His legacy includes the mentorship of more than 200 minority and other master’s and doctorate graduate students in engineering.

- For 30 years the MSU Formula Racing Team has been zipping along and providing many Spartan Engineers with hands-on experience in design, perseverance, and teamwork as part of SAE’s annual student competition. Retired Mechanical Engineering Professor Gary Cloud is the long-time advisor and a fundamental reason for the team’s success through the decades.

- The First

Joseph Salatino (PhD ’19) made Spartan academic history in May when he graduated as MSU’s first PhD in biomedical engineering. He worked in assistant professor Erin Purcell’s Regenerative Electrode Interface Lab. In June, he joined reference, Inc., in Cambridge, Massachusetts, as a translational scientist.

University Distinguished Professor of Computer Science and Engineering Anil Jain (45 years at MSU) was recognized for 50 years of advancing the study of pattern recognition internationally with an honorary doctorate from the Autonomous University of Madrid during ceremonies in Spain last September. He is a member of the National Academy of Engineering.
Honors, the most recent being:

- Five faculty members have received Early Career Awards since 2018. This recognition supports junior faculty who exemplify the role of teacher-scholars through outstanding research and education. In the past 10 years our faculty members have received international recognition for improving the performance of network analytical tools.

- Three new MSU Foundation Professors

The college now has six MSU Foundation Professors - outstanding faculty members who enhance research and creative activities at MSU.

The newest recipients are Pouyan Nejadhashemi, professor of Biosystems and Agricultural Engineering; Yunhao Liu, chairperson in Computer Science and Engineering; and Peter Savolainen, an expert in Civil and Environmental Engineering.

They join Professor Xiaobo Tan and Professor and Chair John Papapolymerou from the Department of Electrical and Computer Engineering, and James Klauser, chair and professor of Mechanical Engineering.

Fostering an environment to grow graduate student research large-scale machine learning on big data.

Three University Distinguished Professors

Three professors were among the 10 University Distinguished Professors named at MSU this summer. The recognition is one of the highest honors bestowed on faculty at MSU. Honored were:

- Professor of electrical and computer engineering, received an Early Career Award for advancing water resource sustainability and food security.

- An international expert in Civil and Environmental Engineering.

- An expert in Civil and Environmental Engineering.

The newest recipients are Pouyan Nejadhashemi, professor of Biosystems and Agricultural Engineering; Yunhao Liu, chairperson in Computer Science and Engineering; and Peter Savolainen, an expert in Civil and Environmental Engineering.

They join Professor Xiaobo Tan and Professor and Chair John Papapolymerou from the Department of Electrical and Computer Engineering, and James Klauser, chair and professor of Mechanical Engineering.

First College-Level Endowed Chair

Arun Ross, professor of computer science and engineering, was named to the inaugural John Papapolymerou (back) as the 2019 Outstanding Young Engineer, an award-winning author and professor of computer science and engineering.

- An expert in nondestructive evaluation and transport.

- JOHN PAPPAPOLYMEROU (back) Asif Naseem, Robert Thomas, Joe Sopko, Martha Gray, Beth Burns, Ivan LaHaie, Marty Toomajian, Rachel Hutter, Dean Leo Kiemel, Steve Klein, Monte Falkoff, and Dave Fouillou.

Three NSF Grad Research Fellows

The National Science Foundation Graduate Research Fellowship Program selected three from the college to receive a three-year stipend with tuition and fees covered, and options for international research. Selected were Sevan Chanakian, a PhD student in materials science; Kara Dean, a PhD student in biosystems engineering, and Carly Gomez, a dualy-enrolled BS/MS student in biosystems engineering.

ChEMS associate professor Yue Qi became the college's first associate dean for inclusion and diversity last summer. She spearheads new and existing diversity and inclusion programs, oversees faculty development activities, and coordinates college activities with other MSU units.

- Mohsen Zayernouri, assistant professor of mechanical engineering, received a 2019 Young Investigator Program (YIP) Award to advance stochastic modeling framework that will lead to new multi-functional materials. It is his second YIP award since 2017. The YIP fosters creative basic research in science and engineering.

- Professor of computer science and engineering, received a 2018 YIP Award for understanding ultrafast and nanoscale electron emission and transport.

- Peng Zhang, assistant professor of electrical and computer engineering, received a 2018 YIP Award for understanding ultrafast and nanoscale electron emission and transport.
MSU celebrated its 15-year history with Fraunhofer USA during MSU’s May 3 Commencement. The partners work together on diamond and coating technologies that close the innovation gap between the laboratory and the real-world market. From left are Fraunhofer USA President Thomas Schuek, former MSU Executive Vice President for Administration Satish Udpa, Fraunhofer-Gesellschaft President Reimund Neugebauer, and Engineering faculty members John Albrecht, Dean Leo Kempel, and Electrical and Computer Engineering Chair John Papapolymerou.

MSU Engineering honored former dean, University Distinguished Professor Satish Udpa, with a ceremony Aug. 29, during which his portrait was unveiled. The artwork, created by local artist Brian Kirchensteiner, will join the collection of dean’s portraits that hang in the Engineering Building Auditorium. Udpa came to MSU in 2001 as chair of the Department of Electrical and Computer Engineering, then began leading the college in 2005. He served as MSU Executive Vice President for Administration from 2013-19, and as Acting President until new President Samuel L. Stanley, Jr., M.D., joined the University this summer. Udpa has returned to the engineering faculty.

Our strength in numbers is also reflected in the growth of our physical space. Since opening the MSU bioengineering building (IQ Building) in October 2016, the university has added, repurposed, or is currently constructing several STEM-related facilities, including:

- The new $100 million STEM Teaching, Learning and Interdisciplinary Research Facility, that will provide more undergraduate teaching and project laboratories, space that supports gateway courses for biological sciences, chemistry, computer science, physics, and engineering, and student study areas. It opens in fall 2022.
- Repurposed space in the South Neighborhood consists of the remodeling of Wilson Hall for our Undergraduate Programs Office, the Engineering Career Center, Engineering advisers, and CoRe offices. The Wonders Hall update adds tutoring facilities, classrooms, and a MakerSpace.
- Spartan Mobility Village, space for faculty and student research focused on autonomous vehicles, mobility management, and smart infrastructure.
- Our progress does not come without growing pains, it is imperative that we continue to move forward, adding to our academic strength, increased diversity, faculty growth and research output. The Engineering Building launched a new gateway program in January 2021, OASIS.

While our strength in numbers that we achieve today will propel us forward for decades to come. Under the leadership of President Stanley, we have great opportunity to move forward as a university that is an emerging strength, increased diversity, faculty growth and research output. The Engineering Building launched a new gateway program in January 2021, OASIS.

My very best wishes to you.

LED KEMPEL, DEAN

Research updates

Predicting damage accumulation in polymeric adhesives

Roozbeh Dargazany, assistant professor of civil engineering, is using $1.5 million to help in the lightweighting effort by building a one-of-a-kind database to better understand one of the challenges—the corrosion of polymeric adhesives.

“Industry is focused on replacing cast iron and traditional steel components with composites, electroplating, and miniaturization as major steps toward the lightweighting of vehicles. Polymeric adhesives play a major role,” Dargazany said.

While past research used physical experiments to better understand reliability of those adhesives in short term, understanding the reliability of adhesives in the long-term remains a major challenge, he explained. “We will be working to predict the service life of degrading adhesives by creating a computational software to describe damage accumulation.”

A team of experts from Bosch Germany and Bosch U.S. will collaborate with Dargazany to build the one-of-a-kind database focused on corrosion and reliability analysis of adhesive joints. Funding is provided by the U.S. Department of Energy, Robert Bosch LLC, and Enduro Ins LLC.

Learning from glass catfish to advance biological circuits

Engineering researchers are working to create synthetic biological devices inside the cells of mammals that will enable new treatments for chronic and uncured diseases.

A cross-disciplinary team of biomedical and electrical engineers are building biological circuits, oscillators, and toggle switches inside cells to respond to electromagnetic fields as a means to fight against neurological illnesses and diseases.

The work began in 2018 and is supported by a more than $1.3 million grant from the National Institute of Neurological Disorders and Stroke of the National Institutes of Health.

A key factor in this research is a unique navigational gene that has been cloned from an almost invisible fish, the Kryptopterus bicirrhis, or glass catfish, which responds to the Earth’s electromagnetic fields.

While past research used physical experiments to better understand reliability of those adhesives in short term, understanding the reliability of adhesives in the long-term remains a major challenge,” he explained. “We will be working to predict the service life of degrading adhesives by creating a computational software to describe damage accumulation.”

A team of experts from Bosch Germany and Bosch U.S. will collaborate with Dargazany to build the one-of-a-kind database focused on corrosion and reliability analysis of adhesive joints. Funding is provided by the U.S. Department of Energy, Robert Bosch LLC, and Enduro Ins LLC.

We will bioengineer synthetic circuits from three bio-parts—a switch, an amplifier and a reporter gene,” Gilad said. “MSU will be the first to build such circuits that function as a synthetic biological device in mammalian cells that will be remotely activated by a magnet and imaged noninvasively in rodents.”

Improving algorithms to advance ultrasound

Robert J. McGough, associate professor of biomedical engineering, is using a $2.3 million NIH R01 grant to extend the capabilities of diagnostic and therapeutic ultrasound.

“Diagnostic ultrasound uses high frequency, low intensity sound waves to noninvasively see inside the human body,” McGough said. “This real-time imaging modality is portable, safe, and cost-effective. It provides helpful images during pregnancy and examinations of the heart, blood vessels, thyroid, breast, prostate, liver, and kidney.

“In contrast,” he continued, “therapeutic ultrasound delivers high frequency sound waves at a much higher intensity to treat or destroy diseased tissues.”

Application of therapeutic ultrasound include noninvasive methods for cancer therapy, targeted drug delivery, and for treating essential tremor.

Primary investigators are Assaf Gilad, professor of biomedical engineering and radiology, and Galit Pelled, professor of biomedical engineering, radiology, and neuroscience.

“We will bioengineer synthetic circuits from three bio-parts—a switch, an amplifier and a reporter gene,” Gilad said. “MSU will be the first to build such circuits that function as a synthetic biological device in mammalian cells that will be remotely activated by a magnet and imaged noninvasively in rodents.”

“The real-time imaging modality is portable, safe, and cost-effective.”

MSU Engineering honored former dean, University Distinguished Professor Satish Udpa, with a ceremony Aug. 29, during which his portrait was unveiled. The artwork, created by local artist Brian Kirchensteiner, will join the collection of dean’s portraits that hang in the Engineering Building Auditorium. Udpa came to MSU in 2001 as chair of the Department of Electrical and Computer Engineering, then began leading the college in 2005. He served as MSU Executive Vice President for Administration from 2013-19, and as Acting President until new President Samuel L. Stanley, Jr., M.D., joined the University this summer. Udpa has returned to the engineering faculty.

Roozbeh Dargazany

Robert J. McGough
Welcome New Faculty

The College of Engineering recently welcomed 16 new tenure-system faculty members, whose expertise is another expansion of MSU’s ability to solve pressing global challenges and create new partnerships. MSU Engineering now has 230 tenure-system faculty members.

Adam Alessio
PROFESSOR (NOVEMBER 2019)
Computational Mathematics, Science and Engineering; Biomedical Engineering; and Radiology
A former professor of radiology at the University of Washington, his research is focused on non-invasive quantification of disease through advanced imaging algorithms and integrated data analysis. His research group solves clinically motivated research problems at the intersection of imaging and medical decision-making.

Bora Cetin
ASSISTANT PROFESSOR (AUGUST 2019)
Civil and Environmental Engineering
He came to MSU from Iowa State University, where he led the Sustainable Geotechnical Infrastructure Group. His research program encompasses multiple research fields including transportation infrastructure, nuclear waste disposal, municipal solid waste landfill design, remediation of mine waste/contaminated soils, and sustainable geotechnical practices.

Kristen Cetin
ASSISTANT PROFESSOR (AUGUST 2019)
Civil and Environmental Engineering
Her interests are in building energy modeling and data analytics to assess building energy use and performance, including determining methods to improve energy efficiency, reduce energy use, and reduce peak electric grid load contributions, as well as enhance building sustainability. Her research also includes the development, laboratory testing and use of smart technologies enhancing building performance and assessment. She came to MSU from Iowa State University.

Michele Grimm
WIELNIA CREATIVE ENGINEERING ENDOWED PROFESSOR (JANUARY 2019)
Mechanical Engineering
She spent 25 years at Wayne State University before coming to MSU for research in injury biomechanics. For the past 15 years, her work has focused on the biomechanics of neonatal brachial plexus injuries. A significant focus of her work at MSU will be on innovations to improve student success and engineering education research.

David Hickey
ASSISTANT PROFESSOR (AUGUST 2019)
Chemical Engineering and Materials Science
He joined MSU from the University of Utah and is focused on the storage and conversion of electrochemical energy. His research combines analytical techniques with computational modeling to design molecules and materials for applications ranging from grid-scale energy storage to high-precision biosensing.

Kristen Johnson
ASSISTANT PROFESSOR (AUGUST 2019)
Computer Science and Engineering
Her research interests include the application of natural language processing and machine learning techniques for social computing and computational social science. Her research models high-level abstractions of Twitter language and behavior to predict real world political and social patterns. She came to MSU from Purdue University.

Bahare Kiumarsi
ASSISTANT PROFESSOR (JANUARY 2019)
Electrical and Computer Engineering
Her current research interests include machine learning in control, security of cyber-physical systems, game theory, and distributed control of multi-agent systems. She came to MSU from the University of Illinois at Urbana-Champaign.

Parisa Kordjamshidi
ASSISTANT PROFESSOR (AUGUST 2019)
Computer Science and Engineering
Her research interests include machine learning, natural language processing, combinatorial optimization, and reasoning paradigms and learning-based programming. She is a 2019 recipient of a National Science Foundation CAREER Award and came to MSU from Tulane University.

Joerg Petrach
ASSOCIATE PROFESSOR (JANUARY 2019)
Mechanical Engineering
He came to MSU as an entrepreneur and consulting engineer in the chemical, construction, and energy industries. His research interests are chemical storage of renewable energy, topography-based numerical and experimental methods for energy applications, micro-structured functional materials for energy applications.

Salipuras Ravishankar
ASSISTANT PROFESSOR (FEBRUARY 2019)
Biomedical Engineering
Computational Mathematics, Science and Engineering
His research interests include signal and image processing, computational and biomedical imaging, data-driven systems, machine learning, inverse problems, compressed sensing, dictionary learning, data science, image analysis, and large-scale data processing and optimization. Prior to joining MSU, he was at the Los Alamos National Laboratory, University of Michigan, and the University of Illinois at Urbana-Champaign.

Debjit Saha
ASSISTANT PROFESSOR (AUGUST 2019)
Biomedical Engineering
He is interested in developing neural engineering and brain–computer interface techniques to address how population neuron responses shape associative learning, decision-making, and stimulus identification in real time. He is working to develop bio-robots that hijack the biological chemical sensing and information processing capabilities toward medical and environmental applications. He came to MSU from Washington University in St. Louis.

Peter Savolainen
MSU FOUNDATION PROFESSOR AND ASSOCIATE CHAIR FOR GRADUATE STUDIES (AUGUST 2018)
Civil and Environmental Engineering
His research examines the fundamental nature of road user behavior, particularly how traffic safety and operations are influenced by behavior in consideration of roadway and traffic characteristics. His research has advanced fundamental knowledge as to how roadway design, environmental factors, and in-vehicle distractions affect the risk of traffic crashes. He joined MSU from Iowa State University.

Josh Siegel
ASSISTANT PROFESSOR (JANUARY 2019)
Computer Science and Engineering
An inventor and entrepreneur, his research interests include the Internet of Things, pervasive sensing, connected and autonomous vehicles, security and privacy, and artificial intelligence. He joined MSU from the Massachusetts Institute of Technology.

Caroline Szczepanski
ASSISTANT PROFESSOR (AUGUST 2019)
Chemical Engineering and Materials Science
Her research integrates fundamental polymer chemistry and reaction engineering to identify innovative and efficient approaches to develop functional soft materials. The materials developed from her research are used for applications in biomaterials, coatings, and adhesives. She joined MSU from Northwestern University.

Daniel Woldring
ASSISTANT PROFESSOR (AUGUST 2019)
Chemical Engineering and Materials Science
His research focuses on high-performance proteins used for diagnosing and therapeutically treating diseases. His research combines directed evolution and high-throughput experiments with structural biology and bioinformatics to elucidate biological processes and their clinical relevance. He came to MSU from Brandeis University and the Howard Hughes Medical Institute.

Qiben Yan
ASSISTANT PROFESSOR (AUGUST 2019)
Computer Science and Engineering
He comes to MSU from the University of Nebraska – Lincoln, where he led the Cybersecurity and Threat Intelligence Lab. He investigates the security of intelligent things. His primary research interests are in Internet of Things security, mobile security and privacy, wireless networking security, and botnet and malware detection.
The Department of Mechanical Engineering is showcasing a cutting-edge perspective with the receipt of three new ARPA-E grants in less than a year. ARPA-E, or Advanced Research Projects Agency-Energy, is part of the U.S. Department of Energy that promotes and funds advanced energy technologies.

The research topics of the three new grants are:

- developing an energy efficient freshwater recovery system that provides environmental remediation by extracting clean irrigation water from hydraulic fracturing wastewater,
- developing innovative materials and system designs for low cost, long-duration energy storage on the U.S. power grid, and
- leveraging super alloys and additive manufacturing, known as 3D metal printing, to develop high performance heat exchangers for efficient power generation.

Engineering Dean Leo Kempel said the ARPA-E grants are strong examples of how the college is advancing new relationships with government, industry and peer academic institutions.

“The success of these projects and many other efforts will continue to position MSU as an international leader in renewable energy research,” Kempel said.

**FRESHWATER RECOVERY SYSTEM FROM FRACKING WASTEWATER**

MSU is sharing almost $3 million to extract clean irrigation water from hydraulic fracturing wastewater. The reclaimed water could help dry western states that need water for crops and livestock.

The collaboration is with Oregon State University and the University of Nevada Reno. It seeks to reuse wastewater being generated by oil companies in Texas and New Mexico that can fill more than 1,000 Olympic-size swimming pools daily.

MSU’s goal is to use low-grade solar or industrial waste heat to develop a new process that is modular, portable, scalable and easily deployable in the field.

Andre Benard, associate professor of mechanical engineering, is MSU’s lead investigator. He is working with MSU Foundation Professor James Klausner, chair and professor of mechanical engineering.

“MSU’s focus is on designing the novel multiphase heat exchangers needed for the process,” Benard said. “We’re working on a system that will efficiently separate, condense and reclaim purified water from wastewater, using a heat-activated swirling nozzle and in-line demister, which helps remove droplets from the vapor stream.”

Ending the practice of wastewater reinjection into the ground will have an additional positive environmental impact, Klausner noted.

**GRANT DETAILS AT:** https://tinyurl.com/y4zb9jza

**REIMAGING THE U.S. POWER GRID**

A $2 million ARPA-E award is equipping MSU – and partners Arizona State University, Dresser-Rand and Saudi Aramco Energy Ventures – with resources to develop the next generation of designs for long-duration energy storage on the U.S. power grid.

The award is part of the Duration Energy Storage (DAYS) program. Only two universities – MSU and the University of Tennessee – are lead investigators among the 10 teams awarded DAYS grants.

Klausner, along with mechanical engineering professor Joerg Petrasch, and ASU chemical engineering professor Christopher Muhich, are the primary co-investigators on the project.

Awardees are developing energy storage systems to power the electric grid for durations for up to 200 hours, enhancing grid resilience and performance. DAYS projects explore a new design space in electricity storage, exploiting opportunities for smart tradeoffs that keep costs low in electrochemical, thermal and mechanical systems.

“MSU’s team will develop a modular thermal storage system that uses electricity from sources like wind and solar power to heat up a bed of magnesium manganese oxide particles to high temperature to enable a chemical reaction that stores energy,” Petrasch explained.

**GRANT DETAILS AT:** https://tinyurl.com/y8mq84bs

**GRANT DETAILS AT:** https://tinyurl.com/y4zb9jza

**ADVANCING HIGH-EFFICIENCY POWER GENERATION**

A $2.3 million ARPA-E grant is helping MSU deepen its growing expertise in additive manufacturing, known as 3D metal printing, and high-efficiency power generation.

Andre Benard is the lead investigator. The technology features a plate-type heat exchanger manufactured using new, high-temperature alloys suitable for powder-based manufacturing.

The goal is to develop a highly scalable, compact and low-cost metallic heat exchanger that is resistant to corrosion and can remain strong at the highest operating temperatures.

MSU researchers serving as co-investigators on the project are James Klausner, Patrick Kwon, Joerg Petrasch, Alex Diaz, Haseung Chung, and Himanshu Sahasrabudhe and Rohini Balakrishnan from the University of Michigan. Curtiss-Wright, Solid Turbines, and UHV Technologies, Inc., are also part of the team.

**GRANT DETAILS AT:** https://tinyurl.com/y4zb9jza
MSU is improving brain implants – “electroceuticals” used to treat Alzheimer’s, Parkinson’s, depression and traumatic injuries – thanks to a $1.8 million NIH R01 grant. The implants decipher complex chemical and electrical input and output that allow patients to bring parts of their brain and body back online. While these medical advances have given patients more treatment options, there are still drawbacks to the devices that Erin Purcell, assistant professor of biomedical engineering, is working to overcome.

“It’s comparable to a cocktail party – except the people represent neurons and microphones are positioned around the room,” she explained.

“By leveraging optical and force sensors already in smartphones for taking ‘selfies’ and employing ‘peek and pop’ we’ve invented a practical tool to keep tabs on blood pressure,” Mukkamala said. “Such ubiquitous blood pressure monitoring may improve hypertension awareness and control rates, and thereby help reduce the incidence of cardiovascular disease and mortality.”

In a publication in Science Translational Medicine last year, Mukkamala’s team had proposed the concept with the invention of a blood pressure app and hardware. With the combination of a smartphone and add-on optical and force sensors, the team produced a device that rivaled arm-cuff readings, the standard in most medical settings.

Ramakrishna Mukkamala received MSU’s 2019 Innovation of the Year Award for his work on smartphone-based blood pressure monitoring. "By leveraging optical and force sensors already in smartphones for taking ‘selfies’ and employing ‘peek and pop,’ we’ve invented a practical tool to keep tabs on blood pressure," Mukkamala said. "Such ubiquitous blood pressure monitoring may improve hypertension awareness and control rates, and thereby help reduce the incidence of cardiovascular disease and mortality.”

In a publication in Science Translational Medicine last year, Mukkamala’s team had proposed the concept with the invention of a blood pressure app and hardware. With the combination of a smartphone and add-on optical and force sensors, the team produced a device that rivaled arm-cuff readings, the standard in most medical settings.

Ramakrishna Mukkamala, working with a team of MSU scientists, invented a proof-of-concept blood pressure app. The discovery, which has been featured in Scientific Reports, can give accurate readings using an iPhone – with no special equipment.

With advances in smartphones, the add-on optical and force sensors may no longer be needed. Peek and pop, available to users looking to open functions and apps with a simple push of their finger, is now standard on many iPhones and included in some Android models. If things keep moving along at the current pace, an app could be available in 2020, Mukkamala noted.

“Like our original device, the application still needs to be validated in a standard regulatory test,” he said. “But, because no additional hardware is needed, we believe that the app could reach society faster.”

This app could be a game-changer. While high blood pressure is treatable with lifestyle changes and medication, only around 20 percent of people with hypertension in the U.S. have their condition under control. This invention gives patients a convenient option, and keeping a log of daily measurements would produce an accurate average, Mukkamala added.

Anand Chandrasekhar, Keerthana Natarajan, and Mohammad Yavarimanesh – all electrical and computer engineering doctoral candidates – contributed to this research.

The research was funded in part by the National Institutes of Health (NIH).
Other new endowed faculty positions in the college include:
- The Keith and Michele Landau Endowed Professorship in Computer Science and Engineering, established to encourage the continued growth of computer science at MSU. The couple from Plano, Texas, created the fund to honor Keith’s parents, Melfe and Nelma (Nikki), who spent their lives stressing the importance of education and hard work.
- Thomas Wielenga funded the Wielenga Creative Engineering Endowed Professorship with a strong belief in the value of the creative process. He invested $1 million to kick-start the next teaching paradigm in the college. Wielenga was one of the developers of the mechanical simulation program, ADAMS, which is used extensively to simulate mechanical systems including cars and trucks. He also worked as a consultant and expert in the field of vehicle dynamics and accident reconstruction. Wielenga received a bachelor’s degree in mechanical engineering in 1978 from MSU.

In all, MSU established 112 new endowed faculty positions – helping attract and retain outstanding faculty members. One of the newest endowed positions is the James and Kathleen Cornelius Chair and director for the Institute for Quantitative Health Science and Engineering (IQ). It is funded by health architect Christopher Contag. He joined MSU in 2017 as the founding director of IQ and the inaugural chair of the Department of Biomedical Engineering. He is also a professor in the Department of Microbiology and Molecular Genetics.

Other endowed positions include:
- The Howard T. Langeveld and Family Endowed Chair in Sustainable Science, Technology, Engineering, Agriculture and Mathematics, established to encourage faculty and students to focus on developing sustainable technologies, especially sustainable energy solutions and agriculture practices.
- The Keith and Michele Landau Endowed Professorship in Computer Science and Engineering, established to encourage the continued growth of computer science at MSU. The couple from Plano, Texas, created the fund to honor Keith’s parents, Melfe and Nelma (Nikki), who spent their lives stressing the importance of education and hard work.
- Thomas Wielenga funded the Wielenga Creative Engineering Endowed Professorship with a strong belief in the value of the creative process. He invested $1 million to kick-start the next teaching paradigm in the college. Wielenga was one of the developers of the mechanical simulation program, ADAMS, which is used extensively to simulate mechanical systems including cars and trucks. He also worked as a consultant and expert in the field of vehicle dynamics and accident reconstruction. Wielenga received a bachelor’s degree in mechanical engineering in 1978 from MSU.

In all, MSU established 112 new endowed faculty positions – helping attract and retain outstanding faculty members. One of the newest endowed positions is the James and Kathleen Cornelius Chair and director for the Institute for Quantitative Health Science and Engineering (IQ). It is funded by health architect Christopher Contag. He joined MSU in 2017 as the founding director of IQ and the inaugural chair of the Department of Biomedical Engineering. He is also a professor in the Department of Microbiology and Molecular Genetics.

The newly endowed faculty positions in the college include:
- The Keith and Michele Landau Endowed Professorship in Computer Science and Engineering, established to encourage the continued growth of computer science at MSU. The couple from Plano, Texas, created the fund to honor Keith’s parents, Melfe and Nelma (Nikki), who spent their lives stressing the importance of education and hard work.
- Thomas Wielenga funded the Wielenga Creative Engineering Endowed Professorship with a strong belief in the value of the creative process. He invested $1 million to kick-start the next teaching paradigm in the college. Wielenga was one of the developers of the mechanical simulation program, ADAMS, which is used extensively to simulate mechanical systems including cars and trucks. He also worked as a consultant and expert in the field of vehicle dynamics and accident reconstruction. Wielenga received a bachelor’s degree in mechanical engineering in 1978 from MSU.

Other endowed positions include:
- The Howard T. Langeveld and Family Endowed Chair in Sustainable Science, Technology, Engineering, Agriculture and Mathematics, established to encourage faculty and students to focus on developing sustainable technologies, especially sustainable energy solutions and agriculture practices.
- The Keith and Michele Landau Endowed Professorship in Computer Science and Engineering, established to encourage the continued growth of computer science at MSU. The couple from Plano, Texas, created the fund to honor Keith’s parents, Melfe and Nelma (Nikki), who spent their lives stressing the importance of education and hard work.
- Thomas Wielenga funded the Wielenga Creative Engineering Endowed Professorship with a strong belief in the value of the creative process. He invested $1 million to kick-start the next teaching paradigm in the college. Wielenga was one of the developers of the mechanical simulation program, ADAMS, which is used extensively to simulate mechanical systems including cars and trucks. He also worked as a consultant and expert in the field of vehicle dynamics and accident reconstruction. Wielenga received a bachelor’s degree in mechanical engineering in 1978 from MSU.
Accomplishments

CEE Professor Volodymyr Tarabara was awarded an honorary degree by the Agricultural University of Georgia, Tbilisi, in April. He served as a U.S. Fulbright Scholar in Georgia in 2014-2016 and was honored for his environmental engineering efforts toward a safe and sustainable water supply.

NEW FELLOWS

ChEMS Professor Thomas Bieler was named a Fellow of The Minerals, Metals and Materials Society. The honor is presented to less than 1 percent of the 33,000 society members.

CEE Professor Karim Chatti was named a Fellow of the American Society of Civil Engineers, the country’s oldest national engineering society.

ChEMS University Distinguished Professor Lawrence Drzal was elected a 2018 Fellow of the National Academy of Inventors.

CEE Assistant Professor Mehrnaz Ghamami was named an Adams Academy Fellow for 2019-2020 at MSU. Only 12 fellows are selected each year to the academy that advocates for instructional innovation.

CSE University Distinguished Professor Anil Jain was named a Fellow of The World Academy of Sciences in 2018 for his pioneering contributions to pattern recognition and a lifetime of inspiring students and researchers worldwide.

MSU Foundation Professor James Klausner was named a Fellow by the American Society of Thermal and Fluid Engineers. He is an MSU Foundation Professor and chair of the ME department.

EE Assistant Professor Lawrence Drzal was elected a 2018 Fellow of the National Academy of Inventors.

ChEMS Associate Professor Robert Y. Ofoii was elected a Fellow of the American Institute of Chemical Engineers last spring, for his distinctive service and research in nanocatalysis and nanostructured interfaces.

CSE Professor Arun Ross was elected a Fellow of the International Association of Pattern Recognition. He is an internationally recognized expert on pattern recognition, machine learning, computer vision, and biometrics.

MSU Foundation Professor Xiaobo Tan was named a Fellow of the American Society of Mechanical Engineers, in recognition of his contributions in the development of electromechanical systems.

AWARDS AND RECOGNITIONS

BAE Professor Evangelyn Alacilla received an MSU William J. Beal Outstanding Faculty Award in 2019. The honor acknowledges her international expertise on nanobiosensor technologies related to disease-causing pathogens.

Research by ME’s Rebecca Anthony and PhD student Aboriz Izadi in MSU’s Plasma & Nanomaterial Laboratory, has created a new way to synthesize gold nanoparticles—a discovery featured on the cover of Plasma Processes and Polymers.

CSE Professor Joyce Chai received an MSU William J. Beal Outstanding Faculty Award in 2018 for her outstanding contributions to education and research.

CHEMS Assistant Professor Shiwang Cheng was awarded the 2018 Peter Debye Prize for Young Investigators in Dielectric Research by the International Dielectric Society for his “significant results on polymer nanocomposites.”

Kalyanmoy Deb, Koenig Endowed Chair Professor for ECE, was presented the 2018 IEEE CIS Evolutionary Computation Pioneer Award at the IEEE World Congress on Computational Intelligence in Rio de Janeiro.

CHEMS University Distinguished Professor Lawrence Drzal was presented the 2018 MSU Technology Transfer Achievement Award for his nearly 100 inventions, 400 peer-reviewed papers, 35 patents, and 16 technologies licensed to industry.

Klausner MSU Foundation Professor and researchers worldwide. and a lifetime of inspiring students contributions to pattern recognition Sciences in 2018 for his pioneering Fellow of The World Academy of Professor CSE University Distinguished innovation. that advocates for instructional advantage and research in nanobiosensor technologies related to disease-causing pathogens. awarded the 2018 Peter Debye Prize for Young Investigators in Dielectric Research by the International Dielectric Society for his “significant results on polymer nanocomposites.”
CSE PhD student Amin Jourabloo won the prestigious Fitch H. Beach Award for most outstanding graduate researcher in the college in March. His research focused on designing convolutional neural networks for face alignment and anti-spoofing.

CoRe Experience Director Tim Hinds is the vice chair elect for ASEE’s First Year Programs Division and will be its 2021 conference chair and 2022 division chair.

Eleven members of the college received top honors at the 2018 Engineering Awards Luncheon: (back, left) Patte Hahn (Dedicated and Creative Service), Xiaobo Tan (Distinguished Senior Scholar), Bradley Marks (Teaching Excellence), Laura Dillon (Teaching Excellence), Xiaoming Liu (Distinguished Junior Scholar), Susan Masten (Teaching Excellence), Amanda Idema (Student Service) and emcee Tom Voice; (front) Ajit Srivasatava (Global Leadership), Tongtong Li (Teaching Excellence), Tamara Reid Bush (Teaching Excellence), and Maddalena Fanelli (Teaching Excellence).

The 2019 Engineering Awards were presented to (back, left) Brian Feeny (Teaching Excellence), Christopher Saffron (Teaching Excellence), R. Mark Worden (Teaching Excellence), Nelson Sepulveda (Teaching Excellence and Excellence in Diversity – Emerging Accomplishment), Eric Tang (Exceptional Service), Wei Liao (Global Leadership), Mahmoodul Haq (Teaching Excellence), Yady Pothrath (Distinguished Junior Scholar), Alex Liu (Distinguished Senior Scholar) and (front) Sebnem Orcay (Teaching Excellence), Meagan Kroll (Dedicated and Creative Service), Lindsey Naylor (Student Service), and Christina Chan (Excellence in Diversity – Sustained Excellence). Missing from photo: Alexandra Zevalkink (Teaching Excellence).

CEE University Distinguished Professor Venkatesh Kodur was honored for his significant contributions to enhancing fire performance of concrete materials and structural systems during ceremonies in India last December. He offered the keynote address at an international conference and symposium in Mumbai.

The 2018 MSU Innovation of the Year Award was presented to CEMS Chair Donald Morelli for his work in thermoelectric technology, which converts waste heat sources into electricity.

Pouyan Nejadhashemi is one of four new MSU Foundation Professors in 2019 — honored for demonstrated excellence in research and teaching while enhancing the prominence of the institution. The professor of biosystems and agricultural engineering is a leading expert in water resources modeling.

BME Associate Professor Steve Safferman received the 2019 MSU Honors College Award for Distinguished Contributions to Honors Students.

Michelle Stewart was presented MSU’s 2018 Gloozo Clinical Technical Recognition Award. She is the assistant to the CEE department chair.

Jeffrey Tsang, academic adviser for Undergraduate Studies, was presented the 2018 NASPA Region IV-E Outstanding New Professionals Award for Michigan.

Robotics coordinator Bob Watson and the VEX U Robotics team brought home the Amaze Award from the VEX World Championship in Kentucky in April. The Spartan team competed against the best 80 teams in the world.

CEE University Distinguished Professor Lalita Udpa received the Ralph H. Smuckerl Award for Advancing International Studies and Programs. She was recognized in April for her long-term dedication to helping MSU international students and mentoring women.

The 2018 MSU Innovation of the Year Award was presented to ChEMS Chair Donald Morelli for his work in thermoelectric technology, which converts waste heat sources into electricity.

The 2018 MSU Innovation of the Year Award was presented to ChEMS Chair Donald Morelli for his work in thermoelectric technology, which converts waste heat sources into electricity.
**Distinguished Alumni Awards 2018 and 2019**

Each year, MSU Engineering honors some of its most accomplished alumni during the annual Alumni Awards banquet. Award recipients are selected for their professional contributions, public service, and personal accomplishments that reflect positively on MSU and the College of Engineering. Each year a high school educator – dedicated to inspiring students to study STEM – is also honored with the annual Green Apple Award.

**2018 DEPARTMENTAL HONORS**
- Brad Borgman (BS ’79), vice president of Engineering for the TWT Group, Biosystems and Agricultural Engineering Distinguished Alumni Award
- Prabhat Shukla (MS ’75, PhD ’84), founder of Fluorotherm Polymers Inc., Red Cedar Circle Award in Chemical Engineering and Materials Science
- James Susan (BS ’75, MS ’77), president of Fishbeck, Thompson, Carr & Huber (FTCH), Inc., Civil and Environmental Engineering Distinguished Alumni Award
- Tracy Camp (BS ’78), professor and head of the Department of Computer Science at the Colorado School of Mines, Computer Science and Engineering Distinguished Alumni Award
- Darius Adamczyk (BS ’86), dean of the College of Engineering at Wayne State University, Computer Science and Engineering Distinguished Alumni Award
- Karen Newman (BS ’82), vice president of the IBM Services Division managing the Global Honda account, John D. Ryder Electrical Engineering and Computer Engineering Alumni Award
- Kim Smith (BS ’84), vice president and general manager of Boeing Fabrication, Mechanical Engineering Distinguished Alumni Award

**READ MORE**
https://www.msu.edu/departmental-honors/2018-
departmental-honors

**2019 DEPARTMENTAL HONORS**
- David Foulke (BS ’88), the health, environmental and safety training manager for Marathon Petroleum Corp., Applied Engineering Sciences Distinguished Alumni Award
- Scott Piggott (BS ’84, MS ’85), chief executive officer of the Michigan Farm Bureau, Biosystems and Agricultural Engineering Distinguished Alumni Award
- Kathy Fish (BS ’79), chief research, development and innovation officer for Proctor & Gamble, Red Cedar Circle Award in Chemical Engineering and Materials Science
- Larry J. Fleis, PE, (BS ’74), cofounder of Fleis & Vandenbreek (F&V), Engineering, Inc., Civil and Environmental Engineering Distinguished Alumni Award
- Farshad Fotouhi (PhD ’81), dean of the College of Engineering at Wayne State University, Computer Science and Engineering Distinguished Alumni Award
- Karen Newman (BS ’82), corporate vice president for artificial intelligence and research at Microsoft, the health, environmental and safety training manager for Marathon Petroleum Corp., Applied Engineering Sciences Distinguished Alumni Award
- Kim Smith (BS ’84), corporate vice president for artificial intelligence and research at Microsoft
- Kathy Fish, Penny Wirsing and Scott Piggott

**GREEN APPLE AWARDS 2018**
- Steven Kosmas of Grosse Pointe North High School, nominated by Ted Supal (’18)
- Kevin Corfixsen of Grandville High School, nominated by Samuel Daniels (’19)

**READ MORE**
https://www.msu.edu/departmental-honors/2019-
departmental-honors

**GREEN APPLE AWARDS 2019**
- Anil Jain and Dean Leo Kempel presented the 2019 Claud R. Erickson Distinguished Alumni Award to Penny Wirsing (BS ’83), an environmental manager at Torrance Refining Company in California and current national president of the 40,000-member Society of Women Engineers.
therese R. kline, pe, f. asce

(Bs civ egr ’66) is the first female engineer in michigan to be named a fellow of the American society of Civil engineers (asce)—an honor awarded to only 3 percent of asce members. she is a pipe specialist for the michigan department of transportation (mdot) and has worked in the buried structures field throughout her career. she was honored in march in Washington, D.c.

1949
cEO bauer (Bs civ egr ’49) was presented the French Legion of Honor award in May for his service during World War II. he is 96.

1971
Ken decker (Bs mech egr ’71) was named a “Legend of artificial lift” and honored by the Society of Petroleum Engineers (SPE) during the 2018 SPE artificial lift conference in Texas. he is considered an expert in the use of gas lift valve performance, design, and troubleshooting and was recognized for his outstanding contributions to the field.

1979
Michael C. Beck (Bs mech egr ’79) became the senior vice president for operations at CSI industries inc. in Connecticut in February.

1982
Joe Brichita (Bs ’71, Ms. Civ egr) joined Motiva in Houston as the vice president of major projects. he is responsible for building a project management organization to design and construct a petrochemical complex along the Texas gulf coast. he has almost 40 years of experience in the oil and gas industry.

1983
Shannon Venable (Bs ELEC EGR ’83), Glen Allen, Virginia, is the president and CEO at the Children’s museum of Richmond, Virginia.

1988
Brian A. rener (Bs ELEC EGR ’88) has been named a principal at the Chicago office of the smithGroup, one of the nation’s leading integrated design firms. he has more than 30 years of experience in the design of critical electrical systems for health, government, university, science, and advanced technology facilities.

1996
Mary Wroten (Bs mech and biomedical egr ’96) is the associate director for global sustainability at Ford Motor Company.

2002
Scott C. Millsap (Bs bioSystems EGR ’92) is a corporate IT project manager for JBT Corporation.

2004
Mike farmer (PhD COMP SC ’04) is a professor of computer science and chair of the multidisciplinary department, Computer Science, engineering and Physics at the University of Michigan—Flint.

2006
Collin Castle (BS civ egr ’06) received the 2018 mdot director’s award – the department’s highest honor for outstanding service. Castle is the statewide manager for Michigan’s intelligent Transportation Systems Program.

2019
kasey a. Coleman (BS chem egr ’96) was the spring 2019 undergraduate commencement speaker. she spent the summer as a congressional intern with the congressional black caucus foundation in Washington, D.C., and will become a supplier quality engineer with United Technologies Corp.’s Collins aerospace in the fall.

Bob Sweeney (BS Civ egr ’71), who spent 17 years with MDOT directing the operation and maintenance of Michigan’s iconic Mackinac Bridge, retired in May. he and his wife, Maureen (BS Civ egr ’71), have moved to Florida, where he will lead the Department of Public Works for the City of Port St. lucie. Maureen also retired in May, following a 33-year career at MDOT.
The mechanical engineer who Racer credits as “the man who helped create one of the biggest breakthroughs in auto racing safety” died Feb. 5, 2019, in East Lansing. Robert “Bob” P. Hubbard, professor emeritus of mechanical engineering, was the inventor and biomechanical engineer who conceived of the Head and Neck Support (HANS) device in collaboration with his brother-in-law and IMSA SportsCar Championship racer Jim Downing. Countless racers around the world avoid injury or death by using this pioneering device. The HANS and related artifacts will be installed in the Smithsonian Museum in 2021. Hubbard, who was on faculty at MSU from 1977 to 2006, was 75.

The man who was fondly known as the “godfather” of Michigan’s distilling industry died Dec. 12, 2018. Kris A. Berglund - University Distinguished Professor of Chemical Engineering and Food Science at MSU and professor of Biochemical Process Engineering at Luleå University of Technology (LTU), Luleå, Sweden – died suddenly at his home in Ökeros. He was a leading researcher in crystallization processes, alternative uses of agricultural and forest materials, and a trail blazer in fermentation and distilled beverage technologies. He was 62.

Emeritus Professor P. David Fisher of Ökeros, who taught electrical and computer engineering for more than 30 years, died Dec. 5, 2018. He was 76. Fisher was a pioneer in applied remote sensing in environmental monitoring and also the development of national traffic radar testing facilities. He was a past winner of a U.S. Outstanding Electrical Engineering Professor Award.

Harry G. Hedges (BS ’49, PhD ’74, ELEC EGR), who served as the first chair of MSU’s computer science department, died June 7, 2018, in Washington, D.C. He was 84. He began his career at MSU Engineering and led the computer science department from 1970-1984. He took a sabbatical from MSU in 1984 to work at the National Science Foundation in Washington, D.C., and remained there until his retirement in 2003. His leadership roles, 1986-2007.

Gerald Duane Leet (BS CHEM EGR ’44), New Port Richey, Florida, died April 25, 2019.


Bruce M. Jones (BS ELEC EGR ’55), Traverse City, died March 23, 2018.

Rusell Grant Sovill (BS CHEM EGR ’53), East Lansing, died June 19, 2018.

Jack K. Barnhart (BS MECH EGR ’50), Mentor, Indiana, died Nov. 19, 2018.

Donald Bocks (BS CV EGR ’51), Holland, died Jan. 26, 2019.


Charles Brown (BS ELEC EGR ’54), Thousand Oaks, California, died April 1, 2019.


Harold Derks (BS CV EGR ’52), Grand Rapids, died Feb. 9, 2019.


Frederick E. Freihite III (BS MECH EGR ’51), East Lansing, died Jan. 4, 2018.

Daniel William Greniewicki (BS MECH EGR ’54), Gainesville and Birming- ham, Georgia, died June 3, 2018.


Warren Gordon Hudson (BS CHEM EGR ’53), Charleston, West Virginia, died May 20, 2018.

Bruce N. Jones (BS CV EGR ’55), Centreville, died Nov. 11, 2018.

E. Z. Leutzius (BS MECH EGR ’65), Lakevood, Ohio, died May 5, 2018.

Howard R. Sawatzki, P.E., (BS CHEM EGR ’49), Glenwood, Illinois, died March 5, 2018.

Russell Grant Sovill (BS CHEM EGR ’53), East Lansing, died June 19, 2018.

John Jacob Schafer (BS MECH EGR ’34), Lansing, died Oct. 9, 2018.

Richard Edward Schedeniel (BS CV EGR ’54), Trenton, died Feb. 20, 2019.

Donald Wayne Smith (BS MECH EGR ’50), Williamson, died Dec. 24, 2017.


Albert Harrison Van Sickle (BS ELEC EGR ’52), Marysville, died May 10, 2019.

60s

S. John Ancher (BS METALLURGY ’61), Dublin, California, died June 6, 2019.

Charles Allan Fisher (BS ELEC EGR ’64), Gaines, Mich., died June 26, 2018.

F. Martin Greene (BS MECH EGR ’61), Fort Smith, Arkansas, died Jan. 25, 2019.

John Edward Huntington Jr. (BS MECH EGR ’62), Lakevood, Ohio, formerly of Cadillac, died May 25, 2018.

Herbert Walden Lloyd (BS METALLURGY ’61), Salt Lake City, Utah, died Sept. 5, 2018.

Bruce I. MacDonald (BS ELEC EGR ’61), Traverse City, died March 23, 2019.

George Edwin Masters (BS CV EGR ’44), Apexa, died June 10, 2019.


Kenneth Gale Miller (BS CHEM EGR ’50), Walnut Creek, California, died Feb. 9, 2018.

Alger H. Palmer (BS CHEM EGR ’53), Unalaska, Wisconsin, died May 28, 2019.

Robert E. Price (BS MECH EGR ’55), Maritou Beach, died March 20, 2018.

Robert E. Price (BS MECH EGR ’55), Maritou Beach, died March 20, 2018.

John Jacob Schafer (BS MECH EGR ’34), Lansing, died Oct. 9, 2018.

Richard Edward Schedeniel (BS CV EGR ’54), Trenton, died Feb. 20, 2019.

Donald Wayne Smith (BS MECH EGR ’50), Williamson, died Dec. 24, 2017.


Albert Harrison Van Sickle (BS ELEC EGR ’52), Marysville, died May 10, 2019.

60s

S. John Ancher (BS METALLURGY ’61), Dublin, California, died June 6, 2019.

Charles Allan Fisher (BS ELEC EGR ’64), Gaines, Mich., died June 26, 2018.

F. Martin Greene (BS MECH EGR ’61), Fort Smith, Arkansas, died Jan. 25, 2019.

John Edward Huntington Jr. (BS MECH EGR ’62), Lakevood, Ohio, formerly of Cadillac, died May 25, 2018.

Herbert Walden Lloyd (BS METALLURGY ’61), Salt Lake City, Utah, died Sept. 5, 2018.

Bruce I. MacDonald (BS ELEC EGR ’61), Traverse City, died March 23, 2019.

George Edwin Masters (BS CV EGR ’44), Apexa, died June 10, 2019.


Kenneth Gale Miller (BS CHEM EGR ’50), Walnut Creek, California, died Feb. 9, 2018.

Alger H. Palmer (BS CHEM EGR ’53), Unalaska, Wisconsin, died May 28, 2019.

Robert E. Price (BS MECH EGR ’55), Maritou Beach, died March 20, 2018.

John Jacob Schafer (BS MECH EGR ’34), Lansing, died Oct. 9, 2018.
ONE-OF-A-KIND STEM BUILDING TO OPEN FALL 2020

MSU will embrace a new approach to educating Spartan students when the 117,000-square-foot STEM Teaching and Learning Facility opens in the Fall 2020.

The College of Engineering will share classroom and laboratory space supporting STEM gateway courses in biological sciences, chemistry, computer science, engineering, material science, and physics.

The central structure of the new building is the former Shaw Lane Power Plant, next to Spartan Stadium. Project renovations are keeping as much of the historical building as possible, and will add student studio space, study areas, and a vibrant commons area with a café, as well as a new home for MSU’s HUB for Innovation in Learning and Technology.