The mission of the Department of Mechanical and Aerospace Engineering (MAE) is to provide students with a world-class education in mechanical, aerospace and nuclear engineering. In reflecting on the past year, we are grateful to our alumni and friends for their unwavering support.

Together, we will continue to build on our research strengths as we seek to establish endowed chairs and professorships to recruit and retain top-tier faculty, support leadership priorities and collaborate with government and industry.

You have been invaluable partners for change and growth – reducing the financial burden on undergraduate students through scholarships, strengthening our popular Capstone Program offerings, equipping our laboratories with state-of-the-art technologies and much more.

Most important, the student experience is our first priority. The impact of your gift is felt strongly in curriculum innovation that provides our students with the skills and knowledge to make a difference in the engineering profession – and in the world.

We sincerely thank alumni who have contributed to the MAE Leadership Fund (314225). The value of this resource cannot be underestimated in promoting excellence, innovation and achievement. These discretionary funds support activities that enhance our belief in learning by doing – combining practical theory and applied experience, and giving students a competitive advantage. And, we are able to complement faculty’s scholarly achievements by supporting leadership roles in their disciplines that set them apart as dedicated teachers and innovators in engineering practice.

None of this is possible without your generosity, support and connection to the department and The Ohio State University. Thank you for giving back and coming back.

AHMET SELAMET
Professor & Chair

To make a gift to the MAE Leadership Fund go to giveto.osu.edu and reference the fund name or number, or call 614-292-2141.
The Mechanical Engineering Undergraduate Program (ME) in MAE is setting the standard for making educational objectives relevant for students. Today, students are seeing more value in their coursework through experiential learning in their sophomore year, in the expansion of the senior capstone experience and the redesign of laboratory courses. In 2015, we introduced the Technical Elective (TE) Program to our first cohort of students who have experienced the redesigned curriculum as they complete their senior year.

Our goal is to educate graduates to be ethical, productive and contributing members of society, but also to give them the technical and professional skills and knowledge to excel in the engineering profession.

Perhaps most important, students have unique opportunities to function at a high level in modern engineering by acquiring lifelong professional skills unrelated to engineering, but critical for them to be competitive in today’s marketplace and successful in their careers. The ME Curriculum Reform Fund (313090) provides resources to support the new TE program, which plays an integral role in achieving these educational objectives.

Highly motivated students who pursue their graduate education in mechanical, aerospace or nuclear engineering are uniquely prepared to make an impact in the engineering profession and in the world. In the past 25 years, more than 2,500 graduate degrees have been conferred to students who have moved on to excel in industry, academia and government.

Our MS and PhD programs are highly ranked in the top 25 programs in their disciplines nationally. The department is housed in the renowned Peter L. and Clara M. Scott Laboratory, a $72.5 million state-of-the-art building with internationally known research centers and laboratories. Our faculty are consistently recognized for their contributions as outstanding teachers and mentors of graduate students.

As a research powerhouse, Ohio State ranks second nationally among public universities in industry-sponsored research and 12th in the nation for sought-after graduates by The Wall Street Journal. And, the city of Columbus has been named the 2015 Intelligent Community of the Year, first among 400 cities worldwide by the Intelligent Community Forum (ICF), an international think tank headquartered in New York. The ME Graduate Fellowship Fund (313153) supports our graduate programs, equipping our students for success in their careers and in life.

Our faculty are recognized worldwide for their scholarly achievements. In addition to being dedicated educators, they are innovators in engineering practice and leaders in their fields, sought after by industry, government and the broader community. And, they are contributors to the strength and success of engineering, addressing real-world societal and environmental challenges that impact quality of life.

In the 2015 issue of Research News, you can see firsthand how our faculty’s research is addressing critical societal needs, reflecting Ohio State’s obligation as a land-grant research university and fulfilling our departmental mission of disseminating original knowledge and technology through the discovery of advanced solutions in mechanical, aerospace and nuclear engineering. To read more, visit our website at mae.osu.edu/publications.

We recognize all of our scholars who are embracing science, technology and innovation to solve important national and global problems and advance engineering practice, paving the way for the brilliant students who will follow in the future.
Alumni Honored

Two MAE alumni were honored with the College of Engineering’s Distinguished Alumni Award on Friday, October 9, 2015 at the 18th Annual Excellence in Engineering and Architecture Awards, part of homecoming festivities.

Ardeshir Contractor (BS ’84, MS ’86, mechanical engineering) and Frank Paluch (BS ’86, aerospace engineering) received the Distinguished Alumni Award for outstanding professional achievement in engineering and architecture.

Contractor is the CEO and founder of Kiran Energy, India’s leading solar energy utility. Paluch is president of Honda R&D Americas, Inc.

CALL FOR NOMINATIONS FOR 2016 ALUMNI AWARDS

Since 2006, more than 60 distinguished MAE alumni have been recognized for their significant career accomplishments. The Alumni Awards Committee has established criteria in nine categories, found on the website at http://mae.osu.edu/department-alumni-recognition-program. Nominations are now being accepted for the 2016 awards. Nomination forms can be found on the Alumni Recognition Program page of the website. Submit your nomination with supporting information to Gail Dickson (dickson.115@osu.edu) by February 2, 2016, Groundhog Day.

Enrolling Well-Prepared Students

The Ohio State University welcomed a record 45,919 undergraduate students to its campus this fall with a record-high first-year retention rate of 93.8 percent. And, USA Today reported engineering as the highest paying degree in 2015 with a projected average starting salary of just over $62,000 annually. At MAE, we are ensuring that our students are equipped with the technical and professional skills to excel in the engineering profession.
Teaching Impact – Endowments Honor Alumni

Two MAE alumni, widely-respected for their commitment to students, teaching excellence and service and dedication to Ohio State, are being recognized with endowed scholarships.

Aerospace alumni led the effort to create an endowed fund in honor of Gerald M. Gregorek, known for his teaching innovation and aerodynamics research.

The fund will provide support for 3rd and/or 4th year undergraduate students enrolled in the College of Engineering, majoring in aerospace engineering. Criteria include U.S. citizenship, involvement in a student organization; demonstrated leadership abilities and GPA.

Mechanical Engineering External Advisory Board members have made leadership gifts to establish a second endowed scholarship honoring Gary Kinzel, well-known as the “engineer’s engineer” and respected as a scholar in the field of mechanical engineering.

A five-year strategy/plan will be in place by June 2016, including scholarship disbursement criteria. The scholarship is on track to raise $50,000 by June of next year, and the university will match the disbursement when it reaches $100,000 as part of the Ohio Scholarship Challenge.

To make a gift to either endowment go to go.osu.edu/Gregorek or go.osu.edu/Kinzel, or call 614-292-2141.

Industry Collaboration – Advancing Engineering Solutions

MAE embraces connections with industry partners at all levels, advancing science, technology and innovation to solve national and global problems. Once such collaboration is the result of the combined efforts of MAE and Ohio State University’s Industry Liaison Office (ILO), launched in 2008 to enhance economic development opportunities in Ohio and beyond by connecting business and industry to the university.

“We foster mutually beneficial relationships with partners worldwide by aligning OSU differentiated capabilities with their needs,” said Dan Kramer, ILO’s director. “Often, our researchers create breakthroughs and discoveries that we recognize as being on the leading edge of a partner’s future roadmap so we can catalyze symbiotic relationships.”

A generous grant received by K. (Cheena) Srinivasan, Professor in MAE, from the Foundation arm of Parker Hannifin, a $13 billion diversified manufacturer of motion control technologies and systems worldwide, helped set the stage for a two-day joint technical interchange meeting in 2013 involving 18 Parker Hannifin technical personnel, Ohio State faculty and staff to identify areas of potential collaboration. Seed grants were provided to OSU faculty members to support interactions with Parker Hannifin staff and identify underlying research issues that were relevant to industry needs.

One outcome of these interactions was a research project to address the reduction of scrap in the extrusion of nylon hoses involving Vishnu Sundaresan, assistant professor in MAE, and Parflex, a manufacturing division of Parker Hannifin Corporation in Ravenna, Ohio. Phase one of this project became a research thesis for Paul Gilmore’s master’s degree in mechanical engineering. From the research, Ohio State has demonstrated the technical viability of the solution developed which Parflex will incorporate into their hose manufacturing process. Sundaresan and Parflex will continue this project into 2016, incorporating the results of Gilmore’s thesis into the hose manufacturing line.

“It was a great match,” said Peter Buca, Vice President for Technology & Innovation for Parker Hannifin’s Fluid Connector’s Group and one of several key supporters of the partnership. “It’s a win-win for us to have Ohio State’s relevant expertise at our disposal and to give aspiring engineers opportunity for experiential learning in a real-world setting.” Other Parker Hannifin advocates of the project are Steven Powell and Scott Burrowbridge of Parflex.

Sundaresan commended Gilmore’s role in the project. “His contributions have helped make the collaboration a success,” Sundaresan said. “It’s a great example of combining theory with practical application in solving today’s engineering and manufacturing problems.”

Fibelkorn Scholarship Fund Helps Aspiring Female Engineers

MAE was deeply saddened at the loss of third-year mechanical engineering student Stephanie Fibelkorn last December 12, 2014. Faculty voted to award the degree of BSME posthumously to Stephanie. She is greatly missed by all who knew her. The Stephanie Fibelkorn Memorial Scholarship Fund was established in her memory to give financial assistance to female engineering students at Ohio State. Go to go.osu.edu/Fibelkorn to make a gift, or call 614-292-2141.