DEPARTMENT OF INDUSTRIAL & SYSTEMS ENGINEERING

50TH ANNIVERSARY
HOMECOMING CELEBRATION

WEEKEND AGENDA + HISTORICAL HIGHLIGHTS

JULY 14, 2018
Welcome from the Chair

Welcome to our celebration! The Department of Industrial and Systems Engineering (ISE) has accomplished many things in the past fifty years. Thank you for being part of those achievements! Through our classes, our research, and our service, you have helped ISE leave its mark on the Ohio University community and beyond. Thanks to all of the students, staff, and faculty who have contributed to the department’s success.

During my time at OHIO, I’ve seen many changes. We’ve increased the number of faculty, created a dynamic online program, expanded the reach of our senior capstone projects, and added courses on many new topics relevant to ISE — including Six Sigma and Lean. Our alumni continue to make us proud with their personal and professional accomplishments, showing the world what it means to be a Bobcat and how we create for good.

I’m excited to be taking over as department chair as we begin our next fifty years. Knowing the talented people in the ISE department, there are many more accomplishments ahead of us, and I look forward to seeing what we’ll do.

Dale Masel
Professor and Chair
Industrial and Systems Engineering
SCHEDULE

*All events to be held in Baker University Center

3:00 P.M.-6:00 P.M. — REGISTRATION (Second floor)
Student work on display
(Room 242)

3:30-6 P.M. — NETWORKING with faculty & alumni
(Room 240)

3:30 P.M. — TOURS: Stocker Center and
4:00 P.M. Academic & Research Center
4:30 P.M. (Depart from Baker University Center,
Room 242)

6:00 P.M. — ISE 50th ANNIVERSARY GALA (Ballroom A)
Attire: business casual

6:00 P.M. — Cocktails

6:30 P.M. — Dinner

7:30 P.M. — Program

PROGRAM:

Welcome:
Robert Judd, Immediate Past Chair

Founding of the Department:
Robert Williams, First Department Chair

Industrial Engineering within the Russ College:
Dennis Irwin, Dean of the Russ College

The Future:
Dale Masel, Department Chair
The first department of industrial and manufacturing engineering in the country was established at Pennsylvania State University in 1908. About thirty years later, in 1937, Ohio University established a joint bachelor’s degree program in industrial engineering between the College of Commerce and the College of Applied Sciences. In 1952, the Department of Mechanical Engineering was established in the College of Applied Sciences; it also administered the industrial engineering program. That same year, the industrial engineering program and all the other engineering programs were accredited. In 1963, the College of Applied Sciences was renamed as the College of Engineering and Technology. In 1994, the college was renamed again as the Fritz J. and Dolores H. Russ College of Engineering and Technology to honor alumnus Fritz Russ, BSEE ’42, HON ’75, and his wife, Dolores, who later bequeathed a transformational $124 million gift to the college.

**1937 Ohio University Catalog Description**

*Bachelor of Science in Industrial Engineering.*

No longer are industry and business based on guesses and haphazard planning, but upon careful estimates and scientific processes. Modern industrial management, which includes production, marketing and financing, presupposes in an executive a knowledge of markets and sales possibilities, cost accounting, expense and production control, labor relations, and waste elimination. Furthermore, the industrial manager must correlate the industrial production and manufacturing processes with the related mechanical and engineering elements. He should know the fundamental principles of heat and electrical power production, and the laws of mechanics and hydraulics, and also how these various engineering relations are applied in industry.
THE OHIO UNIVERSITY DEPARTMENT AND LATER DEGREE PROGRAMS

In 1967-68, under the urging of Professor Paul Black, then chair of the Department of Mechanical Engineering, Dr. Robert Williams, along with Drs. Donald Scheck, Charles Overby, Edward Gamble, and John Fink, founded the Department of Industrial and Systems Engineering (ISE). At the same time, the B.S. degree was renamed industrial and systems engineering, and a master’s degree program in industrial and systems engineering was created. Dr. Williams became the first chair. In 1991, the State of Ohio approved the doctoral program in integrated engineering, a shared program among the Departments of Civil, Mechanical, and Industrial and Systems Engineering.

In 1998, ISE developed a live two-way video delivery version of its master’s program to specialize in engineering management. The courses comprising the program were broadcast to Ohio University branch campuses and several community colleges within Ohio. This was the department’s first attempt to serve a growing need of delivering advanced degree education to mid-career engineers. In 2006, the department revamped the undergraduate degree to include professional concentrations to reflect the growing reach of industrial engineering in the economy. That same year, the Department of Civil Engineering was awarded a Ph.D. program. The integrated engineering Ph.D. was then renamed as the mechanical and systems engineering Ph.D. and is now shared between the Departments of Industrial and Systems and Mechanical Engineering.

Based on the success of video outreach program, the department proposed to the State of Ohio the creation of a fully asynchronous, online Master of Engineering Management (MEM) program, which was approved in 2010. The first MEM courses were offered in winter quarter of 2011, and the program now accounts for about half of the department’s total enrollment.
ENROLLMENT GROWTH

The chart below tracks the enrollment of the department since 1974. (Accurate data for the first six years is not available. A three-year running average is used to smooth the data.) There was a tremendous growth in the undergraduate program in the 1970-80s. Unfortunately, this was followed a significant dip in the undergraduate enrollment in the 1990s, from which the department didn’t recover until the beginning of the 21st century. On-campus graduate enrollment (M.S and Ph.D. degrees) has remained steady during those program lifetimes. (The Ph.D. enrollment includes students from all three departments sharing the program: civil, industrial and systems and mechanical engineering). In 2011, the online MEM program was launched, leading to explosive growth. Total ISE enrollment has hit new records every year since 2012.

RESEARCH

Research was always important to ISE faculty. Early research within the department included investigations into highways, industrial growth, and mining. In the 1980s, a major focus of the department’s
Research, led by Dr. Helmut Zwahlen, involved highway signage visibility and tracking the eye movement of drivers.

Funded research started to significantly grow in the late 1990s with the creation of the Center for Advanced Software Systems Integration (CASSI). Shortly after its creation, three new research contracts defined the department’s focus in the integration of software design tools and cost estimation for the next fifteen years: Apparel Research Network (Defense Logistics Agency), Integrating CAD, CAPP and MRP (National Science Foundation), and Federated Intelligent Product Environment (National Institute of Science and Technology). Since 2006, five new tenure track faculty members have been hired with diversely funded research activities in reliability, human factors and safety, logistics, and transportation. Because of that diversity, the department decided in 2010 to change the name of the center to the Center for Advanced Systems and Transportation Logistics Engineering. The chart below tracks the growth of funded research awards since early 1980s. (This also uses a three-year running average technique to smooth out the year-to-year swings.)
Industrial and systems engineering faculty and students have received many national and international accolades:

Dr. Dušan Šormaz was awarded the 2018 IIESE Lean Division Teaching Award. This award is given annually for the teacher who has demonstrated outstanding course content, leadership, and innovation in the classroom, along with student satisfaction, in the area of Lean.

Drs. Dušan Šormaz and Gursel Süer organized the 2018 Flexible Automation and Intelligent in Manufacturing (FAIM) conference. This annual international research conference in manufacturing was held in Columbus, Ohio, June 10-14, 2018.

In spring 2017, ISE seniors Shayne Gillian and Anna Frankart, under the direction of Dr. Dušan Šormaz, won first place in the national Simio Simulation competition for their portrayal of a pulp and paper manufacturing operation, from more than 190 entries.

In spring 2017, the OHIO IIESE student chapter hosted the 2017 IIESE regional conference, bringing together more than 300 ISE students from Ohio, Michigan, and Indiana for a weekend of information sharing and leadership training. They also hosted this conference in 2011 and 2002.

The IIESE Student chapter received the Gold recognition award for 2016-17, 2015-16, and 2014-15.

In 2012, a student team consisting of Warnaka Gunawardena, Ecstacy Adkins, Sumali Hewage, Praveen Gopollawa, and Eric May, under the direction of Dr. Diana Schwerha, won first place in a national ergonomics competition for their design of a pizza box folding apparatus.
Dr. Dale Masel won first place in the 2011 IISE Curriculum Innovation Award from the Council of Industrial Engineering Academic Department Heads for his work revitalizing the ISE curriculum to include professional concentrations that represent the broad scope of applications of ISE.

Drs. Gursel Süer and Dušan Šormaz organized the Group Technology/Cellular Manufacturing Symposium. This triennial symposium was held in Columbus, Ohio, in July 2003.

ISE students have received nationally competitive student scholarships:

a. Samantha Sanders – Electrification and Controls Manufacturers Association Association Honor Scholarship from the Material Handling Education Foundation (2018-19)

b. Camille Jones – UPS Scholarship for Female Students (2017-18, 2016-17, 2015-16)

c. Austin Rehmar – IISE Henry & Elisabeth Kroeze Scholarship (2017-18)

d. Landon Rehmar – IISE Harold & Inge Marcus Scholarship (2017-18)


f. Casey Davis – Storage Manufacturers Association Honor Scholarship from the Material Handling Education Foundation (2016-17)

g. Nicholas Loree – IISE John F Fargher Scholarship

h. Marie Hayden – ASSE Harry Taback 9/11 Memorial Scholarship (2017)


j. Benjamin Taylor – IISE Presidents Scholarship (2013-14)


l. Seth Hostetler – Storage Equipment Manufacturers Association Honor Scholarship from the Material Handling Education Foundation (2008-09)
ISE fulltime faculty since the founding of the department:

Felipe Aros-Vera, Ph.D. (2015-)
Dean Bruckner, Ph.D. (2013-)
Prashanta Chatterjee, Ph.D. (1986-1987)
Kenneth Cutright, Ph.D. (1986-1990)
John Fink, Ph.D. (1968-1974)
Edward Gamble, Ph.D. (1968-1977)
Saeed Ghanbarzehani, Ph.D. (2016-)
Trevor Hale, Ph.D. (2000-2007)
Robert Judd, Ph.D. (2005-)
Behrokh Khoshnevis, Ph.D. (1982-1985)
David Kounce, Ph.D. (1993-)
Kwan Lee, Ph.D. (1984-1985)
Dale Masel, Ph.D. (1998-)
Chuck Overby, Ph.D. (1968-1993)
Charles Parks, Ph.D. (1992-2009)
Ralph Rogers, Ph.D. (1986-1990)
Donald Scheck, Ph.D. (1968-1996)
Diana Schwerha, Ph.D. (2006-)
Ralph Sims, MBA (1987-2007)
Ralph Smith, M.S.M.E. (1973-1992)
Dušan Šormaz, Ph.D. (1995-)
Ronald Stemmler, Ph.D. (1973-1974)
Gursel Süer, Ph.D. (2001-)
Gary Weckman, Ph.D. (2002-)
Y Wei, Ph.D. (1970-1972)
Robert Williams, Ph.D. (1968-2004)
Tao Yuan, Ph.D. (2008-)
Helmut Zwahlen, Ph.D. (1973-2012)
DEPARTMENT CHAIRS

Robert Williams, Ph.D. (1968-1991) Professor and Chair
Ralph Smith, M.S.M.E. (1991-1992) Professor and Acting Chair
Charles Parks, Ph.D. (1992-2005) Professor and Chair
Robert Judd, Ph.D. (2005-2018) Russ Professor and Chair
Dale Masel, Ph.D. (2018-) Professor and Chair

THE GRADUATING CLASSES OF 2018

UNDERGRADUATE CLASS OF 2018

GRADUATE CLASS OF 2018