From setting an all-time record for the number of degrees awarded from our School with over 870 graduates, to breaking ground for Innovation Hall, to being granted site approval by the Indiana Commission for Higher Education to award the Ph.D. in mechanical engineering, 2018-2019 has been a remarkable year for the Purdue School of Engineering and Technology at IUPUI.

The School is well-positioned to assertively move forward to achieve higher levels of excellence and impact in key focus areas, with the goal of being regarded as one of the premier urban engineering and technology schools in the nation. We appreciate the interest of our stakeholders and your involvement in shaping the future of our School.

With the help of our alumni, industry partners, and friends, along with our faculty, staff and students, we will continue to successfully compete at the highest levels, achieve excellence in our core mission, and enhance our image and reputation.

We hope you enjoy reviewing some key accomplishments and trends summarized in the following pages of our inaugural annual report.

David J. Russomanno, Ph.D.
Dean
### History

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1940s</strong></td>
<td>Defense training courses taught by Purdue at Indianapolis</td>
</tr>
<tr>
<td><strong>1950s</strong></td>
<td>Diploma programs in technology</td>
</tr>
<tr>
<td><strong>1961</strong></td>
<td>Purdue Regional campus established at 38th Street in Indianapolis</td>
</tr>
<tr>
<td><strong>1969</strong></td>
<td>IU and Purdue merged Indianapolis operations to create IUPUI</td>
</tr>
<tr>
<td><strong>1972</strong></td>
<td>Purdue School of Engineering and Technology at IUPUI was founded</td>
</tr>
<tr>
<td><strong>1975</strong></td>
<td>Some technology programs moved to IUPUI’s main campus (ET building)</td>
</tr>
<tr>
<td><strong>1991</strong></td>
<td>Remainder of 38th Street programs moved to IUPUI campus (SL building)</td>
</tr>
<tr>
<td><strong>2008</strong></td>
<td>Music and Arts Technology joined the School of Engineering and Technology (IT building)</td>
</tr>
<tr>
<td><strong>2013</strong></td>
<td>Science and Engineering Laboratory Building (EL building)</td>
</tr>
<tr>
<td><strong>2018</strong></td>
<td>Innovation Hall, a Multidisciplinary Research and Classroom Building (to be completed by 2020)</td>
</tr>
</tbody>
</table>
Leadership Offices

David Russomanno, Dean
Office of the Dean

Karen Alfrey, Associate Dean of Undergraduate Academic Affairs and Programs
Office of Undergraduate Programs and Academic Affairs

Razi Nalim, Executive Associate Dean of Research
Office of Research

Paul Salama, Associate Dean of Graduate Programs
Office of Graduate Programs

Sherri Alexander, Assistant Dean of Finance and Administration
Office of the Dean

Marsha Baker, Assistant Dean of Recruitment, Retention, and Student Services
Office of Career and Student Services

Tami Tarpley, Assistant Dean of Development and External Relations
Office of the Dean

Jim Kippenbrock, Director, Computer Network Center
Computer Network Center

Faculty (full-time)

Professor (tenure/tenure-track)  21
Associate Professor (tenure/tenure-track)  31
Assistant Professor (tenure/tenure-track)  22
Clinical (all ranks)  11
Lecturer (all ranks)  33
Research (all ranks)  10
Visiting (all ranks)  10

Staff (full-time)

Professional (including Technicians)  40
Non-exempt (Clerical)  13
Engineering Departments

Biomedical Engineering  
Electrical and Computer Engineering  
Mechanical and Energy Engineering

Technology Departments

Computer Information and Graphics Technology  
Engineering Technology  
Music and Arts Technology  
Technology Leadership and Communication

Ed Berbari, Chair  
Biomedical Engineering

Brian King, Chair  
Electrical and Computer Engineering

Jie Chen, Chair  
Mechanical and Energy Engineering

Feng Li, Chair  
Computer Information and Graphic Technology

Robert Weissbach, Chair  
Engineering Technology

Debra Burns, Chair  
Music and Arts Technology

Charles Feldhaus, Chair  
Technology Leadership and Communication
BS Degrees

Engineering
- Biomedical Engineering
- Computer Engineering
- Electrical Engineering
- Energy Engineering
- Engineering—Interdisciplinary
- Mechanical Engineering
- Motorsports Engineering

Technology
- Computer Engineering Technology
- Computer Graphics Technology
- Computer and Information Technology
- Construction Management
- Electrical Engineering Technology
- Healthcare Engineering
- Technology Management
- Interior Design Technology
- Mechanical Engineering Technology
- Music Technology
- Music Therapy
- Organizational Leadership
- Technical Communication

MS Degrees

Master of Science Degree Programs (Engineering)
- Biomedical Engineering
- Electrical and Computer Engineering
- Mechanical Engineering

Master of Science Degree Programs (Music and Arts Technology)
- Music Technology
- Music Therapy

Master of Science Degree Program (with Technology focus areas)
- Applied Data Management and Analytics
- Information Security and Assurance
- Facilities Management
- Motorsports
- Organizational Leadership
- Technical Communication

PhD Degrees

Biomedical Engineering (joint with West Lafayette)
- Electrical and Computer Engineering
- Mechanical Engineering
- Music Technology
STUDENT HEADCOUNT

**E&T Student Headcount**

- 3,400 (F18)
- 3,300 (F17)
- 3,200 (F16)
- 3,100 (F15)
- 3,000 (F14)

**E&T Non-Resident Student Headcount**

- 1,000 (F18)
- 900 (F17)
- 800 (F16)
- 700 (F15)
- 600 (F14)

**E&T Undergraduate Student Headcount**

- 4,000 (F18)
- 3,900 (F17)
- 3,800 (F16)
- 3,700 (F15)
- 3,600 (F14)

**E&T Graduate Student Headcount**

- 550 (F18)
- 500 (F17)
- 450 (F16)
- 400 (F15)
- 350 (F14)

**E&T PhD Student Headcount**

- 65 (F18)
- 55 (F17)
- 45 (F16)
- 35 (F15)
- 25 (F14)

**E&T International Student Headcount**

- 650 (F18)
- 600 (F17)
- 550 (F16)
- 500 (F15)
- 450 (F14)

**E&T Ethnicity Headcount**

- African-American
- Asian
- Hispanic/Latino(a)
- Two or more

**EDDP Student Headcount**

- 200 (F18)
- 190 (F17)
- 180 (F16)
- 170 (F15)
- 160 (F14)

Dual Degree Programs: Butler University, University of Indianapolis, Marian University
Annual Budget

Base budget, which excludes research, and other non-base revenue categories

<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>INCOME</td>
<td>$24,924,316</td>
<td>$26,558,216</td>
<td>$28,086,522</td>
<td>$29,406,874</td>
<td>$29,631,414</td>
</tr>
<tr>
<td>EXPENSES</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>COMPENSATION</td>
<td>$21,901,136</td>
<td>$22,003,840</td>
<td>$23,485,109</td>
<td>$24,578,100</td>
<td>$24,906,911</td>
</tr>
<tr>
<td>FINANCIAL AID</td>
<td>$683,000</td>
<td>$948,000</td>
<td>$1,058,000</td>
<td>$1,688,000</td>
<td>$1,338,000</td>
</tr>
<tr>
<td>SUPPLIES AND EXPENSE</td>
<td>$1,761,080</td>
<td>$3,017,276</td>
<td>$2,911,706</td>
<td>$2,488,824</td>
<td>$2,739,533</td>
</tr>
<tr>
<td>TRAVEL</td>
<td>$114,100</td>
<td>$114,100</td>
<td>$175,707</td>
<td>$195,950</td>
<td>$180,950</td>
</tr>
<tr>
<td>CAPITAL</td>
<td>$465,000</td>
<td>$465,000</td>
<td>$456,000</td>
<td>$456,000</td>
<td>$466,000</td>
</tr>
<tr>
<td>TOTAL EXPENSES</td>
<td>$24,924,316</td>
<td>$26,558,216</td>
<td>$28,086,522</td>
<td>$29,406,874</td>
<td>$29,631,414</td>
</tr>
</tbody>
</table>

Bicentennial Campaign Fundraising Status

The School of Engineering and Technology has raised 95% of the campaign goal at the 88% completion point at the close of the 2018 fiscal year.

*Progress toward revised campaign goal as of June 30, 2019.*
Research Centers, Institutes, and Initiatives

- Biomechanics and Biomaterials Research Center (BBRC)
- Collaborative Additive Manufacturing Research Initiative (CAMRI)
- CyberLab (CL)
- Initiative for Product Lifecycle Innovation (IPLI)
- Internet of Things Collaboratory (IoT)
- Integrated Nanosystems Development Institute (INDI)
- Lugar Center for Renewable Energy (LCRE)
- Donald Tavel Arts and Technology Research Center
- Transportation Active Safety Institute (TASI)

Research & External Funding

Expenditures
Awards

Research Sponsors

FY14-FY19

Commercial/For Profit
Federal - Other
Federal - NIH
Federal - NSF
Higher Education
Non-Profit
Other Governmental
State of Indiana

Disclosures and Patents

Patent Applications

E&T Active Startups
ABET
ABET, the recognized accreditor for college and university programs in applied science, computing, engineering, and engineering technology, is a federation of 33 professional and technical societies representing these fields. Among the most respected accreditation organizations in the U.S., ABET, has provided leadership and quality assurance in higher education for over 80 years.

Programs accredited by the Computing Accreditation Commission of ABET
Bachelor of Science Computer Graphics Technology
Bachelor of Science Computer and Information Technology

Programs accredited by the Engineering Accreditation Commission of ABET
Bachelor of Science in Biomedical Engineering
Bachelor of Science in Computer Engineering
Bachelor of Science in Electrical Engineering
Bachelor of Science in Energy Engineering
Bachelor of Science in Mechanical Engineering
Bachelor of Science in Motorsports Engineering

Programs accredited by the Engineering Technology Accreditation Commission of ABET
Bachelor of Science Computer Engineering Technology
Bachelor of Science Electrical Engineering Technology
Bachelor of Science Healthcare Engineering Technology Management
Bachelor of Science Mechanical Engineering Technology

Facilities Management Accreditation Commission (FMAC)
Programs accredited by the Facilities Management Accreditation Commission (FMAC)
MS in Technology - Facilities Management Emphasis

American Council for Construction Education
Programs accredited by the American Council for Construction Education
Bachelor of Science in Construction Management

American Music Therapy Association
Programs Approved by the American Music Therapy Association
Bachelor of Science in Music Therapy
Master of Science in Music Therapy

American Music Therapy Association
Programs Accredited by the American Association of Schools of Music
Department of Music and Arts Technology
Bachelor of Science in Music Technology
Bachelor of Science in Music Therapy
Master of Science in Music Technology
Master of Science in Music Therapy
Doctor of Philosophy in Music Technology

Council for Interior Design Accreditation
Programs Accredited by the Council for Interior Design Accreditation
Bachelor of Science in Interior Design Technology
2018 Best Engineering Undergraduate Schools
(among those whose highest degree is the doctorate)

- Tied at #99 with some state land-grant flagships: U. Missouri-Columbia and LSU
- Ahead of 7 out of 12 IUPUI campus peers with Schools/Colleges of Engineering

2019 Best Engineering Graduate Schools
(among those offering the doctorate)

- Tied at #97 with BYU, SMU, U. Miami, Oklahoma, Kentucky, S. Carolina, Tulane
- Only 3 schools with smaller engineering graduate enrollment than IUPUI were ranked higher than IUPUI in 2019 ranking (Yale-#39, Darmouth-#52, and Iowa-#69)
The Purdue School of Engineering and Technology at IUPUI has worked closely with the Office of Community Engagement in facilitating community-based projects to enhance the organizational framework of the IUPUI Campus. The School worked with 40+ organizations on 50+ projects. Focus areas include:

- A&R Erectors
- Allison Transmission
- Arts Council of Indianapolis
- Belcan
- Cerebral Palsy Foundation
- CertaPro Painters
- Citizens Energy Group
- Cummins
- DOLE Food Company
- Electro-Spec
- Energy Improvement Matters
- Girl Scouts of Central Indiana
- Girls Rock! Indianapolis
- Governor’s Office
- Habitat for Humanity
- Heritage Place of Indianapolis
- HOT BOX Pizza
- Indianapolis Motor Speedway
- Indianapolis Opera
- Indianapolis Power & Light
- Indianapolis Public Schools
- Indy Convergence
- Indy Learning Centers
- Jameson Camp
- Jeco Plastic Products
- Local Artists
- Milestone Contractors
- MISO
- NASA
- National Institute of Aerospace
- Newfields
- NSWC Crane
- PHD Inc.
- Raytheon
- Roche Diagnostics
- Rolls-Royce
- SAE
- Scientech
- Skilled Knowledgeable Youth
- Society of Women Engineers
- Spinball Sports
- St. Christopher Catholic Church
- The Inst. for Affordable Transp.
- U.S. Department of Energy
- United Technologies Carrier
- Wayne Township Schools
2018 First Destination Survey Results

Graduating undergraduate students* were asked to complete an online survey regarding their post-graduate plans. Information was collected through December 2018 from Bachelor Degree graduates, a 71.2% knowledge rate.

### Average Starting Salary by Major* (BS Degree)

* major only included if response rate was > 15%

<table>
<thead>
<tr>
<th>Engineering</th>
<th>Graduates 17-18</th>
<th>2018 Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biomedical Engineering</td>
<td>29</td>
<td>$56,500</td>
</tr>
<tr>
<td>Computer Engineering</td>
<td>31</td>
<td>$69,570</td>
</tr>
<tr>
<td>Electrical Engineering</td>
<td>43</td>
<td>$75,571</td>
</tr>
<tr>
<td>Energy Engineering</td>
<td>12</td>
<td>$63,800</td>
</tr>
<tr>
<td>Mechanical Engineering</td>
<td>172</td>
<td>$62,216</td>
</tr>
<tr>
<td>Motorsports Engineering</td>
<td>28</td>
<td>$53,638</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Technology</th>
<th>Graduates 17-18</th>
<th>2018 Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction Management</td>
<td>33</td>
<td>$56,306</td>
</tr>
<tr>
<td>Computer Graphics Technology</td>
<td>25</td>
<td>$47,922</td>
</tr>
<tr>
<td>Computer and Information Technology</td>
<td>93</td>
<td>$54,195</td>
</tr>
<tr>
<td>Electrical Engineering Technology</td>
<td>18</td>
<td>$58,036</td>
</tr>
<tr>
<td>Interior Design Technology</td>
<td>13</td>
<td>$44,000</td>
</tr>
<tr>
<td>Mechanical Engineering Technology</td>
<td>53</td>
<td>$58,575</td>
</tr>
<tr>
<td>Music Technology</td>
<td>6</td>
<td>$28,333</td>
</tr>
<tr>
<td>Organizational Leadership</td>
<td>48</td>
<td>$54,055</td>
</tr>
<tr>
<td>Technical Communication</td>
<td>5</td>
<td>$50,000</td>
</tr>
</tbody>
</table>

STRATEGIC ACTION HIGHLIGHTS

Highlights in support of the six strategic areas from the School of Engineering and Technology’s strategic plan

1.0 Undergraduate Programs
- Received over $1.7M from the NSF for a project titled: “Urban S-STEM Collaboratory.” The project aims to generate new knowledge for STEM educators by investigating a variety of mechanisms for supporting a diverse set of undergraduate engineering and mathematics students in an urban context to advance their development of a STEM identity – the lack of which is a fundamental reason that students often select out of STEM majors and careers.
- Hosted two NSF Research for Undergraduates (REU) sites in i) nanomaterials for energy and biological applications and ii) mobile cloud and data security. The sites hosted outstanding students from IUPUI and around the nation.
- Expanded 4+1 accelerated B.S./M.S. programs to allow well-qualified students to earn the B.S. and M.S. degrees in 5 years.
- Created a specialized certificate in IP and patent law embedded in engineering design courses. Some students of the program have subsequently taken and passed the patent bar after completing the certificate program.
- Invited to the White House. A diverse student team associated with the local chapter of Students for the Exploration and Development of Space constructed a diorama of a U.S. lunar base and presented it to Vice President Mike Pence in the West Wing.

2.0 Research, Creative Activities, and Graduate Programs
- Awarded over 200 graduate degrees from the School of Engineering and Technology, setting an all-time record.
- Gained approval by the Indiana Commission for Higher Education to grant the Ph.D. in mechanical engineering (Purdue diploma) at IUPUI.
- Continued implementation of a customized master’s degree program in electrical and computer engineering focused on electronic warfare for the Naval Surface Warfare Center Crane (NSWC Crane) in collaboration with the Naval Post Graduate School.
- Received a grant for $1.5M from NIH-National Cancer Institute for research related to pancreatic cancer. The research strives for a deeper understanding of tumor-tissue interactions using hydrogels with precisely engineered properties.
- Received a grant for over $600K from NIH-National Institute of Arthritis and Musculoskeletal and Skin for research targeting collagen as an interventional approach to improve bone material properties.
- Received a grant for over $1M from the U.S. Department of Energy (DoE) to develop mesoporous carbon-based catalyst cathodes, free of platinum-group metals, which will help overcome a major challenge in advancing polymer-electrolyte-membrane fuel cell technology.
3.0 Community Engagement

- Received the Center of Excellence Award from DoE for the most outstanding Industrial Assessment Center in the nation among 31 DoE funded centers. Energy audits conducted by School of Engineering and Technology faculty and staff have resulted in more than $19M in recommended savings for small- and mid-sized companies throughout the region.

- Hosted an NSF-sponsored Innovative Technology Experiences for K-12 Students and Teachers project, providing a 2-week summer camp for several students and 14 teachers. The program was designed to increase STEM interest and learning materials with stipend support for underserved populations.

- Broke an attendance record with the topic: “Electric America: Will the Grid Evolve or Be Replaced?” at the Lugar Center for Renewable Energy Spring Forum. Eighteen speakers from across the U.S. addressed blockchains, energy storage, electric vehicles, and other grid issues.

- Paired with several other units on the IUPUI campus to partner with the Boner Center of Indianapolis on the redevelopment of a near east-side neighborhood. Both residential and commercial design solutions provided by students contributed to the enhancement of this community.

4.0 Internationalization

- Set an all-time record in the fall semester 2018 with over 600 international students pursuing programs in the School of Engineering and Technology.

- Finalized an agreement for diploma holders from the Universiti Teknikal Malaysia Melaka to matriculate to IUPUI and complete baccalaureate degrees in engineering technology programs.

- Designed a system to improve the lifespan of lead-acid batteries for remote areas of Haiti. Students working with a local entrepreneur were credited for the design.

- Continued GO GREEN Germany, GO GREEN France, Interior Design in Italy, Computer Graphics Technology in Poland, and Global IT in China and India study abroad courses and experiences.

- Completed a revision to the International Leadership Certificate offered by the School of Engineering and Technology. In collaboration with the Office of International Affairs, Organizational Leadership faculty advanced the international pathway curriculum.

5.0 Diversity, Equity, and Inclusion

- Selected as an “exemplar” recipient of a Bronze Award in the inaugural year of the American Society for Engineering Education’s Diversity Recognition Program. Of 74 Schools/Colleges of Engineering in the nation who received a Bronze Award, the School of Engineering and Technology was among only 28 College/Schools to be awarded the highest recognition offered in the program’s first year.

- Supported the IUPUI campus in the NSF proposal titled: “Project EPIC at IUPUI: Evidence-Informed Promotion of Inclusive Climate,” which was subsequently selected by NSF for an award of approximately $1M.

- Recognized by the Society of Hispanic and Professional Engineers for a faculty member being selected as the Educator of the Year.

- Continued to lead and/or support several IUPUI Welcoming Campus Initiative projects.

6.0 Best Practices

- Utilized best practices in human resources to establish effective hiring procedures and practices and established HR staff within the School to support the full lifecycle of employment.

- Increased opportunities for professional development for faculty at all ranks and at all stages of their careers.

- Supported numerous professional development opportunities for staff in various areas, such as development and external relations, and the women’s leadership conference.

- Continued a Mentoring Academy project in partnership with Academic Affairs focused on establishing and sustaining excellence in teaching and the scholarship of teaching and learning.