

Engineering at Illinois – Corporate Partnerships

Engineering at Illinois delivers successful partnerships that impact businesses. Illinois has a strong track record of **technology innovation** and **commercialization**. We also lead the nation in funding from the National Science Foundation and are conducting a critical mass of research in many important areas including: **Big Data/Data Analytics/Computing, Biomedical/Bioengineering,** and **Energy Technologies**. Our industry partners are playing a key role in each of these areas, and many more.

Future Leaders Start Here

The **leaders** of some of the world's **top companies got their start at Illinois**; companies like PayPal, YouTube, and BP. Our students' excellence stays with them long after graduation. Our **entrepreneurial nature** combined with **multidisciplinary focus** and a **drive for results** builds a **culture of leadership**.

Great Startups from the University of Illinois

When you combine **hundreds of world-renowned faculty** and **thousands** of the best and **brightest students** you get an **explosion of innovation** across a vast array of technologies. The result is a **top-ranked incubator** and a **200-acre Research Park**.

- » More than **150 startups** to date
- » Raised more than **\$550 million in venture capital** and angel funding
- » Several large-scale successes, including **ByteMobile's purchase by Citrix for \$425 million**
- » 2011 **Outstanding Research Park Recognition**
- » 2013 **Top 3 College Town Incubator** - *Inc. Magazine*

Corporate Partners on the Move

- » More than **160 corporate partners** to date
- » Training more than **400 interns per year** in the Research Park alone and fueling new pipeline talent
- » **A 200-acre Research Park** adjacent to campus with more than **90 companies** and **13 buildings** and growing
- » More than **2,000 research projects** per year across every engineering discipline

A Sampling of Current Illinois Corporate Partners

- | | |
|----------------|---------------|
| » Abbott | » John Deere |
| » AB InBev | » Microsoft |
| » ADM | » Neustar |
| » Boeing | » Pepsi |
| » BP | » Raytheon |
| » BNSF Railway | » Rolls-Royce |
| » Caterpillar | » Samsung |
| » Citrix | » Sony |
| » Dow Chemical | » State Farm |
| » Intel | » Yahoo |

Illinois Talent Built these Top Companies

- » Bloom Energy
- » BP
- » Flex-n-Gate
- » PayPal
- » Yelp
- » YouTube



Engineering at Illinois – Excellence in Innovation

Results Driven

- » One of the **Top 5 engineering** programs worldwide
- » More than **\$40M of corporate-sponsored research** per year
- » More than **2000 research projects** per year resulting in **\$229 million in research expenditures**

Entrepreneurial Culture

- » More than **30 companies founded** by faculty and students
- » **Top 10 in the country** for venture capital investments per capita
- » Fellows of the **National Academy of Inventors** and winners of the **American Ingenuity Award**
- » More than **90 companies and growing** in our adjacent 200 acre top-ranked Research Park
- » EnterpriseWorks incubator with more than **150 starts-ups to date**

Breadth of Expertise

- » **Nine of our engineering specialties** rank in the **Top 5 by U.S. News & World Report**.
- » More than **400 faculty**—many with joint appointments—across our **12 departments**
- » World-renowned faculty recognized with **five Nobel Prizes** and a **MacArthur Genius Award**
- » Faculty members elected to the **National Academy of Engineering** and **National Academy of Sciences**

Students Prepared to Succeed

- » **More than 10,000** of the brightest innovative students (2,200 degrees awarded per year)
- » Rated in the **Top 5 most-prepared to succeed** students by the *Wall Street Journal*
- » An average **ACT score above 32** for incoming freshmen

More than **\$75 million in multidisciplinary research** expenditures including **translational research** in:

- » Advanced Materials and Manufacturing
- » Biomedical/Bioengineering
- » Big Data/Data Analytics
- » Energy Technologies

60+ laboratories, research centers, and institutes including:

- » Advanced Digital Sciences Center (Singapore)
- » Illinois Applied Research Institute

Multidisciplinary research centers with significant industry engagement:

- » Advanced Transportation and Research Engineering Laboratory (ATREL)
- » Air Conditioning & Refrigeration Center (ACRC)
- » Beckman Institute for Advanced Science and Technology
- » Coordinated Science Laboratory (CSL)
- » Information Trust Institute (ITI)
- » Institute for Genomic Biology (IGB)
- » Seitz Materials Research Laboratory (MRL)
- » Micro and Nanotechnology Laboratory (MNTL)
- » National Center for Supercomputing Applications (NCSA)

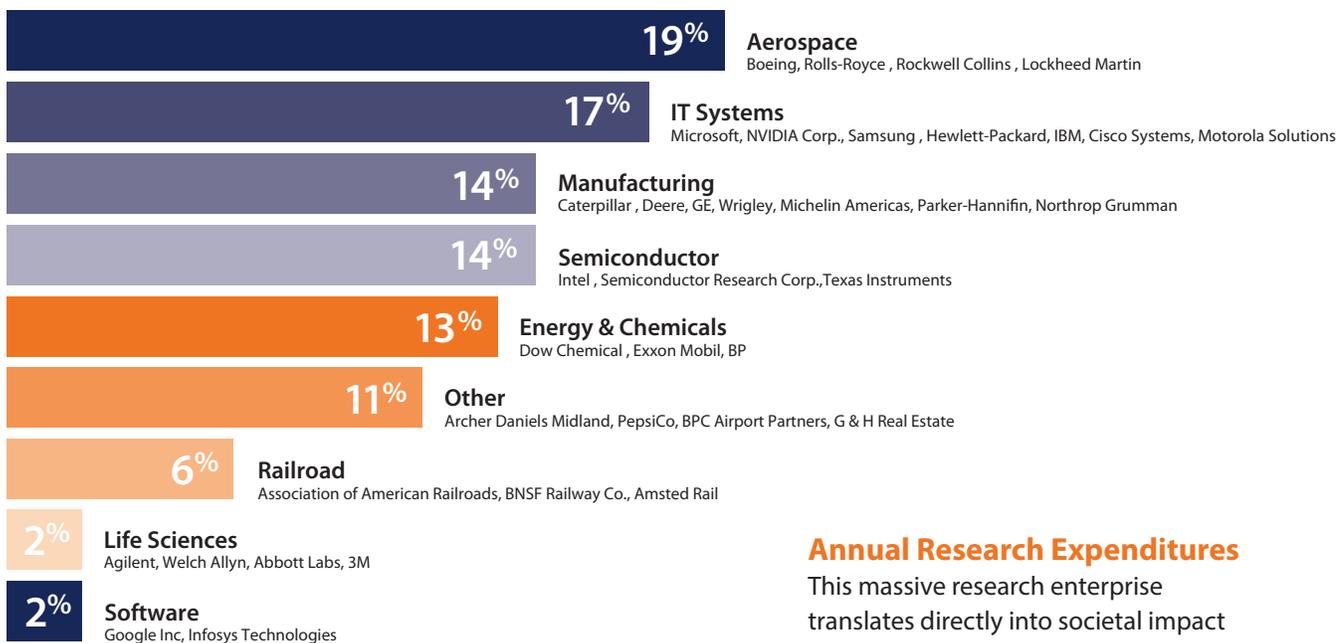
The Innovations we Create Together will Impact Your Business!



Engineering at Illinois – Multidisciplinary Research

- » Ranked one of the **Top 5 Engineering Programs** in the country and worldwide.
- » **\$229 million in research** expenditures, **\$40 million in corporate research** each year.
- » **650 researchers** involved with more than **2,000 research projects** focusing on new energy solutions, complete water systems, advanced manufacturing and materials, bioengineering, data analytics, and many more.
- » **Over 400 faculty** including faculty members elected to the **National Academy of Engineering** and **National Academy of Sciences**.

Corporate Investments



Annual Research Expenditures

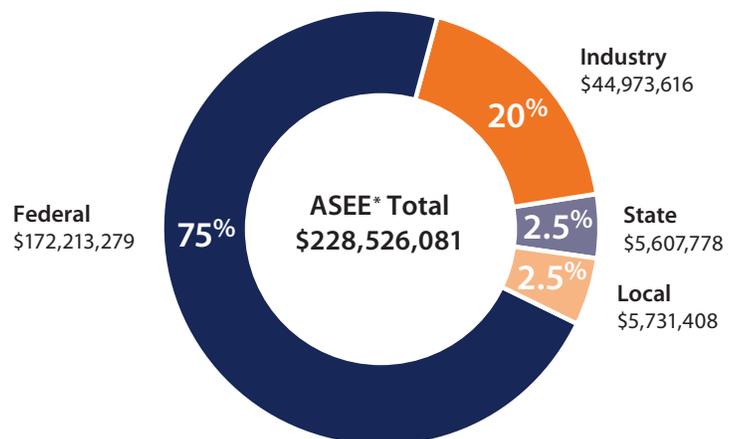
This massive research enterprise translates directly into societal impact **Solutions to the Big Issues.**

Visioning Future Excellence Initiative

The Visioning Future Excellence initiative here at Illinois speaks to our **commitment to drive change for some of the world's most pressing issues.** In Engineering, we play a major role in creating and implementing this change.

Interdisciplinary Themes

- » Information and Technology
- » Health and Wellness
- » Energy and Environment
- » Education



*American Society for Engineering Education



Research Institutes

Faculty and students are just two of the core elements of the College of Engineering. The facilities at the University of Illinois are an integral part of the groundbreaking work on campus. Multidisciplinary research is fostered through **research spaces designed specifically for collaboration**. These **state-of-the-art facilities** allow faculty the arena for creating ambitious research initiatives that impact on a global level.

Multidisciplinary Centers

- » Advanced Transportation and Research Engineering Laboratory (ATREL)
- » Air Conditioning & Refrigeration Center (ACRC)
- » Beckman Institute for Advanced Science and Technology
- » Coordinated Science Laboratory (CSL)
- » Information Trust Institute (ITI)
- » Institute for Genomic Biology (IGB)
- » Materials Research Laboratory (MRL)
- » Micro and Nanotechnology Laboratory (MNTL)
- » National Center for Supercomputing Applications (NCSA)

Illinois Applied Research Institute (ARI)

The **Illinois Applied Research Institute** is a team of problem solvers and innovators committed to **accelerating research and product development and deployment**. ARI is a quasi-independent business unit able to negotiate quickly and meet unique project demands. ARI is at the hub of research knowledge in the Champaign-Urbana area, located in the University of Illinois Research Park.

ARI's Research Specialties

- » Advanced metals
- » Applied materials science
- » Big data
- » Bioscience and agriculture
- » Computational electromagnetics
- » Cybersecurity
- » Energetic materials
- » Extreme ultraviolet lithography
- » Micro/Nano technology
- » Modeling and simulation
- » Prototype development
- » Renewable energy

Strategic Research Initiatives

Through multidisciplinary partnerships, companies benefit from the promising innovations explored at the University of Illinois. To expand research and **support collaboration in new and emerging areas**, the College of Engineering recently introduced its **Strategic Research Initiatives program**. SRI supports exploratory research in evolving fields and enhances existing capabilities for new interdisciplinary focus areas or centers. Funding for the SRI programs comes primarily from the College of Engineering.

Current Projects

- » A Theory of Cognitive and Algorithmic Decision Making
- » Atomic-Scale Design of Oxide Heterojunctions for Energy Conversion
- » Beyond Speech towards an Interdisciplinary Study of Sound
- » **Digital/Cyber Security** and Nuclear Security
- » Interfaces at the Ultimate Limit
- » Interrogation of Special Nuclear Material Using the Illinois Pulsed Neutron Facility
- » **Nanomanufacturing** Paradigm Shift from 2D to 3D Rolled-up Electronic and Photonic Devices and Sub-Systems
- » Optimizing **DNA Storage** Efficiency via Joint Constrained and Error-Control Coding
- » **Powering Big Data: A Systems Approach** to Future Computing Platforms
- » Wide-Bandgap (WBG) **Power Electronics**

Discover Student Engagement

We are committed to fostering relationships between students and organizations through education and research. In addition to traditional ways of engaging graduate students, companies will **discover new ways of engaging the undergraduate population**. Let us help you find the right connection for your interests.

- » Senior Design/Capstone Projects
- » Student Competitions/Challenges
- » Student Consulting
- » Student Internships/Externships
- » Student Research Experiences