

**The College of Engineering
and Applied Sciences**

INVENTING THE FUTURE OF ENGINEERING



Stony Brook University
*College of Engineering
and Applied Sciences*

By the Numbers

TOP 30%

2020 *U.S. News & World Report* ranking of engineering graduate schools

TOP 20% OF PHD PROGRAMS IN ACADEMIC ANALYTICS

- Applied Mathematics and Statistics
- Biomedical Engineering
- Computer Science

ENROLLMENT 2019-2020

Undergraduate: **3,916** (87% growth over 10 years)
Graduate: **1,589** (51% growth over 10 years)

FRESHMAN CLASS PROFILE 2019-2020

Average High School GPA: **95.8**
Average SAT Score, Math and EBRW*: **1,434**
Average Score of SAT/ACT Converted: **1,442**

**Evidence-Based Reading & Writing*

FACULTY AND STAFF

Professors: **75**
Associate Professors: **42**
Assistant Professors: **46**
Lecturers and Instructors: **63**
Staff: **96**

FACULTY DISTINCTIONS

- **2** National Medal Laureates
- **6** National Academy Members
- **1** National Inventors Hall of Fame Member
- **2** Presidential Early Career Awards for Scientists and Engineers (PECASE)
- **45** NSF Faculty Early CAREER Awards
- **44** Fellows of Prestigious Professional Societies

Research and Economic Development

More than \$41 million in annual research expenditures (41% increase since 2015)
A major contributor to Stony Brook University's \$7.23 billion annual total economic impact

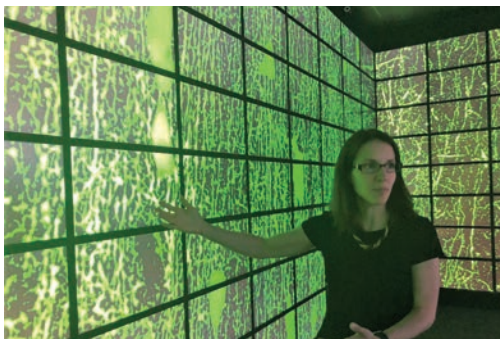
More than 20 centers and institutes, including:

- Institute for AI-Driven Discovery and Innovation
- Institute for Engineering-Driven Medicine
- Center for Clean Water Technology
- Advanced Energy and Research Technology Center
- Center of Excellence in Wireless and Information Technology

Cross-cutting research initiatives in:

- Energy Systems for Sustainability
- Smart and Resilient Cities and Ecosystems
- Engineering-Driven Medicine
- Securing Cyber-Everything
- Engineering Education for Technology-Driven Society
- AI-Driven Discovery and Innovation

Big Questions, Bold Solutions



TACKLING ALZHEIMER'S WITH AI

Christine DeLorenzo, in the Department of Biomedical Engineering, is using AI and imaging to develop treatments that can potentially arrest and reverse memory loss in Alzheimer's sufferers.



NANO-MATERIAL ENGINEERING

Karen Chen-Wiegart, in the Department of Materials Science and Chemical Engineering with a joint appointment at Brookhaven National Lab, is investigating solid-state interfacial dealloying (SSID), enabling the design of materials with advanced functions in sensing, energy storage and more.



INVENTING BIOFUELS

Sotirios Mamalis, in the Department of Mechanical Engineering, is developing a new biofuel derived of loblolly pine to displace petroleum-based fuel and reduce greenhouse gas emissions from transportation and power generation.



LIFE-SAVING BATTERIES

Esther Takeuchi, in the Department of Materials Science and Chemical Engineering, received the 2018 European Inventor Award for her compact batteries that power implantable cardiac defibrillators (ICDs), greatly reducing the incidence of heart attack by delivering life-saving shocks.



COMPUTATIONAL DRUG DISCOVERY

Dima Kozakov, in the Department of Applied Mathematics and Statistics, is developing protein mapping algorithms and alternative computational biology procedures to advance drug discovery and innovation.

Beyond the Classroom

DEPARTMENTS

Applied Mathematics and Statistics

Biomedical Engineering

Biomedical Informatics

Civil Engineering

Computer Science

Electrical and Computer Engineering

Materials Science and Chemical Engineering

Mechanical Engineering

Technology and Society



WOMEN IN SCIENCE AND ENGINEERING (WISE) HONORS

The WISE Honors program is dedicated to increasing the number of women in science, math and engineering fields with a strong focus on mentoring. Nearly 200 high school and middle school students participate in outreach programs and workshops run by WISE Honors students each year.



STEM TEACHING LAB SERVES THE COMMUNITY

The new North Atlantic Industries Engineering Teaching Lab is a flexible classroom that supports both lecture and laboratory activities and offers enhanced facilities and learning for high school and middle school students from communities that lack resources for STEM education.



DESIGN, BUILD, CREATE AND CODE!

Our 24-hour hackathon organized by students with support from alumni and industry partners, SBUHacks brings a new energy and a stronger hackathon culture to campus from machine learning hacks to security hacks to game hacks.

Faculty Highlights 2018-2019

HONORS AND AWARDS

Army Research Office Young Investigator Program Award

Kedar Kirane, Mechanical Engineering

DARPA Young Faculty Award

Michalis Polychronakis, Computer Science

European Inventor Award

Esther Takeuchi, Materials Science
and Chemical Engineering

National Academy of Inventors Fellows

Arie Kaufman, Computer Science

Clinton Rubin, Biomedical Engineering

Amazon Research Award

Nick Nikiforakis, Computer Science

Google Faculty Research Award

Xiaojun Bi, Computer Science

SUNY Chancellor's Award for Excellence

Michael Dudley, Materials Science and
Chemical Engineering

Paul Fodor, Computer Science

Robert Rizzo, Applied Mathematics and Statistics

Dimitris Samaras, Computer Science

Stony Brook University

Stony Brook is one of
America's **most dynamic
public universities**
and an **internationally
recognized research
institution**. Home to more
than **26,800 students**,
the University offers more
than **200 undergraduate
programs** and **140
graduate programs**. It's
ranked among the **top 100
universities in the nation**
and the **top 40 public
universities** by *U.S. News
& World Report*.

Go further, faster.



Stony Brook University

FAR BEYOND

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Stony Brook University/SUNY is an affirmative action, equal opportunity educator and employer.