College of Sciences’ John McDonald and team use targeted delivery of nanoparticles containing RNA to shrink ovarian tumors in mice.
2017 FRESHMAN HIGHLIGHTS

31,504
FRESHMAN APPLICATIONS
(record number)

23%
ADMIT RATE
(record selectivity)

43%
FEMALES IN FRESHMAN CLASS

20%
BLACK, HISPANIC, OR MULTIRACIAL
ENGAGING GT INTERNATIONAL AND U.S. STUDENTS IN SUSTAINABILITY AND COMMUNITY BUILDING

OIE and Serve-Learn-Sustain program to Defuniak Springs, Florida, during spring break

40 domestic and international students worked together to build artificial shoreline for environmental protection

Group connected with the local GT Alumni chapter
General James C. McConville, who earned his MS degree from the Daniel Guggenheim School of Aerospace Engineering, was named the 36th Vice Chief of Staff of the U.S. Army this past June. McConville joins another AE alumnus, retired admiral James A. "Sandy" Winnefeld Jr., in attaining four-star general status.
CREATING THE NEXT IN ROBOTICS

Researchers from five Georgia Tech colleges and the Georgia Tech Research Institute are collaborating to create the next in robotics.

Machines that will change the monotony of agriculture, medical robotic devices that aid in surgery and breast cancer diagnosis, and collaborative robotics are just some of the projects being pursued by ME, ECE, and BME researchers.
AE graduate student Adam Cox served as a technical consultant on the Oscar-nominated film “Hidden Figures.” He was the guy behind those cool equations.
GTMI is expanding its successful partnership with the Technical College System of Georgia by increasing opportunities for tech school students to come to GT to learn about advanced manufacturing technologies.

GTMI’s Manufacturing Scholars program is another effort in which we pair undergraduate students with industry partners to work on specific research programs.
HEALTH & WELL-BEING 2017
PRESIDENT’S CAMPUS WALK

CAMPUS RECREATION CENTER

Georgia Tech supports a healthy lifestyle!
Thank you President Peterson.

CREATING THE NEXT®
6

Start Ups
licensed intellectual property created by researchers at Georgia Tech.

FraudScope, Inc.
MoQuality, Inc.
PanXome, LLC
Sanguina, LLC
Sila Nanotechnologies
Varentec, Inc.
AE PROFESSOR MARK COSTELLO TAKES ASSIGNMENT FROM DARPA

Longtime AE professor Mark F. Costello was scooped up by the Defense Advanced Research Projects Agency (DARPA) to serve a two-year term as a program manager in Washington, D.C.
TWO REGISTERED DIETITIANS WITHIN HEALTH INITIATIVES AND STAMPS

HEALTH SERVICES

Saw 569 students between August – May!

Verified on 19 of the 23 Partnership for a Healthier America guidelines and will complete all 23 this November!
A middle linebacker for the Yellow Jackets in the early ’80s, Todd Stansbury returned as the Institute’s ninth athletic director last September. His athletics administration career began on The Flats in academics, and he most recently served as athletic director at Central Florida and Oregon State.
LEADING WOMEN@TECH

- Launched Leading Women@Tech to engage women leaders at the Institute in spring 2016.
- Increased program participation by more than 60 percent from inaugural year.
- 100 percent of first cohort thought program was relevant, informative, and engaging.
- Received CASE Circle of Excellence Award in 2017.

Learn more at diversity.gatech.edu/leadingwomenattech.
A class of undergraduates traveled to Bolivia during spring break to collect water-quality data.

Class is part of the
Global Engineering Leadership Minor

ce.gatech.edu/leadership

“This trip really made me aware of the social issues that might come up as we implement technical solutions.”

– Riley Poynter
DRAMATIC VICTORY IN ATHENS
The Georgia Tech Agile Communication Architectures team was chosen to compete in the DARPA Spectrum Collaboration Challenge to increase access to Wi-Fi for both military and civilian wireless devices.

Borne out of the Center for Machine Learning, the team includes ISyE Professor Sebastian Pokutta, ECE Professor Matthieu Bloch, and graduate students from both schools.
This summer, 300 pre-qualified prospective MBA students came to Tech as a part of Management Leadership for Tomorrow’s pre-MBA prep seminar designed for African-Americans, Latinos, and Native Americans.
Research by College of Sciences’ Rodney Weber, Thanos Nenes, and Yuzhong Zhang shows that the impact on the atmosphere and climate of smoke from wildfires is greater than previously thought.
CONCESSIONS & ATHLETICS

CONTRIBUTING TO LOCAL COMMUNITIES

Partnered with more than 22 nonprofit organizations for game-day operations.

Resulted in more than $50,000 donated to local causes.
Student researchers worked with Professor David Anderson to record and analyze the voices of singers from the Metz Opera.
Michael Edwards, senior director, Campus Recreation

- Received Honorable Mention in the 2016 Chancellor’s Customer Excellence Award for Leadership
The “Inform Georgia Tech” series was created in 2016 to assist employees by providing information on relevant, timely topics of interest. The quarterly series focuses on areas or departments where staff members have voiced questions, or ones which aim to solicit staff feedback.
ECE & BME researchers have learned how to keep what helps in medical treatment, while blocking what harms, in a therapy to fight serious chronic inflammatory diseases. They have developed an implanted device that electrically stimulates the vagus nerve and inhibits unwanted nerve activity in a targeted manner.
LBAT CELEBRATES 25 YEARS

The Ivan Allen College School of Modern Languages celebrated 25 years of the LBAT (Languages for Business and Technology) study-abroad programs.

Last year 159 students from across all six colleges studied on LBAT programs in 11 countries around the globe.
CEISMC has received a 3-year $2.5M NSF grant to transform Georgia’s information technology curriculum in K-12 schools. The College of Sciences unit will develop and implement a program called CAPACiTY, for Culturally Authentic Practice to Advance Computational Thinking in Youth.
Georgia Tech alumnus (CE 1977) General Philip Breedlove joined the Ivan Allen College Sam Nunn School of International Affairs as a distinguished professor.

He recently retired as NATO Supreme Allied Commander-Europe and as U.S. European Command Commander.
Fourteen departments participated in this pilot. Four received grants co-sponsored by Health & Well-Being and the Staff Council Well-being Committee.
THE AE SCHOOL IS RANKED NO. 2 IN THE NATION

In rankings released this past year by *U.S. News & World Report*, the Daniel Guggenheim School of Aerospace Engineering was named No. 2 in the nation for both undergraduate and graduate programs. This is the highest ranking the school has ever earned in both programs simultaneously.
Professor Eric Schatzberg joined the School of History and Sociology as chair.

He is the former director of the Robert F. and Jean E. Holtz Center for Science and Technology Studies at the University of Wisconsin, Madison.
The Honors Program celebrated its 10th anniversary this year and had more than 280 students enrolled. Next year, the LLC will expand to 320 students. Grand Challenges, now in its sixth year, has had 550 students go through the program as freshman, with 110 more joining in the fall.
VOICE is Georgia Tech’s sexual and relationship violence prevention and response initiative based in the Office of Health Initiatives.
LMC Professors Janet Murray and Ian Bogost were elected to the inaugural cohort of Higher Education Video Game Alliance (HEVGA) Fellows.
New research from Ivan Allen College economist Shatakshee Dhongde shows that a household’s economic condition should be described by more than just income. The study found that almost 15 percent of Americans are also deprived in areas such as health, education, standard of living, and housing quality.
FY2017: Impact at a Glance

274
Inventions Disclosed by Georgia Tech researchers

37
Licenses / Options completed for Georgia Tech innovations to outside partners

76
Patents Issued for Georgia Tech innovations in countries around the globe. 62 of these were issued in the U.S.
ATTACKING UNSOLVED PROBLEMS: TURBULENCE

College of Sciences’ Mike Schatz and Roman Grigoriev make strides in getting math around turbulence. Their progress could help sharpen weather forecasts.
Public Policy

45th Overall Best Graduate School in Public Affairs in Latest US News Rankings

#2 in IT Management
Imagine it’s the first day of class at Georgia Tech in 2040 ...

Who are we serving? What are we teaching? Where are we teaching?
Professor Massimo Ruzzene received the 2016 Lloyd Hamilton Donnell Applied Mechanics Reviews Paper Award for his co-authorship of “Dynamics of Phononic Materials and Structures: Historical Origins, Recent Progress, and Future Outlook.”
Seventeen faculty members were chosen to participate in the first cohort of the Provost Teaching and Learning Fellows.

The fellows will meet during the next two years to discuss teaching and learning needs, mentorship, dissemination of teaching lessons, and techniques.
In 2017, the GTPD Social Media Center has been recognized as a forward-thinking, innovative community-outreach program by the international SMILE (Social Media in Law Enforcement) Conference as well as the Georgia Association of Chiefs of Police.

The Social Media Center employs 4-9 creative and talented GT students each semester, supervised by sworn officers.
From lethal exposure to danger from weakened structures, disasters at nuclear power plants present problems for search and rescue teams. Drs. Yong Cho (CEE) and Jun Ueda (ME), in collaboration with researchers from South Korea, are developing robots capable of rescuing people and containing dangerous nuclear material in situations where quick action is critical.
STUDY ABROAD AT GT

54% of undergraduate students have an international experience prior to graduation.

Georgia Tech undergrads study/intern abroad at rates higher than most universities (average is 10%).
Speeding up the time it takes research to go from the lab to the marketplace is what the AMPF and GTMI are all about. We want to spark a renaissance in U.S. manufacturing by bringing together GT’s best researchers, students, and industry partners to solve grand challenges.
GTPE delivers professional development programs to 26,000+ learners worldwide.

6,800 graduate and undergraduate students take online degree programs.

37% increase in total enrollment since FY16.

GTPE served 2,700+ companies with public and sponsored professional development programs.
The Additive Manufacturing for Bio-Engineering Research Laboratory, or Amber Lab, is open ready to CREATE THE NEXT
Students, faculty, and staff swarmed the Gold Dome to meet with alumni lawmakers and other elected officials, including Governor Nathan Deal (center).
GENDER EQUITY INITIATIVES
IMPLEMENTATION UPDATES

Hiring, Promotion, and Tenure
- Conducted more than 20 Implicit Bias Workshops to nearly 300 faculty members since fall 2015.
- Offering three additional Implicit Bias Workshops during fall 2017.

Professional and Leadership Development
- Launched Leading Women@Tech, Inclusive Leaders Academy, and Provost Emerging Leaders Program.

Learn more at diversity.gatech.edu/GenderEquityInitiatives.
AMERICAN HELICOPTER SOCIETY NAMES AE PROFESSOR MARILYN SMITH TO LEADERSHIP POST

Professor **Marilyn J. Smith** has been elected as the new southern regional director for the American Helicopter Society International, the pre-eminent professional organization of rotorcraft professionals and academics. An AHS member for nearly 30 years, Smith also serves as associate editor of the AHS journal, president of the Atlanta AHS chapter, peer reviewer for the AHS journal, and faculty advisor for the AHS Georgia Tech chapter.
INTERNSHIPS & STUDY ABROAD PROGRAMS CONTINUE TO GROW

25% growth in global internship participation

64% growth in exchange program participation

10 new faculty-led study abroad programs
GEORGIA TECH LAUNCHES FIRST ONLINE MASTER OF SCIENCE IN ANALYTICS

First cohort of 300+ adult learners starts August 2017

47% are Georgia residents

26% have graduate degrees

Average age is 34

1,200+ applications
GEORGIA TECH OFFERS ITS FIRST CODING BOOTCAMPs

- 24-week programs in Atlanta and Savannah sold out in both cities
- 70 students graduated in July with a Full Stack Web Development Certificate
- Offered in partnership with Trilogy
- Next cohorts in Savannah and Atlanta in progress
ME researchers, in conjunction with more than 20 researchers from Georgia Tech, are laying the groundwork for manufacturing next-generation flexible electronics. The developing technology has the potential to make an impact on industries ranging from health care to defense, and to positively impact society’s greatest challenges.
SPECIALIZED PROGRAMS IN SAVANNAH PREPARE VETERANS FOR CIVILIAN LIFE

- **VET² 101** online course now **funded statewide** by Georgia Department of Economic Development’s Operation Workforce so all service members in the state can benefit

- **VET²** Lean Six Sigma **grew 60%** from FY16 to FY17
**Top Ten Federal Research Sponsors (FY17)**

1. Department of Defense  
2. National Science Foundation  
3. Department of Health & Human Services  
4. National Aeronautics & Space Administration  
5. Department of Energy  
6. Department of Commerce  
7. Department of Transportation  
8. Homeland Security  
9. Department of Labor  
10. Environmental Protection Agency

More than 70% of Georgia Tech’s research portfolio is sponsored by the federal government. Other funding entities include other universities, foreign agencies, industry, and state and local governments.
University Professional and Continuing Education Association (UPCEA) Awards:

- **Online Master of Science in Computer Science** won 2017 UPCEA Outstanding Program in Credit Category

- **University Learning Store** won UPCEA 2017 Outstanding Program in Noncredit Category
CRC FACULTY & STAFF WELLNESS WALKS

• Implementation of faculty and staff hiking program.

• Program developed to align with the Office of Health & Well-Being objectives.

• “The hikes are quite enriching. I am outdoors, active, and engaged in inspired conversations with fellow GT hikers. After a long work week, it is a chance for a much needed mental reset!” — Aisha Oliver-Staley, Executive Director, Affiliated Organizations
GEORGIA TECH CELEBRATES 40 YEARS OF LEARNING AT A DISTANCE

• 2017 marks Georgia Tech’s 40th anniversary of offering distance-learning programs

• First distance-learning programs offered in 1977 via satellite and videotape

• Today, 6,850+ learners participate in online programs through GTPE

• MOOC enrollments reached 2.5 million this year after launching in 2012
JIM KIRK RECEIVED GRADUATE SGA AWARD

- Jim Kirk, assistant vice president for Institute Budget Planning & Administration
- Received the 2016 Susan Cozzens Administrator of the Year Award from the Graduate Student Government Association
College of Sciences’ Thom Orlando leads REVEALS, a NASA virtual institute to study radiation effects of human exploration of the moon and near-Earth asteroids.
Two hundred and twenty-seven employees celebrated their 10-year work anniversary with the Institute, and 47 celebrated 25 years.
College of Sciences’ Carol Paty discovers that the magnetosphere of Uranus opens and closes every day, unlike Earth’s.

Experiments by College of Sciences’ Joe Dufek suggest that sands on Saturn’s moon Titan are electrically charged.
GEORGIA TECH ONLINE LAUNCHED AT ONLINE.GATECH.EDU

• New web portal serves as hub for all online education offered by Georgia Tech to learners worldwide

• Access point to online degree and professional development programs, MOOCs, skills assessment

• 15,000+ visitors since May 2017

• 13 online degree programs, 60+ MOOCs, 1 skill assessment, and 50+ traditional online professional and GT undergraduate courses

online.gatech.edu
Will Ratcliff wins 5-year, $825K Packard Foundation Fellowship.

Francesca Storici joins inaugural cohort of HHMI Faculty Scholars.
Since launching its first MOOC in 2016, Language Institute now offers five Professional Communication MOOCs on Coursera.

- Enrollments grew by 83% since last summer.
- Current enrollment is at 311,000.
- Among most popular MOOCs on Coursera.org.
TRAILBLAZING CULINARY EXPERIENCE

Unveiling the next phase in campus dining, West Village.
A community space to gather, study, laugh, and thrive — all over a fantastic meal

Opened Aug. 17, 2017
Grand Opening Celebration with fun events — Sept. 21
Office of the Arts launched Made@GT, producing programs featuring work at the intersection of science, engineering, art, and design.

This year, Creative Collisions brought together artists and technologists in the creation of “Characters,” a one-woman show by Katherine Helen Fisher.
In 2016, a Strategic Plan Advisory Group (SPAG) proposal was submitted to launch three diversity and inclusion initiatives:

- Diversity and Inclusion Councils
- Diversity and Inclusion Fellows Program
- Transformative Narratives

Learn more at diversity.gatech.edu/spag-initiatives.
Buzzin’ Back to School is an annual school-supply drive that benefits Georgia Tech employees who may lack the financial resources to purchase school supplies for their children in grades K-12.

In 2016, more than 550 filled backpacks were gifted to 225 Georgia Tech families.
LINDSAY BRYANT RECEIVED CHANCELLOR’S AWARD

• Lindsay Bryant, senior director, Student Center
• Received the 2016 Silver Chancellor’s Customer Excellence Award for Leadership
Please save the date for the Inclusive Leaders Academy Closing Ceremony Tuesday, Oct. 24, 2017

Featured Speaker
Brené Brown, Ph.D.
Research Professor at the University of Houston and Author of Three No. 1 New York Times Best Sellers

Learn more at sdie.gatech.edu/inclusiveleadersacademy
Georgia Tech Department of Housing

442 Student Leaders
Living Learning Communities

881 LLC residents
594 1st Years
287 2nd+ Years

Grand Challenges
110 1st Year, 77 2nd+ Year

Honors Program
202 1st Years, 114 2nd+ Years

SHaRP - 140 First Years

SMaRT - 142 First Years

WST - 48 2nd+ Years

I-House - 48 2nd+ Years
CRC & GTLYFE COLLABORATION

- The CRC collaborated with gtlyfe to provide campus with real-time data on fitness center equipment availability.
- Innovative technology that decreases barriers to wellness.
Best City Center Venue
&
Best Venue for Transportation

Our Venue was named a winner of the
BEST of AWARDS 2017
By Unique Venues Magazine
Airplanes take a lot of wear and tear. Delta TechOps and GTMI are teaming up to develop advanced technologies to repair and maintain the parts of the Delta A350 aircraft that are made with composites. They will explore the use of new materials and processes that will ensure the safety and long-term quality of composite repairs.
Graduate students are encouraged to use the roadmaps to explore resources, plan their strategy, and develop the professional skills they need for a successful career.

grad.gatech.edu/career-roadmap
FY2017: Research Expenditures

Total Expenditures: $824.8 Million

- GTRI: $383.1 M (46%)
- Colleges and Other Units: $441.7 M (54%)
ADVANCING HUMAN HEALTH: ‘OMICS’ OF PHYSICAL ACTIVITY

College of Sciences’ Facundo Fernandez leads the Georgia Tech team selected to provide metabolomics and proteomics expertise to NIH’s program to map molecular changes during human physical activity. Research by Fernandez et al. can dramatically boost the sensitivity of mass spectrometry, a key tool in “omics” research.
Benito Nieves
Vickie Hawkins Outstanding New Professional Award
Georgia Housing Officers, September 2016

Geneen Jackson
Outstanding Support Staff Member Award
Georgia Housing Officers, September 2016
The first cohort of the Emerging Leaders Program included 16 participants.

The nine-month program included monthly workshops, small group work, self assessments, and 360-degree assessments. The cohort also attended a few events on President Peterson’s Georgia Tour in summer 2017.
C2D2 hosted two major Career Fairs and many smaller events that amassed more than 10,000 unique student visits. The fall 2016 fair, the largest recruiting event on campus, hosted 350 employers in the Campus Recreation Center. In AY16, C2D2 placed 1,537 students in co-ops and 1,150 students in internships.
PROFESSOR STEPHEN RUFFIN PROMOTED TO ASSOCIATE CHAIR

Longtime aerospace engineering professor Stephen Ruffin was promoted to the position of Associate Chair for Graduate Programs. Ruffin holds degrees from Princeton, MIT, and Stanford, and also serves as director of the Georgia Space Grant Consortium.
• NSF $30 million investment in national system of four regional hubs.

• Academic, industry, government, nonprofit partners; ~800 members, 16 Southern states.
Collaborative teams led by College of Sciences faculty in the Center for the Science and Technology of Materials and Interfaces (STAMI) address basic science and technology questions to meet demanding needs in information technology, health, security, and energy sectors.
The NAC selected three civil engineering alumni:

- G. Wayne Clough  
  *Georgia Tech president emeritus*

- Bill Calhoun Jr.  
  *Exec VP, Clark Construction*

- Leo Vecellio Jr.  
  *CEO, Vecellio Group*
MELISSA MOORE RECEIVED RHA AWARD

- Melissa Moore, director of Communications for Campus Services
- Received the 2016 Residence Hall Association Resident Appreciation Award from Malik Barton, RHA program chair
Dean Maryam Alavi and Scheller College hosted executives from The Coca-Cola Company, McKinsey & Company, and Atlanta Hawks & Philips Arena to discuss how future leaders can create impact, unlock innovation, and drive market growth through diversity and inclusion.
SUSTAINABLE PRACTICES

15 GT Dining locations implemented sustainable receipt-less practices.
RENOVATIONS

$1.4 million investment for network switches to improve wireless capabilities in housing areas.
ECE researchers in conjunction with GTRI and IISP have been awarded $17.3 million to establish new science around the ability to quickly and positively identify the virtual actors responsible for cyberattacks.
ATLANTA PUBLIC SCHOOLS (APS)

8 APS SCHOLARS FROM DISTRICT 50
North Avenue North Upgrades: New lighting, cabinets, appliances, counters, window clean & seal, sprinkler replacements, duct cleaning, laundry-room renovation
OIE PARTNERS WITH STORYCORPS

StoryCorps Atlanta recorded 12 interviews at GT in September 2016. Interviews included students, faculty, staff, and members of the International Spouse Group, a network for spouses of GT students and scholars that builds community in Atlanta.
Scheller College of Business and The Aspen Institute partnered to host the global executives of The Coca-Cola Company, The Home Depot, and BuzzFeed. Together they examined the most disruptive ideas and game-changing trends in American business.
I feel safe when

A project of the Office of the Arts, prompting personal reflection and storytelling, initiated a campuswide discussion of personal safety and well-being. Distributed both online and in person at tabling events, in classrooms, and at student group events, the project reached 4,000 students.
Using tiny snippets of DNA as “barcodes,” researchers have developed a new technique for rapidly screening the ability of nanoparticles to selectively deliver therapeutic genes to specific organs of the body. The technique could accelerate the development and use of gene therapies for such killers as heart disease, cancer, and Parkinson’s disease.

James Dahlman, Wallace H. Coulter Department of Biomedical Engineering at Georgia Tech and Emory University
FRESH. LOCAL. SUSTAINABLE

are the core pillars of the GT Dining Services program.

Ensuring fresh, quality food with a complementary dining experience.

Sourcing local food & supporting local businesses.

Eco-friendly & sustainable business practices and procedures, such as composting.
In April 2017, Staff Council awarded four $250 grants to departments that demonstrated a commitment to fostering healthy lifestyle choices while at work.
FY2017: New Awards

$690.4 Million
TOTAL NEW AWARDS

GTRI
$377.0 M (55%)

Colleges and Other Units
$313.4 M (45%)

New Awards: Sources

73%
Federal Awards
$502.4 M

14%
Industry Awards
$98 M
“This part of my life is the best part of my life ... and it's students like you that make it this way.” — **Ernie Scheller** (IM 1952) with his wife, **Roberta**, talking to long lines of Scheller College of Business students, faculty, and staff during a visit in October.
NEW STUDENT CENTER UPDATE

• After a resounding student vote for a new Student Center, design firms participated in an Ideas Competition.
• A design team will be selected soon from the competition.
VIRTUES PROJECT

• Vertical Integration of Research, Technical, Undergraduate, and graduate Education for Sustainability

• Roadmap for Post-Secondary Sustainability Education and Training

• Learn more at: sustainability.gatech.edu/virtues-project

• Sponsored by the Ray C. Anderson Foundation

May 2017
More than 600 undergraduates, masters, and Ph.D. students studied at Georgia Tech-Lorraine in the past year.
• 35,467 patient visits in the past academic year
• 90% of students seen indicated that Stamps contributed to their academic success and overall health and well-being.
• Physicians Board Certified in emergency medicine, internal medicine, family practice, sports medicine, psychiatry, and gynecology
• Care coordinators in psychiatry have significantly improved students’ access to mental health resources on and off campus.
• Stamps Pharmacy dispensed more than 21,000 prescriptions.
Research by College of Sciences’ Yuhang Wang suggests that global warming is exacerbating China’s winter air pollution.
Academics

• Began expansion of OMED’s Challenge program enrollment from 75 to 175 participants per summer by 2019.

• Challenge is a five-week intensive academic preparatory program for incoming freshmen over the summer.

Reporting System

• Launching EthicsPoint reporting system to the Institute this fall.

Learn more at diversity.gatech.edu/BlackStudentExperienceTaskForce.
LEADING IN MATHEMATICS

Rachel Kuske takes the helm at the School of Mathematics with a bold vision of Georgia Tech as a hub of mathematical activity locally, nationally, and globally. The school hosted hundreds of attendees of the 2017 SIAM Conference on Applied Algebraic Geometry, July 31 through Aug. 4.
• New center for sustainable urban infrastructure.

• Championed by GT’s John Crittenden, BBISS; Perry Yang, Eco Urban Lab; and Yongsheng Chen, School of Civil & Environmental Engineering
8 Sustainable Undergraduate Research Fellows (SURFers) will prototype an interactive dashboard system for the Georgia Tech Living Building.

Lead by Drs. Michael E. Chang, deputy director, Brook Byers Institute for Sustainable Systems, and Dana Hartley, undergraduate coordinator, School of Earth and Atmospheric Sciences.

Sponsored by the Kendeda Fund Gift.
Georgia Tech’s women’s basketball team surged in the postseason and earned a berth in the WNIT championships game. The program finished with 20 or more wins for the 12th time in school history, including nine under coach MaChelle Joseph. Guard Francesca Pan was selected as the ACC’s Freshman of the Year.
THREE ISYE RESEARCHERS RECEIVE GOLDEN GOOSE AWARD

ISyE’s John Bartholdi III, Craig Tovey, and John Vande Vate were part of a team that received the 2016 Golden Goose Award, which honors scientists whose federally funded work may have been considered silly, odd, or obscure when first conducted, but has resulted in significant benefits to society.

The team studied honey bee foraging behavior and the development of the Honey Bee Algorithm to allocate shared web servers to internet traffic.
Grand Challenge Scholars Program

National Academy of Engineering Program

Components: hands-on project or research experience related to a grand challenge; interdisciplinary learning experience; entrepreneurship experience; global/cross-cultural experience; service and social action experience
Professor Julian J. Rimoli, head of AE’s Computational Solid Mechanics Lab, received a Grainger Foundation Grant to apply his tensegrity research to the construction of a hybrid vehicle that will allow scientists to land on asteroids, moons, and comets.
ME researchers are developing a thermal storage system that uses liquid tin as a transport fluid. The technology could provide a high-efficiency alternative for directly converting high-temperature heat from concentrated solar thermal to utility-scale electricity, paving the way for the development of real-world systems at costs competitive with fossil fuels.
Dr. Jerry Qi (ME), Dr. Glaucio Paulino (CEE), and a team of researchers from the Georgia Institute of Technology have developed a way to use 3-D printers to create objects capable of dramatic expansion. These new 3-D printed objects can transform into tensegrity structures and could someday be used in applications ranging from space missions to biomedical devices.
ALTERNATIVE SERVICE BREAKS

Trips provide a meaningful way for students and staff to engage in a group-oriented, immersion community-service experience and to learn about service issues such as affordable housing, early childhood education, disaster relief, hunger and homelessness, and sustainable development. This year the program grew 10 locations, including three international locations.
NAGELA NUKUNA NAMED NATIONAL STUDENT BODY PRESIDENT OF THE YEAR

Industrial engineering student Nagela Nukuna was named the National Student Body President of the Year by the National Campus Leadership Council.
Georgia Tech Human Resources’ Talent Acquisition team joined other campus units as a partner of the Westside Communities Alliance (WCA), a network dedicated to improving Atlanta’s Westside.

Pictured here, they celebrated the grand opening of The Lab, WCA’s new community center, with other partners and President G.P. “Bud” Peterson.
RESEARCH AT A GLANCE

FY2017: New Awards

$690.4 Million In Sponsored Awards received by Georgia Tech researchers to support discovery and innovation

Federal Awards $502.4 M

Industry Awards $98 M
Three engineering students took home the top trophy at the Collegiate Drone Racing National Championship.

First year a national championship has been organized for pilots of unmanned aircraft to compete against each other at the college level.

Twenty-seven universities fielded teams of pilots.
500 trackable “pay it forward” coins were distributed during the kindness month in February.

Created in partnership with the Cowan-Turner Servant Leadership Program and the Institute for Leadership & Entrepreneurship (ILE).
EDUCATING THE “NEXENG”

Re-engineering Engineering Education

Active Learning

Problem-Based Learning

Flexible Curriculum

Learning Laboratories

Invention Studio

Innovation/Entrepreneurship

Interdisciplinary

CDIO (Conceive/Design/Implement/Operate)
COE’S WENDY NEWSSTETTER SELECTED TO SERVE ON ARMY SCIENCE BOARD

Newstetter, assistant dean of Educational Research and Innovation in the College of Engineering, has been appointed to a three-year term on the Army Science Board.

Provides the secretary of the Army and secretary of defense with advice on matters relating to scientific, technical, and manufacturing
IDEaS:  *Data science foundations. Data-driven discovery.*
Co-Executive Directors: Srinivas Aluru, CSE, and Dana Randall, CS

Centers

- MACHINE LEARNING
- HIGH PERF COMPUTING
- ALGORITHMS & RANDOMNESS
- CRNCH: NOVEL COMP ARCH
- NSF SOUTH BIG DATA HUB
- NSF TRIAD INSTITUTE

Additional Research Thrusts

- HEALTH AND LIFE SCIENCES
- MATERIALS & MANUFACTURING
- ENERGY INFRASTRUCTURE
- SMART CITIES
BIOPHYSICAL CUES PROVIDED BY PATHOGENIC PARTICLES MAY HELP FINE-TUNE VACCINES

Understanding these biophysical cues may help vaccine developers fine-tune the signals they already knew were being transmitted by the molecular information presented to the immune system.

Krishnendu Roy, Wallace H. Coulter Department of Biomedical Engineering at Georgia Tech and Emory University
Implicit Bias Workshops

- Conducted more than 20 Implicit Bias Workshops to nearly 300 faculty members since fall 2015.
- Offering three additional workshops during fall 2017.
- 97 percent of participants would recommend the Implicit Bias Workshops to a colleague.
- Offered by Institute Diversity, VPGEFD, and Georgia Tech’s ADVANCE Program.

Learn more at advance.gatech.edu/implicit-bias-workshops.

“The workshop was very useful and enlightening. It helped me realize that in order to promote meritocracy and fairness, we first need to understand and address our implicit biases.”

—Harris Dimitropoulos, associate professor, School of Architecture
CauteryGuard, a safer electrocautery device with automatic retractability, took first place at the ninth Georgia Tech InVenture Prize competition. The team represented GT in the second ACC InVenture Prize, winning the People’s Choice Award.
EMORY INTERVENTIONAL RADIOLOGISTS COLLABORATING WITH GEORGIA TECH CAPSTONE STUDENTS

This is what collaboration looks like.

Last April, seven interventional radiologists from Emory University’s School of Medicine met with leaders from the Petit Institute for Bioengineering and Bioscience and Coulter Department of Biomedical Engineering (BME) on the Georgia Tech campus.

“As an interventional radiologist, I can say without a doubt that I could see myself using each and every one of these devices when they come to market,” says Zach Bercu, an assistant professor in Emory’s Division of Interventional Radiology and Image-Guided Medicine.
OIT Cyber Security, working with academic and administrative units, is providing added security for students, faculty, researchers and staff.

Enrollment to date:
• Over 7,000 faculty and staff
• Ongoing — more than 30,000 students

Completed Project Timeline:
Spring 2018
A new breakthrough discovery by a team of scientists, which includes Annabelle Singer, assistant professor in the Wallace H. Coulter Department of Biomedical Engineering at Georgia Tech and Emory, has found that modifying oscillating gamma brain waves substantially reduces the buildup of beta amyloid plaques that are closely associated with Alzheimer’s disease.
ILLUMINATING BACTERIAL WARFARE, COOPERATION

College of Sciences’ Peter Yunker, Brian Hammer, and Will Ratcliff use physics and genomics to predict battles among armies of cholera bacteria. They find that weapons-rich bacteria are more likely to share resources than those that are weapons-poor.
The Emory-Georgia Tech team invented Rolosense, a DNA-powered diagnostic machine that turns chemical energy into rolling motion. Its invention could make advanced testing for diseases and contaminants more efficient in remote areas when it’s needed most. The team was composed of two BME students and an Emory faculty advisor.
$30 million commitment from The Kendeda Fund to build and operate one of the most environmentally advanced educational and research facilities in the Southeast.

Building launch this fall with anticipated Living Building Challenge 3.1 certification in 2020.
Nearly 200 middle school students from Atlanta and the metro area visited Georgia Tech to get a feel for a college campus and to participate in demonstrations that were fun and also outlined critical STEM fields.
SLS HOSTS SECOND INSS CONFERENCE

Part of the NSF-funded Integrated Network for Social Sustainability (INSS). The theme of this year’s conference was “Smart, Connected Communities,” and SLS partnered with Georgia Tech’s Institute for People and Technology (IPaT) and Civic Data Science program to host more than 120 faculty, staff, students, and partners.
Professor Vicki Birchfield’s “Politics in the EU” course (INTA 2221) took learning outside the classroom at the Atomium in Brussels.
Offered by the Office of Graduate Studies, **Grad Groups** is a peer-mentoring program providing opportunities for 250 graduate students to network with peers and learn about valuable campus resources. Group Leaders are senior grad students who are committed to helping new students transition to Tech.

www.grad.gatech.edu
ENTERPRISE DATA TRANSFORMATION

“Create the Next” platform for administrative services and business processes to deliver a higher degree of institutional effectiveness in support of the Institute’s academic and research mission.

Partnering with Workday to transform the Institute’s financial administration system with leading cloud-based technology.
ACHIEVEMENTS IN JOURNALISM

The *Technique* student newspaper won eight Georgia Collegiate Press Association (GCPA) awards in the organization’s annual awards ceremony, including second place for Best Newspaper and a first-place award for Best Layout and Design.
In his first season at the helm, coach Josh Pastner led the men’s basketball program to the NIT Finals in Madison Square Garden. The team’s 21 victories included a New Year’s Eve upset of eventual national champion North Carolina. Pastner earned ACC Coach of the Year honors, while Ben Lammers and Josh Okogie garnered all-ACC accolades.
Jeff Wu has received the 2017 Box Medal Award from ENBIS, the European Network for Business and Industrial Statistics, for his many contributions to the study of statistics.
NIH awards College of Sciences’ Greg Gibson $2.3M to develop ways to evaluate genetic variants that predispose people to autoimmune disorders. He and postdoc researcher Urko Marigorta helped identify biological markers to predict whether a child with Crohn’s disease will develop complications requiring surgery.
LIBRARY VISITOR DOOR COUNT 2016-2017

1,703,506

While there, she hiked to Mount Everest Base Camp, saying the trek taught her to take big tasks one step at a time.

She was one of 67 CEE students who went abroad last year thanks to the Joe S. Mundy Global Learning Endowment.
DISCOVERING HOW NATURE WORKS: FLAMINGOS’ ONE-LEGGED STANCE

Young-Hui Chang (College of Sciences) and Lena Ting (College of Engineering) discover that flamingos use a passive mechanism to stand on one leg with little muscular effort. Their discovery could aid design of legged robots and prosthetics. Chang and Ting collaborated with Zoo Atlanta and the Birmingham Zoo, in Alabama, for this work.
LET’S CALL IT 4-D PRINTING

CEE’s Glaucio Paulino and ME’s Jerry Qi created a 3-D printed object that can expand dramatically when heated.

Using different temperatures, they can control the sequence of that expansion.

The result? A new way to deploy structures in space — or even in the human body.
UNDERGRADUATE ADMISSION HIGHLIGHTS

38
ARTS AND SCIENCES PATHWAY STUDENTS

63%
INCOMING FRESHMEN + TRANSFER STUDENTS FROM GEORGIA
Launching soon at the Library.

DATA VISUALIZATION PILOT

U.S Public Housing Development

Rent Per Month

Filter 2

Filter 1

data source: https://egis-hud.opendata.arcgis.com/datasets/5c96143f79c940a0a8cedae99a41ac562_0
This is a new beginning for the Georgia Tech Library.
RANSOMWARE ATTACK SHOWS VULNERABILITY OF INDUSTRIAL CONTROLS

ECE researchers have developed a new form of ransomware that can take over control of a simulated water-treatment plant. The simulated attack was designed to highlight vulnerabilities in the control systems used to operate industrial facilities.
As part of the ninth annual summer tour of Georgia, first lady Val Peterson joins Government Relations staff to welcome Georgia Congressman Buddy Carter.
Library Next promises to be a model for the academic library of the 21st century.
Reservations (2016-17 school year):

- 23,222 instant reservations
- 6,159 classroom and auditorium reservations
- 332 rehearsal reservations

Notable events:

- Observatory 10th anniversary and planetarium
- Squishy Physics
- Legislative Day
- Aerospace Hackathon
- Hack GTeeny
The Kolon Center for Lifestyle Innovation is an interdisciplinary research center made possible through funding from Kolon Industries Inc. to develop next-generation technologies for enhancing quality of life in this hyperconnected era.
The School of Materials Science and Engineering’s Materials Innovation and Learning Lab (The MILL) is the “maker and measure space” with equipment for analysis, creation, characterization, and testing of materials to encourage discovery and hands-on and active learning of materials science concepts by students from across the Institute.
Georgia Tech-Lorraine students from the “Industrial Regions of Europe” (HSOC 2100) course enjoyed a VIP tour of Airbus and visited historic Toulouse, France
OIT is partnering with C21U, CTL, and GTPE to implement a new LMS, Canvas, for faculty and students.

Outcomes:

- Increased student engagement
- Seamless delivery of learning content
- Improved teaching effectiveness
ARKADI NEMIROVSKI ELECTED TO NAE

Professor Arkadi Nemirovski, who holds the John Hunter Chair in the H. Milton Stewart School of Industrial & Systems Engineering, has been elected to the National Academy of Engineering (NAE).

This highest of distinctions reflects Nemirovski’s contributions to convex optimization, which have shaped the field.
STAMPS PHARMACY NOW FILLING EMPLOYEE PRESCRIPTIONS

Now has the ability to process most prescription insurance, including Blue Cross Blue Shield, for faculty and staff!
TWO NO. 1 UNDERGRADUATE PROGRAMS

Specialty Ranks - Engineering
No. 1 – Biomedical Engineering
No. 1 – Industrial Engineering
No. 2 – Aerospace Engineering
No. 2 – Civil Engineering
No. 2 – Mechanical Engineering
No. 4 – Chemical Engineering
No. 4 – Electrical Engineering
No. 4 – Environmental Engineering
No. 6 – Computer Engineering
No. 6 – Materials Science and Engineering

*U.S. News
SHIMON LEARNS TO WRITE MUSIC

The School of Music’s first Ph.D. graduate, Mason Bretan, helped Shimon the marimba-playing robot’s AI develop deep learning. Shimon is now the first robot composer.
INNOVATING IN EDUCATION:
B.S. IN NEUROSCIENCE TAKES OFF

• College of Sciences designs a 21st-century neuroscience education for a 21st-century technological research university.

• Interdisciplinary program builds upon Georgia Tech’s vibrant neuroscience and neuroengineering research communities.

• For information, contact Assistant Dean Cam Tyson, cam.tyson@cos.gatech.edu
HEALTH & WELL-BEING HEALTH TRAILS

1,000 Georgia Tech employees participated in a six-week-long competition in the spring. This program focused on tracking three healthy habits every day: steps, hydration, and kindness.

We produced enough virtual miles to go around the earth 17 times!

The winning team, Stamps Health Services, poses for a photo.
The Juno Science Team, which includes ECE’s Paul Steffes, published its first observations of Jupiter.

Their findings describe varying amounts of ammonia, cyclones, and bands of storms that extend far deeper beneath the planet’s clouds than previously thought.
DELTA NEEDED SPACE, INDUSTRIAL DESIGN FOUND IT

School of Industrial Design students designed storage solutions for a Boeing 777 that freed up three food carts’ worth of space and made work safer for flight attendants.
An international team including College of Sciences’ John Wise adds evidence to one theory of how ancient monster black holes may have formed.
STAFF COUNCIL SERVICE-RECOGNITION PROGRAM ENHANCEMENTS

- April 2017 — Received a 100% increase in funding for current awards
- July 2017 — Creation of 1-year service-recognition program
HEALTHY SPACE ‘LIVE HEALTH’ KIOSK OPENED

Telemedicine option available for students and employees which connects you face to face with a board-certified physician.

No appointment or long wait necessary!

Located in the Student Center Healthy Space across from the information desk here at work.
Summer students visited Dapeng Fortress in Shenzhen, China
2,979 students were enrolled in undergraduate research courses this year. Ten years ago, that number was only 1,580.
Georgia Tech Dining Services served as the host site for the American Culinary Federation Certified Executive Chef (CEC) training and test.

Four chefs from the GT Dining Services team earn CEC credentials.

A total of six campus executive chefs are certified.
COSPLAY FOR EVERY BODY

School of Industrial Design students in the rehabilitation technology studio designed cosplay for children who use wheelchairs. Then they marched in the Dragon Con parade!
School of City & Regional Planning Professor Nancey Green Leigh received a new NSFNR grant to research the economic impact of the robotics industry.
As part of his ninth annual summer tour of Georgia, President G.P. “Bud” Peterson visited Thrush Aircraft, an agricultural plane manufacturer in Albany, Georgia, where he met four Georgia Tech students serving summer internships at the company.
REAL ESTATE DEVELOPMENT UNITES CAMPUS

The School of Building Construction’s new Master of Real Estate Development degree combines construction, city planning, finance, law, architecture, and engineering.
**OIT HRIS** in collaboration with OHR and USG Institutes and System Office launched OneUSG Connect.

**Timeline:** Nine Months

**Required:** Planning, testing, and validation prior to go-live

**Results:** Pristine HR data with almost seamless transition to the new OneUSG-Connect platform.
HONORABLE GUESTS ON CAMPUS

President G.P. “Bud” Peterson and Georgia Lt. Governor Casey Cagle greet Georgia Tech alumnus and President of Panama, Juan Carlos Varela
Please save the date for the Ninth Annual Diversity Symposium

Wednesday, Sept. 6, 2017

Morning Featured Speaker

John Quiñones
Author, Broadcast Journalist, and Host and Creator of “What Would You Do?”

Learn more at

diversity.gatech.edu/DiversitySymposium
INTERNATIONAL PLAN IMPACTS
STUDENTS AND ALUMNI

IP welcomed more than 250 freshmen

IP alumni present at national conferences

2017 International Plan graduates
Last fall, the Division of Student Life and the Counseling Center launched *Tech Ends Suicide Together*, a campuswide initiative focused on suicide prevention. Then in April, the initiative was the recipient of the 2017 SAA Gift to Tech, highlighting the students’ commitment to this important initiative.
“SLS has taught me to look at issues from multiple viewpoints. My SLS class is taught by three professors of differing backgrounds. Each class, my professors frame sustainability using their interdisciplinary knowledge, allowing me to better understand the complexity of real life problem solving.”

— Ariella Ventura, ISyE, 2019-20
NATIONAL INTRAMURAL CHAMPIONS

• Hosted the 2017 NIRSA Championship Series Regional Basketball Tournament.

• Teams from 25 schools and officials from 21 schools in the region attended.

• Georgia Tech’s Single A All Stars won the 2017 NIRSA Championship Series National Basketball Tournament.
OMOJARO RECEIVES PRESIDENT’S VOLUNTEER SERVICE AWARD

Olatide Omojaro received this honor from former President Barack Obama for his work with the African Research Academies for Women (ARA-W).

ARA-W encourages female undergraduates at universities in Ghana to pursue studies in STEM fields.
TRIAD INSTITUTE
PI: Xiaoming Huo, ISyE

New NSF Transdisciplinary Research Institute for Advancing Data Science

- Established July 2017 with $1.5 million from NSF.
- Integrating research & education in mathematical, statistical & algorithmic foundations of data science.
RECORD HIGH RETENTION RATES

By fall 2016, Georgia Tech’s first-to-second-year retention rate was 97%; six-year graduation rate, 86% (a historic high for the Institute); and five-year graduation rate, 80%.

During 2016-17, 3,606 undergraduate degrees were awarded, a 5% increase from the previous year and a 25% increase since 2011-12.
GT ALUMNI ASSOCIATION STUDENT ENGAGEMENT

- National award for the Outstanding Organization for the GT Student Foundation and the Outstanding Student Leader to Weatherly Langsett
- 7,165 student donors to Georgia Tech
- Georgia Tech Student Foundation runs the largest entirely student-run philanthropic endowment in the country
College of Sciences’ Ruth Kanfer establishes center to advance the science and practice of human work in the 21st century by improving workforce health and well-being, promoting work innovations, and informing public policy.
The first national Composite Joining and Repair technology road map is published. Next steps include forming an industry-led consortium to drive innovation so that maintaining and repairing composites is standardized, safe, and long-lasting. The market for this technology is estimated in the multibillions of dollars.
GEORGIA TECH ALUMNI ASSOCIATION

• 70th Annual Roll Call represents almost 34,000 donors and more than $9.8 million dollars

• $380,000 in scholarship money awarded by Alumni Network and Affinity Groups to incoming students
Fiscal Year 2017: At A Glance
GTRI, Colleges and Other Units

- **GTRI**
  - Total Expenditures: $383.1 M (46%)
  - Awards: $377.0 M (55%)

- **Colleges and Other Units**
  - Total Expenditures: $441.7 M (54%)
  - Awards: $313.4 M (45%)

**New Awards: Sources**
- Federal Awards: $502.4 M (73%)
- Industry Awards: $98 M (14%)