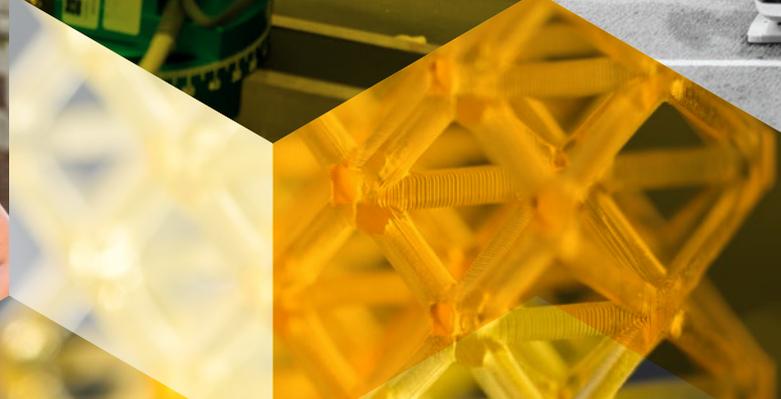


2017

INSTITUTE ANNUAL REPORT



Georgia
Tech 

2017

INSTITUTE ANNUAL REPORT

CREATING THE NEXT®

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A MESSAGE FROM THE PRESIDENT

The enduring strength and relevance of an institution like Georgia Tech is derived from many sources.

- Our internationally renowned faculty, who are passionate about teaching students to apply their gifts in meaningful and beneficial ways.
- Our gifted students, who possess a global perspective and legendary drive to achieve and succeed that ultimately benefits not only themselves but also their fellow human beings and their all-too-fragile planet.
- Our highly accomplished alumni, who understand and treasure the part their Georgia Tech education has played in their success and who want to see that tradition continue.
- Our strategically focused industry and research partners, who value the role that our faculty and students play in advancing their vision and their success.
- Our local, state, and federal legislators, whose longstanding support and advocacy have been absolutely vital to Georgia Tech's rise to world-class status.
- Our many other friends and associates across the country and around the world, whose good will has bolstered our reputation and added to our trajectory.

Clearly, the broad scope and robust variety of the Georgia Tech community is breathtaking. For us, diversity is much more than an altruistic ideal or goal; it is a competitive advantage that becomes increasingly valuable every day.

This year's 65th anniversary of the admission of women as full-time students at Georgia Tech vividly illustrates this advantage. Many of our alumni — both women and men — would be surprised to know that this year's freshman class is 43 percent women.

Additionally, we are a global university, attracting some of the world's brightest scholars, researchers, and teachers. Students come from all 50 states and 117 countries. They bring with them a broad range of cultural, ethnic, and diverse backgrounds that makes us all better and strengthens and greatly enriches our campus community. This diversity helps each of us grow intellectually and socially as we share different traditions, beliefs, knowledge, and perspectives with one another.

Our welcoming and inclusive environment strengthens our ability to come together to address some of the world's biggest challenges and most pressing problems in a positive and constructive manner. Dozens of examples of our community's collaborative spirit are found within this year's Institute Annual Report. I hope you are not only impressed but also inspired by these stories, as they reflect who we are and the values we hold dear.

Sincerely,

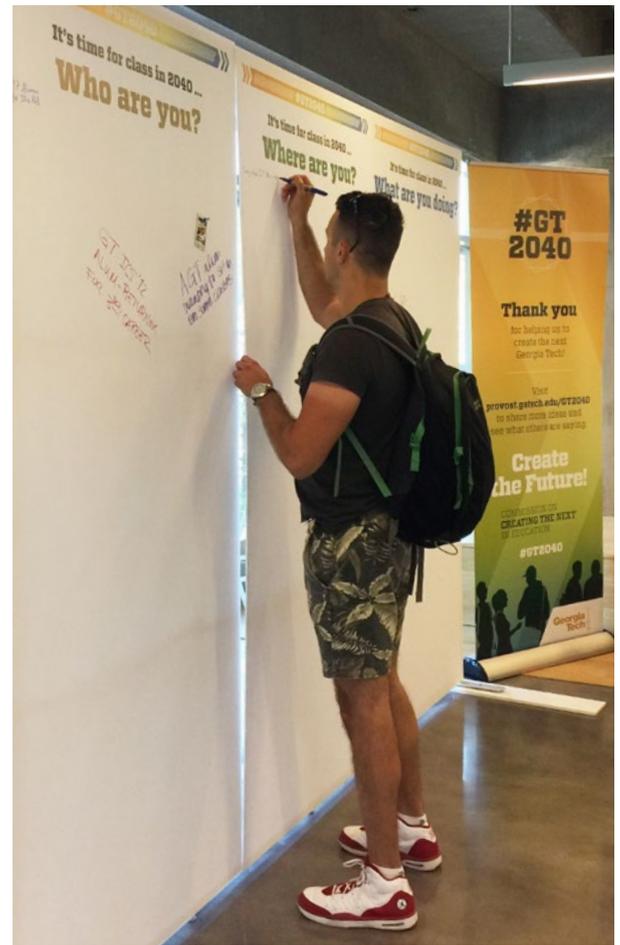


G.P. "BUD" PETERSON

PRESIDENT, GEORGIA INSTITUTE OF TECHNOLOGY



G. P. "BUD" PETERSON



Envisioning Tech's Future Provost and Executive Vice President for Academic Affairs Rafael L. Bras (pictured above) chartered the Commission on Creating the Next in Education. The Commission invited members of the Georgia Tech community to share their vision for what Georgia Tech could and should be in the year 2040. Students, faculty, and staff recorded their thoughts on oversized writing pads placed in Clough Commons last spring. The ideas recorded were both plentiful and diverse.

Women Faculty/Staff/Graduates Assume More Key Leadership Roles

The Institute's strategic plan is unambiguous in its resolve that all members of the Georgia Tech community be offered equal opportunity for learning and professional success. The development of more abundant and robust opportunities for women faculty, staff, and students is critical to this goal's success.

Women now comprise more than 40 percent of the undergraduate student body for the first time in Tech history, and the Leading Women @ Tech program is providing unprecedented support for faculty and staff. Another key barometer is the number of women appointed to key leadership roles in fiscal year 2017. This list includes:

Rachael Kuske: Chair, School of Mathematics



Susan Margulies: Chair, Coulter Department of Biomedical Engineering



Anna Stenport: Chair, School of Modern Languages



Bonnie Ferri: Vice Provost for Graduate Education and Faculty Development



Gisele Bennett: Associate Vice President for Research



Jennifer Bonnett: General Manager, Advanced Technology Development Center



Trudy Riley: Head of Contracting, Office of Sponsored Programs



Andrea Laliberte: Chair, Georgia Tech Alumni Association, and Professor of the Practice, Industrial and Systems Engineering



Wendi Sturgis: Chief Customer Officer, Yext Chair, Georgia Tech Advisory Board



**All good fellows who
come from far and near**

For the first time, the graduating class of the Online Master of Science in Computer Science (OMS CS) program was honored during last fall's Commencement weekend with a reception at The Biltmore and a campus tour.

Expanding Role of Online Learning

The phenomenal success of Georgia Tech's Online Master of Science in Computer Science (OMS CS) program — launched in January 2014 — continued last year with the total number of graduates approaching 500. For the first time, OMS CS graduates were honored during Commencement weekend with a special reception at The Biltmore and a campus tour designed just for them.

"I've been doing this program for two-and-a-half years, and I've been waiting for an opportunity to meet the people and professors and teaching assistants," said fall 2016 graduate



OMS CS graduates received a campus tour and an opportunity to meet Buzz.

Pramod Recard, who traveled all the way from India to don his gown and mortarboard. "Getting to do this after so long, and seeing the beautiful Georgia Tech campus, is a really nice experience."

Augmenting the OMS CS is a new OMS in Analytics degree initiated in fall 2017. The new degree program — offered at a quarter of the cost of the Institute's on-campus program — is being delivered in collaboration with edX, the leading nonprofit provider of Massive Open Online Courses (MOOCs).

The top 10-ranked analytics degree program is an interdisciplinary collaboration between Georgia Tech's College of Engineering, College of Computing, and Ernest Scheller Jr. College of Business.



Professor Thomas Orlando is a renowned leader in bringing together multiple academic disciplines to advance scientific knowledge and, consequently, the human condition.

Prominence, Momentum on the Rise in Tech's College of Sciences

Of critical long-term, strategic importance to Georgia Tech is the vitality and relevance of all academic disciplines on campus. The College of Sciences is helping to lead the way with successes such as the REVEALS project.

REVEALS (Radiation Effect on Volatiles and Exploration of Asteroids and Lunar Surfaces) is a multi-institutional research team led by Thomas Orlando, professor in the School of Physics. NASA announced last March that REVEALS is one of four teams chosen by the space agency for inclusion in SSERVI, the Solar System Exploration Research Virtual Institute. NASA created SSERVI to work with scientific institutions around the world to learn more about the lunar surface, near-Earth asteroids, and the Martian moons Phobos and Deimos.

Within Georgia Tech, Orlando's team includes Phillip First and Zhigang Jiang in the School of Physics, Peter Loutzenhiser in the Woodruff School of Mechanical Engineering, Carol Paty and James Wray in the School of Earth and Atmospheric Sciences, John Reynolds and Joseph Perry in the School of Chemistry and Biochemistry, and Jud Ready in the Georgia Tech Research Institute.

A veteran of applying for NASA requests for proposals, Orlando says the REVEALS win is his biggest yet, because of its interdisciplinary approach.

"It's probably the most important because it links many entities on campus that haven't been linked before," he said.

COLLEGE OF SCIENCES FACULTY WHO MAKE AN IMPACT

Professor Gary B. Schuster

- Former Interim President of Georgia Tech
- Former Provost of Georgia Tech
- Former Dean of the College of Sciences
- 23-year Veteran of the Georgia Tech Faculty
- Vassar Woolley Professor Emeritus in the School of Chemistry and Biochemistry
- 2017 recipient of the Class of 1934 Distinguished Professor Award (Tech's highest faculty honor)
- Primary Research Interests: Organic and Bio-organic Chemistry
- Tireless Advocate for the Scientific Enterprise

Read more about Professor Gary Schuster at news.gatech.edu/features/humor-vision-and-distinguished-professor-award



The need for speed

FPV (first person view) drone racing is a type of motorsport where participants control drones equipped with cameras while wearing head-mounted displays showing the live stream camera feed from the drones. The goal is to complete a set course as quickly as possible.

STUDENT ACHIEVEMENTS AND ACCOLADES

Engineering Students Win Drone Racing National Championship

Three engineering students took home the top trophy at the Collegiate Drone Racing National Championship held at Purdue University last spring. This was the first year a national championship had been organized for pilots of unmanned aircraft to compete against each other at the college level.

Twenty-seven universities fielded teams of pilots who navigated obstacle courses flying custom-designed drones. The course was designed for testing both a pilot's speed and precision.

The Georgia Tech team was led by aerospace engineering major Nick Willard, who flew in the final race to seal the victory. Willard competes in many non-collegiate Drone Racing League events, and has won racing events televised on ESPN. He is affectionately known by drone racing enthusiasts as "Wild Willy."

Willard was joined by Seth Ableidinger and Davis Engelman, two mechanical engineering majors, who held strong in preliminary races to put Georgia Tech into a solid lead.

Their times and rankings, combined with Willard's, put Georgia Tech into first place among the field. The team brought home a total of \$15,000 in equipment and prizes.

The University of California, Berkeley finished second, with Embry-Riddle Aeronautical University in third, and host Purdue University coming in fourth.

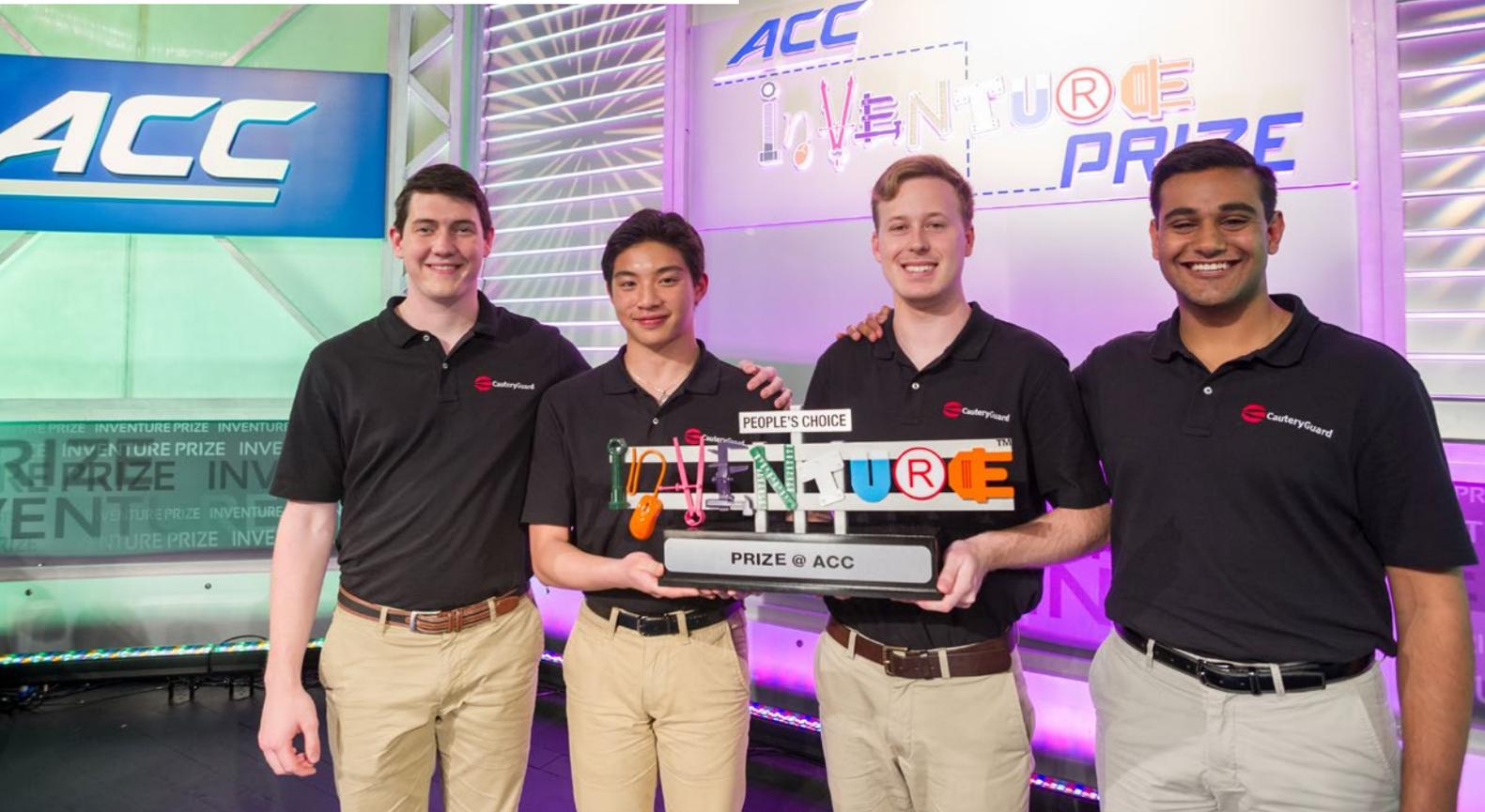


Nick Willard (above), also known by many in the drone racing community as "Wild Willy," competes in many non-collegiate Drone Racing League events. Willard is pictured (page 7) with his Georgia Tech teammates Seth Ableidinger (left) and Davis Engelman.



RAISING UP A NEW GENERATION OF LEADERS

Solving real-world problems and improving the quality of life are the most compelling motivators for Georgia Tech students — and the prestigious honors they routinely receive reflect those priorities.



CauteryGuard Seals the Deal

A safer medical device used to remove unwanted tissue and to stop bleeding won Georgia Tech's 2017 InVenture Prize.

The four biomedical engineering students behind CauteryGuard redesigned an electrocautery device by adding a retractable tip. This change prevents the risk of burns many doctors and patients face from the device's exposed tip. It also eliminates the chance of fires in operating rooms because an exposed tip could come into contact with flammable materials.

The team won \$20,000 plus a free patent filing and a spot in Flashpoint, a Georgia Tech accelerator. They also won the \$5,000 People's Choice Award, which went to the fans' favorite invention. (CauteryGuard also won the People's Choice Award at the ACC InVenture Prize competition held on campus several weeks after the Georgia Tech event.)

"This is really incredible," said Dev Mandavia, a student in Georgia Tech's Coulter Department of Biomedical Engineering. "This validates all the hard work we've put into this device. This will allow us to take it to the next step and bring our product to FDA approval and then eventually start saving the lives of patients and surgeons."

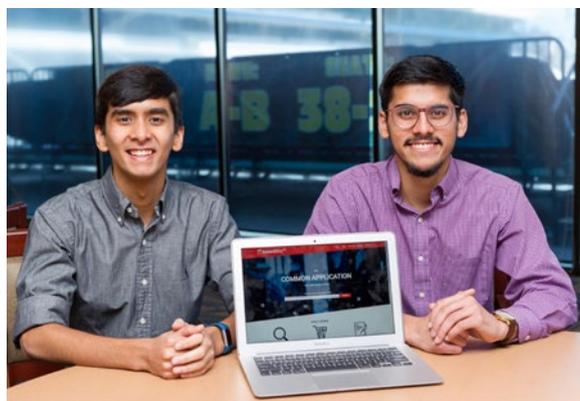
In addition to Mandavia, the other team members are Jack Corelli, Hunter Hatcher, and Devin Li.

The two-member team of InternBlitz earned second place, which comes with \$10,000, a free patent filing, and a spot in Flashpoint.

The annual InVenture Prize brings together student innovators from all academic backgrounds across campus in an effort to foster creativity, invention, and entrepreneurship.

The winning InVenture Prize team that conceived of CauteryGuard consists of (from left) Jack Corelli, Devin Li, Hunter Hatcher, and Dev Mandavia.

The CauteryGuard device that won the 2017 InVenture Prize is a tool that helps prevent surgeons and patients from being injured during procedures.



The inventors of InternBlitz: Murtaza Bambot, an industrial engineering major, and Nathan Dass, a computer science major.

Debate Team Wins State Championship



Georgia Tech's debate team emerged the overall winner (with the most cumulative points) at the Georgia Collegiate Varsity Debate Championship.

During the competition, the teams debated immigration status as a criterion for federal funds, federal government investments in space systems, bridging the racial divide, plans to counter climate change, and the merits of violent vs. nonviolent protest.

"I think it's notable that college students are moving beyond social media to have a constructive discourse over issues in the currently tumultuous political climate," said Andrew Huot, vice president of Tech's debate team. "All of these topics are important for college students to engage, and Georgia Tech's debate team proved that you can be a helluva engineer and a helluva debater."



Technique Honored by Georgia College Press Association

Georgia Tech's student newspaper won nine awards in as many categories in the Georgia College Press Association's annual Better Newspaper Contest.

The awards honor work from January to December of 2016. With a young staff, *Technique* Editor-in-Chief Vidya Iyer said they spent some of that time getting up to speed and training new students.

The *Technique's* nine GCPA awards for 2016 are:

INDIVIDUAL AWARDS

- **Impact Award:** Lanah Marie Jose
- **Best Review:** 3rd Place, Will Finch
- **Best News Article (Investigative):** 3rd Place, Maura Currie and David Raji
- **Best Editorial:** 1st Place, Evan Gillon
- **Best Photo Series:** 3rd Place, Polly Ouellette

PUBLICATION AWARDS

- **Improvement:** 3rd Place
- **General Photography Excellence:** 3rd Place
- **Layout and Design Excellence:** 2nd Place
- **General Excellence:** 3rd Place

The recognition received by the *Technique* staff is all the more impressive because so many of its members (and award recipients) were first-year students.

STUDENT RESOURCES AND SUPPORT

Center for Student Diversity and Inclusion

In an effort to strengthen the services that support the success of underrepresented minority and women students at Georgia Tech, a new center is both centralizing current programs and expanding its reach with new ones.

The Center for Student Diversity and Inclusion was launched last year to provide more programs and pathways to success for underrepresented students on campus. As part of Institute Diversity, the Center for Student Diversity and Inclusion encourages students to excel academically, interact across cultures and perspectives, and value inclusion.

The purpose of the Center for Student Diversity and Inclusion is to serve students from all backgrounds and encourage them to be inventive leaders who think globally. The Center aims to be a positive, enriching environment that connects students, faculty, staff, alumni, and community stakeholders

through effective programs, projects, networks, and research.

S. Gordon Moore Jr., executive director of Student Diversity and Inclusion, serves as the director of the new Center.

"One of the findings from Georgia Tech's Climate Assessment Survey expressed feelings of marginalization by gender, race, and ethnicity among undergraduate and graduate students," said Moore. "By launching the Center for Student Diversity and Inclusion, we will better serve the more than 4,000 students who benefit from our programs now — and increase capacity to serve even more current and future students."

Focusing on the recruitment, retention, and advancement of underrepresented minority and women students, the Center for Student Diversity and Inclusion houses the Office of Hispanic Initiatives, OMED: Educational Services, and the Center for the Study of Women, Science, and Technology.

American Talent Initiative Working to Make College More Affordable

Georgia Tech is collaborating with 29 other universities across the country to help more students from lower-income families earn a college degree.

The new American Talent Initiative (ATI) allows the country's most respected public and private higher education institutions to share strategies to substantially increase the number of talented students from low- and moderate-income families who successfully complete college. The founding members seek to attract, enroll, and graduate the most qualified students, regardless of family income. They will also contribute to research that will help other colleges graduate more high-achieving, lower-income students.

The initiative is supported by Bloomberg Philanthropies and was created with a national goal of educating 50,000 additional high-achieving, lower-income students at the 270 colleges and universities with the highest graduation rates by 2025.

For Georgia Tech, the new alliance builds on other initiatives improving college graduation rates, especially among underrepresented students. The Institute is the only public college in Georgia currently participating in this collaborative effort.

"Georgia Tech is proud to partner with the American Talent Initiative and looks forward to participating in this nationwide collaboration addressing access and affordability for some of the country's best and brightest students," President G.P. "Bud" Peterson said. "This initiative is entirely consistent with the state of Georgia's efforts to increase the number of college graduates through the Complete College Georgia initiative. Through a sharing of ideas, both of these initiatives provide a great opportunity to impact the lives of many students across the state and maximize their potential."

ATI expects to add more top-performing colleges every year to join Tech and the other founding members.



Black Student Experience Task Force Issues Update on Progress

The implementation committee of students and leaders from Institute Diversity, the Office of the Provost, Student Life, and Undergraduate Education announced updates on the committee's progress in addressing the 11 recommendations from the Black Student Experience Task Force that will help ensure a welcoming, inclusive campus.

As part of a three-year process, implementation of the 11 recommendations started in August 2016. These recommendations are grouped into four categories: programs, trainings, physical spaces, and planning and assessments.

"After discussing with the committee, we expanded the implementation of two areas from the original 11 recommendations of the Black Student Experience Task Force — Challenge and FASET," said Archie Ervin, vice president for Institute Diversity. "The implementation committee

identified broader and more long-term academic issue areas beyond the Challenge program and orientation processes beyond the FASET program as it relates to diversity, equity, and inclusion."

"Although not visible to the campus community yet, there has been a sustained amount of background, foundational work from the implementation committee to move forward on the recommendations from the Black Student Experience Task Force report," said John Stein, dean of students and vice president for Student Life. "I appreciate and applaud the work of the committee, and we look forward to the campus community experiencing these recommendations and seeing the positive changes in an effort to further advance a culture of close collaboration, global perspective, and intercultural respect at Tech."

Counseling Center Offers ‘Let’s Talk’ Program

Launched last year, “Let’s Talk” is an outreach program designed to engage students by providing informal walk-in consultations with Georgia Tech Counseling Center (GTCC) counselors at sites across campus. “Let’s Talk” is intended to reach students who might be unlikely to seek traditional mental health services at the GTCC.

“Let’s Talk” is different from formal counseling in that there is no clinical paperwork to fill out, no formal intake, and no scheduled appointments. Students are encouraged to drop by and talk about whatever is important to them, much as they might talk with a teaching assistant, residence hall director, or academic advisor.

Open to all Georgia Tech undergraduate and graduate students, “Let’s Talk” is tailored to students who may be unsure about formal counseling, have a specific problem and would like someone with whom to talk it through, are seeking advice about assisting a friend, or who are not interested in ongoing counseling but would like the perspective of a counselor.

“Let’s Talk” is held at different locations across campus, with an emphasis on reaching students who may have difficulties accessing traditional mental health services or have a hard time accessing GTCC because of tight schedules or geographic location.



Janice Harewood is one of the Georgia Tech counselors who is available for “Let’s Talk” sessions, which are held in various locations across campus.

Several members of the implementation committee — Henderson Johnson II, Vice President for Student Life and Dean of Students John M. Stein, Morgan Foreman, Vice President for Institute Diversity Archie Ervin, and Nelson Raphael — discuss progress on the 11 recommendations from the Black Student Experience Task Force that will help ensure a welcoming, inclusive campus.

Student-focused Philanthropy Makes Significant Impact

Opportunities for students to gain invaluable entrepreneurship-related experience will dramatically increase as the result of an anonymous donor’s \$30 million commitment designated for student entrepreneurship at Georgia Tech. The endowment comes with but one stipulation – that it be used for “programs, activities, and initiatives designed to advance entrepreneurship in the student body...”

The program that piqued the donor’s interest the most is CREATE-X — flourishing in no small part thanks to its first philanthropic fan, Chris Klaus, former Georgia Tech student, founder of one of the first internet security companies, ISS, and social gaming company Kaneva, and namesake of the Institute’s Klaus Advanced Computing Building.

This new \$30 million commitment is a “tremendous leap forward to help the Institute achieve its ultimate vision,” says Rafael L. Bras, provost and executive vice president of Academic Affairs and K. Harrison Brown Family Chair. “We are very excited about the opportunities that the funds from this endowment will open up, both near- and long-term — they will bridge much of the gap between where we are and where we hope to go in building entrepreneurial confidence at Georgia Tech.”



EMPOWERING A
WORLD-CLASS



FACULTY AND STAFF

Georgia Tech's faculty and staff are renowned for their creativity and motivation. They are the heart of the Institute.



Kaye Husbands Fealing Named AAAS Fellow

Kaye Husbands Fealing, chair of the School of Public Policy in the Ivan Allen College of Liberal Arts, was named a Fellow of the American Association for the Advancement of Science (AAAS).

Election as a Fellow is an honor bestowed upon AAAS members by their peers. Fealing was nominated by the Section on Societal Impacts of

Science and Engineering for "distinguished contributions to the field of science, technology, and public policy, particularly for leadership in the area of the science of science policy."

During the course of her career, Fealing has developed models to measure science innovation and to measure the impacts of market forces and policy on the access of women and minorities to employment and careers in science, technology, engineering, and mathematics (STEM) areas. She has held named professorships at two institutions and served as president of the National Economic Association.

Kaye Husbands Fealing, chair of the School of Public Policy in the Ivan Allen College of Liberal Arts, is an expert in the measurement of science innovation.



Laura Cadonati Named to Key LIGO Post

Now that scientists have observed and confirmed the existence of gravitational waves, the community is preparing for what it calls a “new dawn” of exploration. This next step will enable a better understanding of the universe and create the directions for the development of future generations of instruments.

To help guide them into this new chapter of discovery, members of the Laser Interferometer Gravitational-Wave Observatory (LIGO) have appointed Georgia Tech Professor of Physics Laura Cadonati as their first-ever deputy spokesperson of the LIGO Scientific Collaboration (LSC). Together with the spokesperson, Cadonati will speak on behalf of LIGO when new detections are announced and oversee the management of a number of divisions, including data analysis and astrophysics.

Cadonati is collaborating closely with MIT’s David Shoemaker, LIGO’s newly elected spokesperson, as they restructure the 1,000-member organization.



Alenka Zajic Receives NSF CAREER Award

Georgia Tech Assistant Professor Alenka Zajic and graduate student Derrick Chu discuss a device used to systematically measure side-channel outputs from electronic devices.

Alenka Zajic, an assistant professor in the School of Electrical and Computer Engineering (ECE), received an NSF CAREER Award to support her research project, “Propagation Modeling and Measurements for THz Wireless Chip-to-Chip Communications.”

New applications such as self-driving cars, smart homes, and/or industrial automation will all require cloud computing that relies on many fast computers in data centers. However, even today, cable management in data centers is a serious challenge, and limitation of the number of pins on the processor is

becoming a bottleneck in designing faster computers.

Zajic is exploring ways to design wireless links at terahertz frequencies that can provide data rates of hundreds of gigabytes per second that would address “cable management” and “pin-count” problems. Insights and results from this project will develop fundamental understanding of wireless propagation at terahertz frequencies and also stimulate further related research in wireless communications and computer engineering.

Popular Science Names Tech’s Will Ratcliff to Its Brilliant 10 List

Will Ratcliff, an assistant professor of biology, had a moment in the spotlight for getting yeast and algae to jump through hoops to new evolutionary heights.



The magazine *Popular Science* included the Georgia Tech researcher in its annual list “The Brilliant 10,” a select roster of “the 10 most innovative young minds in science and technology.” Ratcliff was praised for advancing the study of cellular evolution.

Popular Science cited his work demonstrating how single-cell organisms may have transitioned into simple multicellular organisms ages ago. It’s widely seen as an arduous evolutionary leap, since single cells had to forfeit a lot of their own fitness for the greater good of creating viable cell groups.

“William Ratcliff revealed surprising insights into what might have been necessary for this transition to occur,” *Popular Science* wrote in its September/October 2016 edition. He has illuminated “one of the greatest mysteries of life.”

Four Faculty Earn Regents Professor/Researcher Titles

The University System of Georgia (USG) Board of Regents appointed three Georgia Tech faculty members as Regents Professors and one as a Regents Researcher. The titles represent the highest academic and research recognition bestowed by the University System of Georgia, and demonstrate distinction and achievement in teaching and scholarly research.

The three Regents Professors are:



Seymour Goodman: professor in the Sam Nunn School of International Affairs with a joint appointment in the College of Computing, and co-director of the Center for International Strategy, Technology, and Policy.



Nicholas V. Hud: professor in the School of Chemistry and Biochemistry and director of the Center for Chemical Evolution.



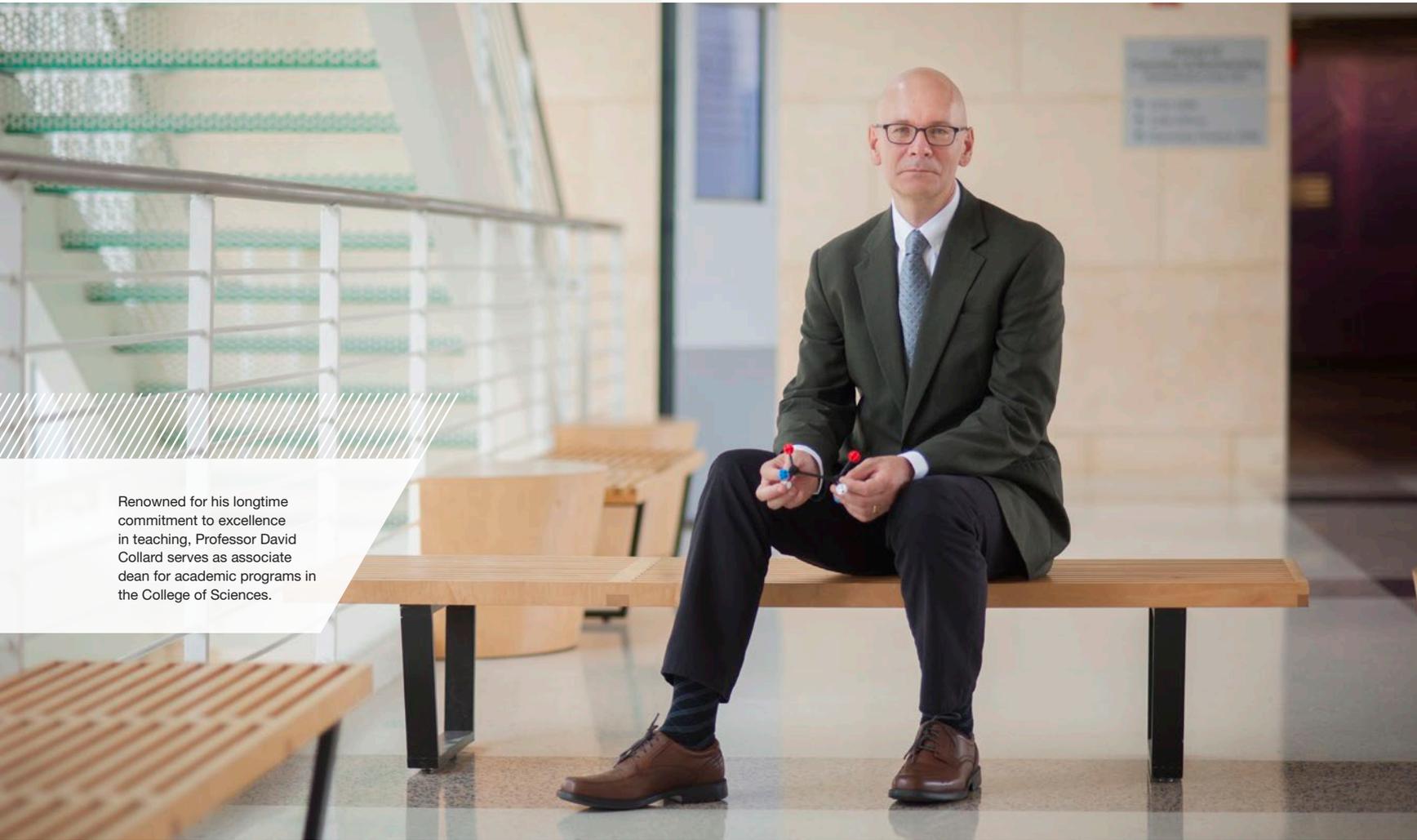
Vladimir Tsukruk: professor in the School of Materials Science and Engineering, founding co-director of the Air Force BIONIC Center of Excellence, and founding director of the Microanalysis Center.

The new Regents Researcher is:

Alexa Harter: associate director and chief scientist of the Advanced Concepts Lab at the Georgia Tech Research Institute (GTRI).



“Georgia Tech is incredibly proud to have some of the world’s best and brightest scholars, and we congratulate these faculty members on their new appointments,” said Rafael L. Bras, provost and executive vice president for Academic Affairs and the K. Harrison Brown Family Chair. “This new distinction is a testament to their continued commitment to excellence in teaching, research, and scholarship.”



Renowned for his longtime commitment to excellence in teaching, Professor David Collard serves as associate dean for academic programs in the College of Sciences.



David Collard Receives USG Faculty Award

The University System of Georgia (USG) honored David Collard with the 2017 Felton Jenkins Jr. Hall of Fame Faculty Award for USG's research and comprehensive universities sector. The award, which invites nominations from across USG, recognizes a faculty member for strong commitment to teaching and student success.

Collard is a professor in the School of Chemistry and Biochemistry and associate dean for academic programs in the College of Sciences. The award review committee cited Collard as "an exemplar for combining the best of teaching and research" at a research institution.

"Our programs today would be unrecognizable if you removed David's contributions," said M.G. Finn, chair of the School of Chemistry and Biochemistry and James A. Carlos Family Chair in Pediatric Technology. "What we teach, how we teach it, what facilities we use to do so, and what advanced opportunities are available to our students all bear the Collard stamp."

Engineering Faculty, GTRI Researchers Advise U.S. Military

Georgia Tech faculty, administrators, and researchers have a long and distinguished history of providing counsel to the nation's military leadership. The following Georgia Tech community members are now serving in key military advisory posts:

ARMY SCIENCE BOARD

Two Tech faculty members have been appointed to initial three-year terms on the Army Science Board:

- **Giselle Bennett**, a professor in the School of Electrical and Computer Engineering, director of the Georgia Tech Research Institute's Electro-Optical Systems Lab, and the Glenn Robinson Chair in Electro-Optics.
- **Wendy Newstetter**, assistant dean of Educational Research and Innovation in the College of Engineering.

AIR FORCE SCIENTIFIC ADVISORY BOARD

Three Tech faculty members are currently serving on the Air Force Scientific Advisory Board:

- **Samuel Graham Jr.**, Rae and Frank H. Neely Professor, Woodruff School of Mechanical Engineering.
- **Dimitri Mavris**, Regents Professor, Boeing Professor of Advanced Aerospace Systems Analysis, and Langley Distinguished Professor of Advanced Aerospace Systems Architecture, Guggenheim School of Aerospace Engineering.
- **William Melvin**, Regents Researcher, Georgia Tech Research Institute.



STAFF ACHIEVEMENTS

Bryant/ECN Earn USG Service Awards



Lindsay Bryant



Michael Edwards

Two individuals and one group from Georgia Tech were honored by the University System of Georgia (USG) with Chancellor’s Service Excellence Awards.

The awards honor USG employees who go above and beyond their expected job duties in service to their greater community.

Lindsay Bryant, director of the Student Center, earned a silver award for Outstanding Leader (Administrator Level).

The silver award in the Team of the Year category went to the leadership team for Tech’s Event Coordinators’ Network (ECN). The team — which includes Renée Brown, Barb Dockweiler, LaJauna Ellis, Julie Hawkins, Nicole Little, Laura Pusateri, Catherine Shaw, Stephanie Sigler, Felicia Turner, and Serena Wallace — was recognized for its effort to improve both the skill set and standards of service for those who plan and execute events on behalf of Georgia Tech.

Michael Edwards, senior director of Campus Recreation, earned an honorable mention in the Outstanding Leader category.

More than 400 staff members from 90 campus units make up the Georgia Tech Event Coordinators’ Network, whose leadership team received the University System of Georgia’s silver award. From left: Stephanie Sigler, Renee Brown, Nicole Little, Catherine Shaw, Laura Pusateri, Barbara Dockweiler, Serena Wallace, Felicia Turner, and LaJauna Ellis.

GT Professional Education Receives Prestigious Honors

The University Professional and Continuing Education Association (UPCEA) has recognized Georgia Tech Professional Education (GTPE) for excellence in both credit and non-credit education as well as teaching quality.

Georgia Tech’s Online Master of Science in Computer Science (OMS CS) degree program received the UPCEA Outstanding Program award in the credit category. The award recognizes Georgia Tech for excellence in achieving educational objectives.

Offered by the College of Computing, OMS CS is one of several online master’s programs that GTPE facilitates for the Institute.

In addition, University Learning Store (ULS) received the UPCEA Outstanding Program award in the non-credit category. The award recognizes outstanding professional and continuing education programs that do not offer degree credit.

Nicole de Vries, application support analyst at GTPE, received the Adelle F. Robertson Continuing Professional Educator Award.



Richard Barke (left), one of 17 faculty selected for the Center for Teaching and Learning's (CTL) new Provost Teaching and Learning Fellows program, is an associate professor and director of Undergraduate Studies in the School of Public Policy.

Center for Teaching and Learning Enters New Era

Georgia Tech's Center for Teaching and Learning (CTL), formerly the Center for the Enhancement of Teaching and Learning, has begun a new chapter of its long history with a name change and additional programming.

"We wanted our emphasis to be on teaching and learning," explained CTL Director Joyce Weinsheimer. "When newcomers read 'the enhancement of' in our name, they thought our focus was on fixing poor teaching. We sent out a survey to faculty and administrators, and 90 percent thought the change to Center for Teaching and Learning was a good idea."

Weinsheimer said she also wants to lead CTL into a new era of collaboration among administrators, instructional staff, and support units to maximize student learning. This will be accomplished largely through two new partnerships:

- **Provost Teaching and Learning Fellows:** Two to five fellows from each college will work on college-specific initiatives in a way that connects the expertise of CTL professionals with the expertise of disciplinary faculty.

- **CIRTL Network:** CTL has joined the Center for the Integration of Research, Teaching, and Learning (CIRTL) Network, partnering with 46 research universities to prepare future faculty in all disciplines (with a particular emphasis on STEM fields).

Committee Announces Progress on Gender Equity Initiatives

The implementation committee of faculty and staff from the Office of the President, Institute Diversity, Faculty Affairs, and Human Resources announced updates on its progress to implement the 11 Gender Equity Initiatives.

As part of a two-year process, implementation began in August 2016. The initiatives emerged from President G.P. "Bud" Peter-



The kickoff event for the second cohort of Leading Women @ Tech was held March 23, 2017. The program is a key component of the Institute's gender equity efforts. The program is led by Julie Ancis, left, and Pearl Alexander.

son's listening sessions on inclusiveness and gender equity in 2015 following feedback from faculty and staff that some of the Institute's collective actions, practices, and policies fell short of fully recognizing women's contributions.

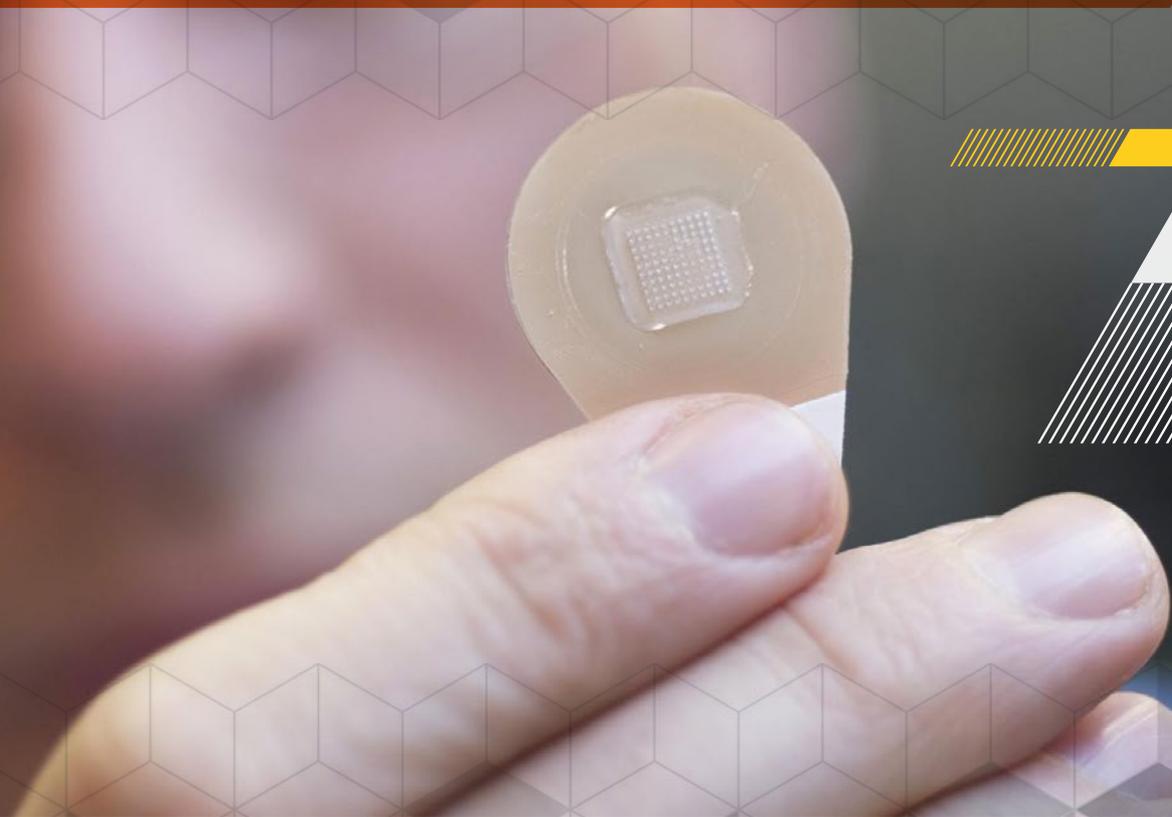
The Gender Equity Initiatives are grouped into four impact areas: hiring, promotion, and tenure; professional and leadership development; leadership appointments; and recognition and increased visibility of the Institute's commitment to gender equity.

These implementation updates (not ranked by priority) encompass the following:

- Implicit Bias Workshops
- Search Guidelines
- Processes and Pathways to Advancement and Promotion
- Salary Equity Studies
- Professional and Leadership Development Programs
- Family Friendly Programming and Policies
- Inclusive and Open Processes for Appointments
- Reporting System Awareness
- Success Story Promotion
- Event Promotion
- Gender Equity Data

CHANGING LIVES THROUGH RESEARCH

The Georgia Tech research enterprise dreams big — and puts those dreams into action by partnering with industry and government to create the next big life-altering breakthroughs.



Major Boost for Flu Vaccine Delivery

A phase I clinical trial conducted by Emory University in collaboration with researchers from Georgia Tech found that influenza vaccination using Band-Aid-like patches with dissolvable microneedles was well tolerated by study participants, generated a robust immunity against influenza, and was strongly preferred by study participants over vaccination with a hypodermic needle and syringe.

“Despite the recommendation of universal flu vaccination, influenza continues to be a major cause of illness leading to significant morbidity and mortality,” said first author Nadine Rouphael, M.D., associate professor of medicine (infectious diseases) at Emory University School of Medicine and principal investigator of the clinical trial. “Having the option of a flu vaccine that can be easily and painlessly self-administered could increase coverage and protection by this important vaccine.”

“People have a lot of reasons for not getting flu vaccinations,” said senior co-author Mark Prausnitz, Ph.D., Georgia Tech Regents Professor of chemical and biomolecular engineering. “One of the main goals of developing the microneedle patch



technology was to make vaccines accessible to more people. Traditionally, if you get an influenza vaccine you need to visit a health care professional who will administer the vaccine using a hypodermic needle. The vaccine is stored in the refrigerator, and the used needle must be disposed of in a safe manner. With the microneedle patch, you could pick it up at the store and take it home, put it on your skin for a few minutes, peel it off and dispose of it safely, because the microneedles have dissolved away. The patches can also be stored outside the refrigerator, so you could even mail them to people.”

The microneedle patch can be administered by a medical professional, but the study also investigated the possibility that patches could be self-administered, so some participants applied the patches to themselves.

Small wonders

The microneedle vaccine patch contains tiny needles that dissolve into the skin, carrying the vaccine.

Data Engineering and Science IRI Formed to Facilitate Key Partnerships

Georgia Tech advanced its efforts to tackle the challenges of big data by creating the Institute for Data Engineering and Science (IDEaS). The new Interdisciplinary Research Institute (IRI) unites researchers across Georgia Tech, fosters important partnerships with industry, and plays a key role in building the community of the recently announced Coda building in Technology Square.

IDEaS is jointly led by Co-Executive Directors Srinivas Aluru and Dana Randall, both professors in the College of Computing, and includes researchers and faculty who span all six colleges, creating critical interdisciplinary research opportunities and positioning Georgia Tech at the forefront of big data solutions.

“As Georgia Tech becomes more visible as a thought leader in data science and engineering, the big idea for IDEaS is to provide the coordination and expertise necessary to link researchers across the Institute, strengthening our position in big data,” said Steve Cross, executive vice president for Research. “Doing so better equips them to take on important and complex problems. It creates meaningful partnerships and accessible resources, and educates future data science leaders.”

IDEaS will facilitate new ventures and industrial collaboration between Technology Square’s recently announced Coda building research neighborhoods, providing a unique opportunity for academia to rub shoulders with industry, and be an asset to other premier education, research, and public-serving institutions in Georgia. It will also collaborate with several stakeholders in Georgia, including the Technology Association of Georgia and the Georgia Manufacturing Extension Partnership, and serve as an incubator for economic development opportunities.



Dana Randall and Srinivas Aluru, co-executive directors of the Institute for Data Engineering and Science.

Renowned Clinical Research Organization Joins Tech’s GCMI

The Global Center for Medical Innovation (GCMI) has acquired the ownership interest in T3 Labs, an industry-leading preclinical CRO (clinical research organization) in Atlanta, from Emory/Saint Joseph’s Inc.

T3 Labs was previously a development partner of GCMI. Their good laboratory practice (GLP) compliant services directly complement GCMI’s existing good manufacturing practice (GMP) compliant device development services and its medtech accelerator. T3 Labs has helped more than 30 medical devices achieve regulatory approval.

“From concept to development through clinical trials, the critical infrastructure to support successful medtech innovation resides within close proximity to our facilities,” said GCMI CEO Tiffany Wilson. “With T3 Labs under GCMI’s umbrella, we have enhanced operational efficiencies for both, creating

and maintaining a capital-efficient environment through collaboration and resource alignment. This is a high-value proposition for medical product innovators, entrepreneurs, and regional and global economic development.

“Medical device innovation is a complex, expensive process, yet there is a tremendous need for novel solutions to unmet clinical needs,” Wilson continued. “These are the technologies that will ultimately benefit patients and lower health care costs by improving the way physicians diagnose and treat disease. Given metro Atlanta’s and Georgia’s fantastic resources — which includes expertise at GCMI, T3 Labs, Georgia Tech, Emory Healthcare, and all University System of Georgia schools — and given GCMI’s access to resources and customers worldwide, we can help derisk many new medical technologies in a methodical way.”

Role of Big Data in Health Analytics Continues to Grow

One of the disciplines that's being dramatically transformed by the rise of big data is health analytics.

Reflecting the importance of this trend is last year's hiring of Jon Duke, M.D., to serve as Georgia Tech's director of Health Data Analytics. Based at the Georgia Tech Research Institute (GTRI), Duke previously served as director of Health Analytics and Advanced Text Mining at the Regenstrief Institute at Indiana University.

Duke will lead GTRI's initiative to improve human health through better capture, interpretation, and application of data. This effort will incorporate a spectrum of expertise including machine learning, natural language processing, high-performance computing, sensors, cybersecurity, and health data interoperability. The result will be real-world projects supporting not only research environments but also health care systems, government and industry partners, and community collaborations.

Over the last several years, Duke has directed more than \$21 million in data research for industry and government sponsors. He has worked to expand on strategies for capturing better health care data, streamlining insights for stakeholders, and delivering effective data-based interventions.

Big data is also playing a prominent role in a collaborative project between Georgia Tech and the U.S. Department of Veterans Affairs.

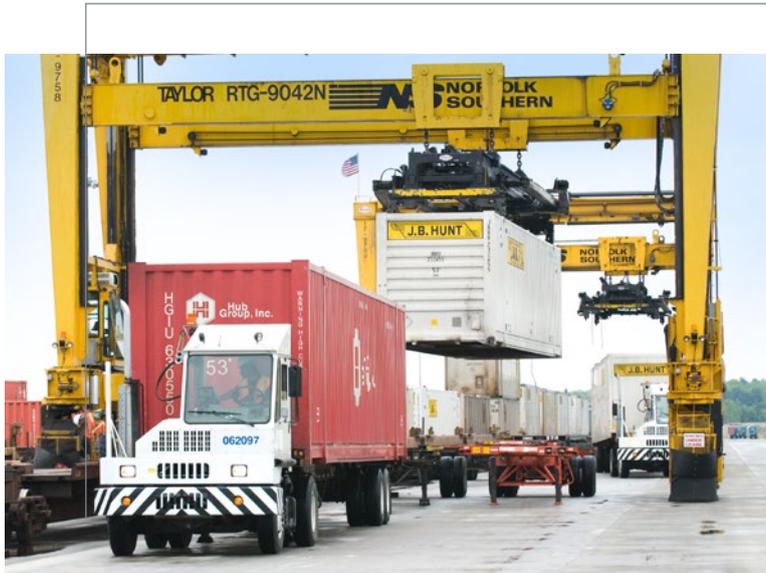
"Liberate the data" was a principal design goal for the team of public-private health care technology collaborators established by Veterans Affairs (VA) and the Veterans Health Administration (VHA) to develop a working and scalable proof-of-concept digital health platform (DHP) to support the department's long-term vision.



The open-source project demonstrated both proven and emerging technologies for interoperability and advanced functionality innovations from both the public and private sectors. The proof-of-concept delivers capabilities that VA and VHA leadership had identified as strategically important to support clinical and operational policy and program transformation plans needed to address expected changes in veteran populations, service needs, and care delivery models.

For example, the demonstration included the capability to obtain patient data from disparate military and commercial electronic records systems, and accept information from a broad range of ancillary services and consumer medical devices.

Georgia Tech served as the project's lead architect and provided overall project management.



College of Design Studying the Future of Transportation

The need for greater mobility, limited funding opportunities, and the uncertainty and opportunities offered by emerging technologies create ongoing challenges to providing sustainable infrastructure and transportation systems. To help governments and practitioners respond to these issues, the Center for Quality Growth and Regional Development in Georgia Tech's College of Design is conducting research on transportation infrastructure investment and design to promote quality growth that addresses the need for greater equity and choice, mobility, accessibility, and economic development. Multimodal and non-motorized transportation are integrated with passenger and freight movement needs in the Center's approach to research. The project, "Freight-Movement, Port Facilities, and Economic Competitiveness," is sponsored by the Georgia Department of Transportation.



Jon Duke was chosen to lead GTRI's initiative to improve human health using data analytics.

Internet of Things Research Center Adds Prestigious Firms to Its Ranks

Georgia Tech's Center for the Development and Application of Internet of Things Technologies (CDAIT) added four prominent firms to its growing list of members in fiscal year 2017. The list includes the following:

› Amazon Web Services

A secure cloud services platform offering computing power, database storage, content delivery, and other functionality to help businesses scale and grow.

› Eaton

A power management company with 2016 sales of \$19.7 billion that provides energy-efficient solutions to help consumers manage electrical, hydraulic, and mechanical power more efficiently, safely, and sustainably.

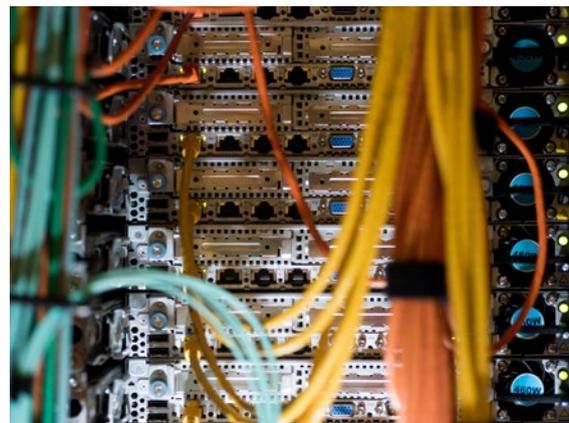
› Honeywell

A Fortune 100 software-industrial company that delivers industry-specific solutions that include aerospace and automotive products and services; control technologies for buildings, homes, and industry; and performance materials globally.

› Kimberly-Clark

The company's well-known global brands — including Kleenex, Scott, Huggies, Pull-Ups, Kotex, and Depends — enhance the health, hygiene, and well-being of people in more than 175 countries.

CDAIT (pronounced "sedate") is a global, non-profit, partner-funded center that fosters interdisciplinary research and education while driving general awareness about the Internet of Things. CDAIT bridges sponsors with Georgia Tech faculty and researchers as well as industry members with similar interests.



\$17 Million Grant to Help Establish Science of Cyber Attribution

Georgia Tech was awarded a \$17.3 million cybersecurity research contract to help establish new science around the ability to quickly, objectively, and positively identify the virtual actors responsible for cyberattacks, a technique known as "attribution."

While the tools and techniques to be developed during the four-and-a-half-year effort won't point directly to the individuals responsible, the initiative will provide proof of involvement by specific groups, identifiable by their methods of attack, consistent errors, and other unique characteristics. Such attribution could support potential sanctions and policy decisions — and discourage attacks by providing transparency for activities that are normally hidden.

The research, sponsored by the U.S. Department of Defense, will be led by researchers at Georgia Tech in collaboration with other academic institutions and companies. The project is expected to create an attribution framework dubbed Rhamnusia — in Greek mythology, the goddess of Rhamnusia and the spirit of divine retribution.

"We should know who our friends are and who our enemies are in the cyber domain," said Manos Antonakakis, an assistant professor in the School of Electrical and Computer Engineering and the project's principal investigator. "We owe it to the people of this country to objectively reason about the actors attacking systems, stealing intellectual property, and tampering with our data. We want to take away the potential deniability that these attack groups now have."

Cyber Innovation and Training Center Is Launched

Governor Nathan Deal announced \$50 million in funding to establish the Georgia Cyber Innovation and Training Center in Augusta. Georgia Tech is providing key support and resources for the center, a state-owned cyber range that brings together academia, private industry, and government to establish cybersecurity standards across state and local agencies to develop and practice protocols for responding to cyber threats. "Cybersecurity is especially important now that cybercrime is bigger than

the global black market for marijuana, cocaine, and heroin combined," said Deal. "The protection of Georgia's citizens, businesses, and institutions in the digital realm is becoming significantly more necessary as cybercrime continues to grow. Building on our efforts to keep Georgia safe and maintain its status as the No. 1 state in which to do business, we are taking action to ensure that Georgia leads the way on cybersecurity."

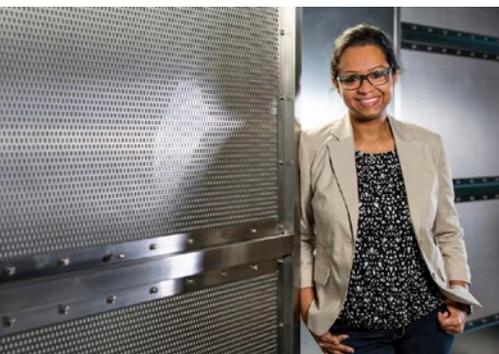
The Georgia Cyber Innovation and Training Center will advance the field of

information security with research on vulnerability that will help ensure reliable and effective practices. The facility will be focused on training, education, research, and development and will act as an incubator hub for cybersecurity startup companies. This concept is designed to challenge professionals and systems in a safe and protected setting in preparation for cyber incidents.

Social Media Data Are Basis of Mental Health Index

Using information gleaned from social media, researchers from Georgia Tech have created a mental health index for the nation's highest-ranked colleges and universities. Their study looked at five years of data on Reddit, scanning it for comments about issues that included depression, financial and academic anxiety, and thoughts of suicide. Schools were given a score based on the frequency of those threads and robustness of the conversations.

The research found that students at higher-ranked schools have better mental health than those at lower-



ranked colleges. The well-being index is also better at universities with higher tuition. It's lower at large public schools with a majority of female students. The study doesn't identify schools individually for privacy reasons.

"Online conversations about mental health issues are definitely increasing," said Munmun De Choudhury, assistant professor in the School of Interactive Computing, who led the study. "We saw it rise 16 percent from 2011 to 2015, even after we took into account that Reddit has become more popular in recent years."

De Choudhury suggests that the reason there are fewer posts about tuition anxiety at more expensive colleges is because their students tend to be more affluent than the average public school attendee. Therefore, the stresses of paying for college or going into debt aren't as great.

Munmun De Choudhury,
School of Interactive Computing



Scheller Research Indicates That Sound in Ads Matters

Lower pitches in voices or music in advertisements lead consumers to infer a larger product size, according to researchers at Georgia Tech's Scheller College of Business and Vanderbilt University.

While sound is a fundamental element of nearly all marketing communications, from commercials to spokespeople and sales associates, Michael Lowe, assistant professor of marketing at Scheller College of Business, and Kelly Haws, associate professor of marketing at Vanderbilt's Owen Graduate School of Management, indicated that marketers don't have a firm grasp on what it communicates to customers.

"Research to date suggests that managers too often select music and spokespeople by intuition, with limited understanding regarding how these elements might affect actual product perceptions," Lowe and Haws wrote in their new paper for *The Journal of Marketing Research*. "Some degree of

importance, then, should be given to understanding what is actually being communicated about the product at a sensory level."

In their paper, titled "Sounds Big: The Effects of Acoustic Pitch on Product Perceptions," the coauthors show in six different studies how the effects of acoustic pitch on consumer beliefs depend on "cross-modal correspondence," defined as the compatibility of stimuli perceived by one sense, such as sound, with a sensory experience in another, like sight.

One study found that acoustic pitch differences in voice affect perceptions of size. Participants listened to a radio advertisement for a new sandwich at a fictitious sandwich chain where a spokesperson's voice was digitally altered to be higher or lower. Participants who heard the ad featuring the lower-pitched voice believed the sandwich was significantly larger than those who heard the higher-pitched version.

Imlay Foundation Gives \$5 Million for Pediatric Therapies Research



From left, M.G. Finn, chief scientific officer of Georgia Tech's Pediatric Technology Center and chair of the School of Chemistry and Biochemistry; Mary Ellen Imlay, chair of the Imlay Foundation; and Dr. Patrick Frias, chief operating officer at Children's Healthcare of Atlanta, in a laboratory in the Krone Engineered Biosystems Building, where research is conducted via the Children's-Georgia Tech partnership.

Children's Healthcare of Atlanta and Georgia Tech received a \$5 million grant from The Imlay Foundation for the development of pediatric therapies. The single largest grant made by The Imlay Foundation in its 25-year history, the commitment establishes The Imlay Innovation Fund at Children's Healthcare to advance collaboration between Georgia Tech and Children's pediatric innovation and discovery efforts.

The research partnership with Georgia Tech is called the Children's Healthcare of Atlanta Pediatric Technology Center. The collaborative research fostered through this partnership brings together clinicians from Children's, academic scientists from Emory University, and engineers from Georgia Tech to solve important problems in pediatrics and develop technological solutions for improving the health of children. With the formation of the Children's Pediatric Technology Center, Children's and Georgia Tech are providing extraordinary opportunities for interdisciplinary collaboration in pediatrics, creating breakthrough discoveries that often can only be found at the intersection of multiple disciplines.

"It is through generous philanthropy that we are able to foster these alliances that help enhance the lives of children," said Donna Hyland, president and CEO of Children's. "Mary Ellen Imlay and her late husband, John, have demonstrated their love and appreciation of Children's and Georgia Tech in a myriad of ways over the years through their volunteerism, board leadership, and philanthropy. This grant furthers their deep commitment to Children's and Georgia Tech."

The grant will help fund two collaborative programs, including Quick Wins, a novel program that allows Children's clinicians and clinical administrative leaders to bring problems that impact care delivery to the attention of scientists and engineers at Georgia Tech to help develop technology-based solutions to improve pediatric health care. The funds will also support a program to help bridge the gap following proof to concept, giving investigators the ability to collect data, complete further proof-of-concept studies, or produce prototypes for testing in order to advance a solution to the next stage of development.

Scheller College Professor Michael Lowe studied the acoustic pitch of advertisements and found a relationship to consumer beliefs about the size of the product: lower tones made people believe products were bigger.



Georgia Tech's faculty and students partner closely with industry and government to develop innovations that result in economic growth and 21st-century jobs. The Institute is deeply invested in the success of Atlanta and Georgia.



DRIVING ECONOMIC GROWTH



Georgia Tech, City of Atlanta, and Portman Holdings officials celebrate the December 2016 ground-breaking for Coda, which will serve as a state-of-the-art resource for breakthrough research.

Coda Groundbreaking Signals Major Expansion of Technology Square

Construction began in late 2016 on the new Coda building, which represents the next phase of Georgia Tech's Technology Square.

The nearly 750,000-square-foot mixed-use project will create new opportunities in interdisciplinary research, commercialization, and sustainability. It will also enhance the area's innovation ecosystem, which fosters collaboration between the Institute, startups, and established industry leaders.

"Since it first opened 13 years ago, Technology Square (Tech Square) in Midtown Atlanta has rapidly become one of the leading regional innovation hubs in the southeastern U.S. Tech Square promotes and facilitates innovation and collaboration between businesses and industry and the Georgia Tech community," said President G.P. "Bud" Peterson. "Coda, which includes a high-performance computing center, will take innovation to a whole new level. This iconic building developed by Portman



Karen Fite (right), director of the Georgia Manufacturing Extension Partnership (GaMEP) at Georgia Tech, worked with Scott Bunn (left), operations manager at Newnan, Georgia-based Groov-Pin to improve the company's processes related to scheduling, cutting lead time between orders, and delivering shipments to customers on time.



\$13 Million Award Will Continue Support for Georgia Manufacturers

Georgia Tech will receive \$13.5 million in federal funding over the next five years to continue a program that has assisted small- and mid-sized manufacturing companies in Georgia for more than half a century. The funding will be used by the Georgia Manufacturing Extension Partnership (GaMEP), which serves manufacturers through a network of 10 regional offices and more than 30 extension personnel statewide.

In fiscal 2015, the GaMEP assisted nearly 2,000 Georgia manufacturers, helping them create or save 2,149 jobs, invest \$106 million in facilities, reduce operating costs by \$25 million, and increase sales by more than \$200 million. Established in 1960, GaMEP is a program of the Enterprise Innovation Institute, Georgia Tech's business assistance and economic development unit.

"Manufacturing is a key component of Georgia's economy, and this funding will allow us to continue serving the companies that provide jobs, investment, and new economic activity across our state," said Karen Fite, director of GaMEP.

"We are proud to be part of the national Manufacturing Extension Partnership helping companies expand their top-line growth and reduce bottom-line cost. The Georgia MEP helps our state's manufacturers grow and remain competitive in world markets."

GaMEP offers assistance in such areas as lean and process improvement, quality management, energy management, sustainability, and business growth — which includes new customer development, new market expansion, and new product development. GaMEP also connects companies to resources and expertise at Georgia Tech.

The funding will take the form of a five-year cooperative agreement in which federal funds will be matched by state funds and contracts with manufacturers requesting assistance with a broad range of technical, managerial, and marketing issues. The federal funding is provided by the U.S. Commerce Department.

Georgia Tech also supports the state's manufacturing companies through a partnership between the Georgia Tech Manufacturing Institute (GTMI) and the Technical College System of Georgia (TCSG). The goal of the partnership is to improve Georgia's advanced manufacturing skills gap. One result of this partnership has been a pilot program developed by West Georgia Technical College (WGTC) and GTMI for WGTC students to intern at GTMI in advanced manufacturing research and technology transfer projects. The pilot program is designed to address the lack of potential workers for skilled production and technician jobs.

Holdings will become a magnet for corporations and startups alike, while serving as a state-of-the-art resource for breakthrough research. As such, this new facility will help propel the region and Midtown Atlanta as one of the leading innovation ecosystems in the Southeast and the nation."

Portman Holdings owns the Coda building, and John Portman & Associates is designing the facility. Georgia Tech will be the anchor tenant, occupying about half of the 620,000 square feet of office space. The project includes nearly 40,000 square feet of retail space and an approximately 80,000-square-foot data center. Construction is scheduled to be completed in 2019.

More Prestigious Firms Locate in Tech Square

The number of innovation centers and corporate laboratories choosing to call Tech Square home reached an all-time high of 20 this past year. The partnerships that form between these innovation centers and Georgia Tech faculty and students are producing transformational breakthroughs that stimulate economic growth and improve the quality of life. The following corporations opened new innovation centers in Tech Square in 2016-17:

› Boeing

In the Boeing Manufacturing Development Center, company researchers and Georgia Tech engineering students are working together to implement automation in industrial applications. The center is located in Georgia Tech's new 19,000-square-foot Delta Advanced Manufacturing Pilot Facility on 14th Street.

"This advanced center will let Georgia Tech students collaborate with Boeing engineers to help drive the development of innovative factory automation solutions in aerospace," said Greg Hyslop, Boeing chief technology officer and senior vice president of Engineering, Test & Technology.

One of the center's first research projects will focus on utilizing industrial robotics for machining and fabrication applications that can be applied to the manufacturing processes at Boeing.

› Chick-fil-A

The Chick-fil-A Innovation Satellite Office, along with the ongoing intern recruitment program housed there, is part of a larger partnership with Georgia Tech and emphasizes Chick-fil-A's commitment to innovation.

The 6,000-square-foot space is located in the historic Biltmore. Chick-fil-A is working with faculty and students to explore design, innovation, and development projects among various majors and disciplines.

"Georgia Tech and Chick-fil-A enjoy a long and collaborative relationship, including employing our undergraduates as interns and hiring our graduates," said President G.P. "Bud" Peterson. "We are delighted to welcome them to Georgia Tech's Biltmore to enhance our partnership and expand the opportunities for interaction with our students, faculty, and staff."

› Emerson

The opening of The Helix Innovation Center at Georgia Tech expands Emerson's global network of innovation facilities focused on climate solutions, including The Helix Innovation Center at the University of Dayton in Ohio, The Europe Solution Center in Aachen, Germany, and The Emerson Innovation Centre in Pune, India.

Emerson is leveraging a variety of projects to explore solutions to customer problems through The Helix Innovation Center at Georgia Tech. Early projects already completed include multiple industry and product ideation sessions, reviews of new technology and entrepreneurial concepts, early development of advanced components for Emerson building management systems, and student engagements in research projects and prototyping product concepts.



› Siemens

The Data Analytics and Applications Center will help transportation providers use big data to improve operations and safety. For example, the Siemens team will work with the City of Atlanta to collect information from the Atlanta Streetcar and analyze data points to make the best use of the fleet.

Georgia Tech has partnered on more than 20 projects with Siemens over the past four years in manufacturing, health care, and energy.

For more than 15 years, the Siemens Foundation has collaborated with the Institute on activities that include improving K-12 science and math education in underserved communities; hosting the Siemens Competition in Math, Science, and Technology; and preparing students for the future of manufacturing.

› UCB

The UCB Solution Accelerator provides a unique environment designed to drive collaboration between UCB and the Georgia Tech community to develop solutions that will positively impact the lives of those living with acute diseases. The 2,500-square-foot innovation center is located in the Centergy Building at Tech Square.

Joining President G.P. "Bud" Peterson (second from right) at the opening of the UCB Solution Accelerator were (from left) LaKeisha Parnell, Jeff Wren (head of UCB's Neurology Patient Value Unit), and Chris Maxwell. Parnell and Maxwell are patient advocates and peer navigators at UCB.

With its North America Headquarters in Smyrna, Georgia, UCB is a global biopharmaceutical company focused on the discovery and development of innovative medicines and solutions to treat severe diseases of the immune and central nervous system. As the first pharmaceutical company with an innovation center in Tech Square, UCB will be able to tap into Georgia Tech's state-of-the-art machine learning and advanced analytics resources to improve patient care and the patient experience.



NSF I-Corps Grant Supports Entrepreneurship, Innovation

The National Science Foundation (NSF) awarded a \$3.4 million Innovation Corps (I-Corps) grant to Georgia Tech's VentureLab program to expand its work in teaching entrepreneurship, support research, and innovation.

The NSF's I-Corps program — a boot camp that shows what it's like to form a startup — helps NSF-funded researchers learn how to commercialize their findings and determine whether a market actually exists for what they developed.

"I-Corps nodes support the national innovation ecosystem and help some of America's brightest researchers test the commercial potential of their discoveries," said Grace Wang, acting assistant director for the NSF Directorate for Engineering. "We are thrilled to support these regional innovation hotbeds, which will help to foster local economic development and expand access to more researchers of all different backgrounds who seek entrepreneurship training."

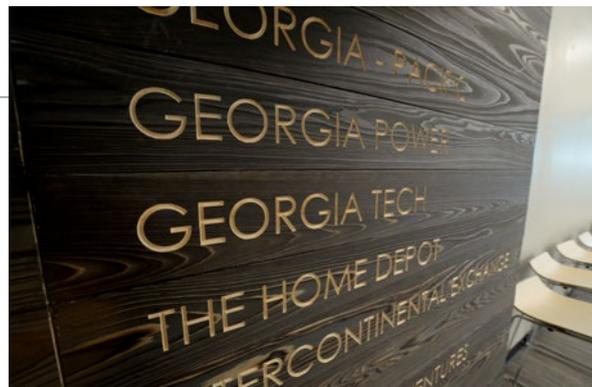
The grant, one of five the NSF awarded to schools across the country, supports innovation hubs called I-Corps nodes.



This new NSF grant expands Georgia Tech's efforts and creates the I-Corps South Node, which includes Georgia Tech, the University of Alabama in Tuscaloosa, the University of Alabama at Birmingham, and the University of Tennessee, Knoxville, Haslam College of Business.

Because of its long experience with forming companies from university research, Georgia Tech was selected in 2012 to be among the first institutions to become "nodes" teaching the I-Corps curriculum. VentureLab is Georgia Tech's technology commercialization incubator that primarily serves Tech faculty, staff, and students who seek to launch startup companies from the technology innovations they have developed.

The Engage accelerator space is housed in ATDC and will be home base for 10 companies selected as the accelerator's first cohort. Participating in Engage are (from left) Jonathan Allen of Gauge, Amari Ruff of Sudu, Andy Monin of Cyrano, Ryan O'Donnell of EmployUs, Craig Fuller of Transrisk, and Allison Robinson of The Mom Project.



Engage Accelerator Launches with \$15 Million in Corporate Support

A new mentorship-driven accelerator and venture fund targeting high-tech startups has arrived in Atlanta. The national program, called Engage, was launched through a joint announcement by Georgia Tech, the City of Atlanta, and the CEOs of 10 leading global corporations.

The Engage accelerator is open to startups across the country, with a focus on mentoring and market access strategies. The program is supported through a venture fund, and 10 corporations made an initial commitment of \$15 million. In addition, the corporations are actively supporting the accelerator through mentoring, education, and collaboration.

"Georgia Tech is committed to continue working with both large corporations and startups to grow the entrepreneurial ecosystem in Atlanta and throughout the Southeast," said President G.P. "Bud" Peterson. "By engaging the business community to maximize our collective strengths, we can attract and grow new companies, foster economic development, and retain talent in Georgia."

Engage is a key initiative of the Atlanta Committee for Progress (ACP), a coalition that includes the mayor of Atlanta, leading CEOs, and university presidents.

Keith McGregor of VentureLab speaks to attendees from 27 universities at the first I-Corps program at Georgia Tech.



MAKING COMMUNITY CONNECTIONS

Supporting the members of the Tech community and the Institute's larger communities is a top priority of the Institute.

Georgia Tech students offering their time and talents to mentor girls in STEM fields through the Stempower program include (from left) Anokhi Patel, Maya Holikatti, Kaitlin Rizk, and Natalie Leonard. Anokhi, Rizk, and Leonard are cofounders of the program.





Kaitlin Rizk, co-founder of Stempower and undergraduate in the H. Milton Stewart School of Industrial and Systems Engineering, mentors fourth- and fifth-grade Girl Scouts by encouraging them to explore STEM and learn key character values.

Tech Students Mentor Girls in STEM Fields



When five Georgia Tech women students co-founded Stempower in 2014, they wanted to boost the flagging self-confidence of young women in science, technology, engineering, and mathematics (STEM) fields, despite their natural interest and ability.

Stempower is a mentoring program offered by Georgia Tech women students that encourages girls to explore STEM and learn key character values. Partnering with the Girl Scouts of Greater Atlanta, two Stempower mentors meet bimonthly with fourth- and fifth-grade girls in a given troop. Each meeting is comprised of a different STEM activity — building rockets, making circuits, or learning to code — paired with a character lesson like encouraging questions and valuing mistakes.

Three years later, after initial support from the Grand Challenges Living and Learning Community, Stempower has become one of the outreach initiatives

of the Center for the Study of Women, Science, and Technology (WST), with eight Tech mentors and 100 Girl Scout mentees in the United States. Stempower was also launched at Uganda’s Makerere University after one of the group’s co-founders, Kaitlin Rizk, witnessed similar women’s empowerment issues during a service project a few years ago.

“After mentoring for years, I still clearly remember my first meeting with a troop,” said Stempower co-founder Natalie Leonard. “The meeting opened with a broad discussion about women scientists and engineers. Upon mentioning Mae Jemison, the first African-American woman astronaut, girls raised their hands and jumped up and down for the opportunity to tell me what they already knew about her. After this first meeting, I walked away impressed by their knowledge and energy, and encouraged that supporting these girls through Stempower would help each of them thrive.”



Recycling Program Expands to Help Feed Hungry Students

For Georgia Tech students, moving out of campus housing has become a prime opportunity to help others, including each other.

Earlier this year, the Student Move-Out Recycling Program evolved to not only collect recyclable waste and donations, but also help feed hungry students.

In addition to its traditional role of diverting students’ unwanted furniture and other reusable or recyclable materials from dumpsters when they move out of campus housing, a more recent partnership is making a significant impact on campus. Klemis Kitchen,

a free program that provides pantry items to food-insecure Georgia Tech students, received 534 pounds of non-perishable food from student donations during the 2016 move-out.

The history of Klemis Kitchen reveals that food insecurity is not a recent development among college students, even at Georgia Tech.

“It means so much to the students who need help to realize that some of this help is actually coming from their peers and that their peers care,” said Dana Hartley, Tech’s campus liaison for homeless students.



Georgia Tech, Atlanta Braves Sponsor STEM Competition

Middle school student teams used their science and engineering skills to build baseball launchers.

More than 100 metro Atlanta students, teachers, and volunteers gathered at the Georgia Tech Campus Recreation Center (CRC) last spring for the finale of the inaugural Braves STEM Competition, an event that combines STEM education and baseball.

Middle school student teams from two Atlanta public schools and four Cobb County schools used their science and engineering skills to build baseball launchers during the 2016-17 school year. Then the teams brought their launchers to the CRC to test them for accuracy. During the oral presentation portion of the competition, a panel of judges evaluated students on their STEM accuracy skills.

“Too many times, children and adults are very smart but don’t know how to explain scientific terms and concepts in a concise, coherent way,” said Mindy DiSalvo, a senior research faculty member at the Georgia Tech Research Institute (GTRI) and the competition organizer.

Physicists in GTRI’s Electro-Optical Systems Laboratory spent two months designing the launcher, and worked with GTRI Machine Services to develop materials and parts for the launcher kits.

The judges chose Cobb County’s Cooper Middle School and the team’s Star Wars-themed launcher as winners of the competition.

“STEM is fun,” said David Thompson, a Cooper Middle School student. “It’s a more advanced, rigorous environment, which I think will challenge my intellectual ability to its fullest capacity. And that’s what I really want in life — to be challenged.”

The Atlanta Braves invited the Cooper team to use their launcher to throw out the first pitch at the Braves’ May 5 game at SunTrust Park.



Tech Police Launch Key Initiatives

› Social Media

Georgia Tech Police Chief Rob Connolly accepted the “Top Cop” award on behalf of the Georgia Tech Police Department (GTPD) for its innovative use of social media during the 2017 Social Media, the Internet, and Law Enforcement (SMILE) Conference last spring.

“We are proud of the work our officers and student reporters have been doing in social media to build a strong connection with our community and discover concerns,” Connolly said. “This award recognizes that GTPD is a leader in using the latest technology to improve the safety of the campus.”

GTPD initiated its efforts on social media platforms in 2011 with Twitter and Facebook and added a presence on SnapChat, Instagram, reddit, and YouTube. GTPD is recognized as a social media leader among law enforcement agencies for their commitment to social media strategy.

“What’s different for us is that we are taking a comprehensive approach,” said GTPD Lt. Anthony Leonard, who supervises the officers and students who work on social media. “We have dedicated space, we have dedicated staff, and we use students. The students are one of the biggest differences because we’re utilizing members of the community to better connect with the whole community.”



Led by Officer Loran Crabtree, the Georgia Tech Police Department has been operating a social media center since the end of spring semester 2016. The center is staffed by students who help GTPD connect with the student population on a variety of social media platforms.

Institute Diversity Honors Gender Equity Champions

In light of the 2016 Diversity Symposium theme, "Celebrating Women at Georgia Tech," Institute Diversity created the Gender Equity Champion Awards to recognize members of the faculty, staff, and student body, and a unit (office,



› Coffee With A Cop/Adopt A Cop

In January, GTPD launched Coffee with a Cop and kicked off Adopt a Cop with residence halls in February. Each program is designed to get officers mingling with students, faculty, and staff to increase dialogue and break down barriers.

"We do a lot to interact with students, but Coffee with a Cop is for faculty, staff, and anyone on campus," said Officer Jessica Howard of GTPD's Crime Prevention Unit. "We're here to serve and protect, and we do that best when we have good relationships with everyone on campus."

Howard is hoping the interactions will be meaningful and worthwhile enough that word will spread and attendance build.

"We don't want to be intimidating," she said. "There's no agenda. Just conversation."

Like Coffee with a Cop, Adopt a Cop is designed to bring members of the campus community into contact with GTPD officers. This initiative is centered around campus housing units.

"We want to build a relationship and give the residents a sense that they have their own 'go-to' officer," Howard said. "A lot of people may not be comfortable just calling the department. When they know someone, they feel more comfortable reaching out."



Georgia Tech Police Chief Rob Connolly meets students at the inaugural Coffee With a Cop event January 30 at Blue Donkey Coffee in the Student Center.

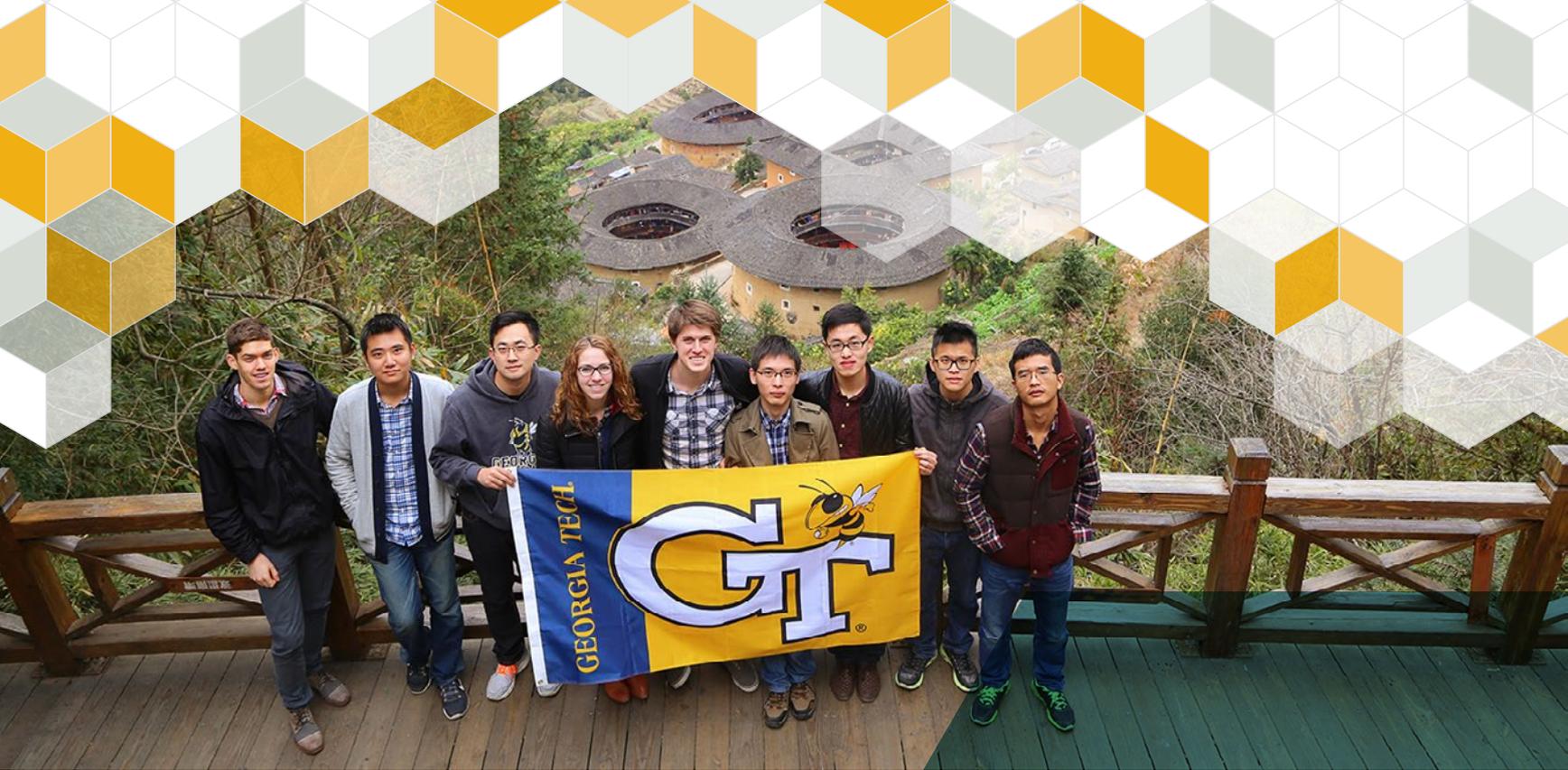
Institute Diversity Associate Vice President Julie Ancis presents an award to Kendall Rankin, undergraduate student in the H. Milton Stewart School of Industrial & Systems Engineering. Rankin was the Gender Equity Champion Award winner in the student category.

department, school, or lab) for significantly demonstrating gender diversity, equity, and inclusion within the campus community.

The Gender Equity Champion Award winners were honored at the Eighth Annual Diversity Symposium last fall.

Award recipients included:

- **Faculty Award:** Mary Frank Fox, ADVANCE Professor, School of Public Policy, and co-director, Center for the Study of Women, Science, and Technology
- **Staff Award:** Shannon Sullivan, graduate program manager, Coulter Department of Biomedical Engineering
- **Student Award:** Kendall Rankin, undergraduate student, Stewart School of Industrial and Systems Engineering
- **Unit Award:** School of Physics



Engaging with education, research, and innovation partners around the world is a primary source of Georgia Tech's strength and ongoing vitality.

ADVANCING A GLOBAL PERSPECTIVE

Shenzhen Partnership Advances Key Strategic Relationships

A new educational collaboration among Georgia Tech, the city of Shenzhen, and Tianjin University in China will expand global opportunities in science, technology, and engineering education. President G.P. "Bud" Peterson signed the collaboration agreement in a ceremony in Shenzhen last fall.

The Georgia Tech Tianjin University Shenzhen Institute offers majors in electrical and computer engineering, computer science, industrial design, environmental engineering, and analytics. Georgia Tech coordinates the graduate programs at the specialized institute, while Tianjin University, China's oldest university, coordinates the undergraduate programs.

The Shenzhen government provided land, startup funding, and operational subsidies. The vision is that the specialized institute will enroll 800 undergraduate and graduate students from throughout the world by 2020, and 3,000 students by 2030. It will present new opportunities for U.S.-based students, including study abroad programs and internships, and will expand Georgia Tech's China Summer Program.

"This historic agreement is in alignment with Georgia Tech's focus on internationalization, as outlined in our 25-year Strategic Plan," said Peterson. "It will serve as a great vehicle to engage our strong alumni base in China and increase Georgia Tech's global reputation as a leading technological research institution."

"Having a full international campus is unusual, and we only do that when there is a compelling reason to benefit the institutions involved, as well as to provide a unique educational experience for students," said Rafael L. Bras, provost and executive vice president for Academic Affairs and the K. Harrison Brown Family Chair. "Today's agreement marks such an opportunity."

Shenzhen is China's high-tech capital and is often referred to as the "Silicon Valley of China."

"This initiative was spearheaded by Professor G. Tong Zhou, associate vice provost for International Initiatives, and represents an exciting opportunity for Georgia Tech to be present in one of the fastest-growing technological centers

Carters Receive Ivan Allen Prize for Social Courage

President G.P. “Bud” Peterson awarded the 2017 Ivan Allen Jr. Prize for Social Courage to Jimmy and Rosalynn Carter last February.

“It is appropriate that this, our first Ivan Allen Jr. Prize for Social Courage to be presented to a couple, will be awarded to Jimmy and Rosalynn Carter,” Peterson said. “Together, they exemplify the far-reaching global changes that are possible through a lifetime partnership in social courage.”

The former president and first lady were jointly recognized for their partnership in a courageous collaboration to improve human rights and alleviate suffering around the world. Over the span of more than four decades, their work has focused on improving health, preventing and resolving conflicts, and enhancing freedom and democracy.

They are the first couple to receive the award, which recognizes those who demonstrate leadership to improve the human condition despite personal risks and challenges.

After the ceremony, the Carters participated in a town hall discussion with Georgia Tech students.

“It’s a pleasure always to be associated with the Ivan Allen family in any way. We’ve been close to the family for a long time,” said Jimmy Carter, who attended Georgia Tech and received an honorary degree from the Institute in 1979. “In every respect my heart is with Georgia Tech and I’m particularly grateful to

Ivan Allen himself and his family, and this award has special meaning for me.”

“This is a great honor for me, especially to receive an award in the name of Mayor Ivan Allen Jr. for whom I had such great admiration,” Rosalynn Carter said. “Mayor Allen was a beacon of light for Jimmy and for me and so many others in our whole country, standing up for what was good and what was right.”

The Carters, who have been married for more than 70 years, have accomplished much together, whether it be their time in the White House, his receiving the Nobel Peace Prize in 2002, or her groundbreaking work in mental health advocacy.



President G.P. “Bud” Peterson (right) presents the 2017 Ivan Allen Prize for Social Courage to Jimmy and Rosalynn Carter. The former president and first lady are the first couple to receive the Ivan Allen Prize.

of China,” said Yves Berthelot, vice provost for International Initiatives. “Educational and research programs, combined with internships, will be tremendously beneficial to our students.”

Future plans for the Georgia Tech Tianjin University Shenzhen Institute include developing major research centers led by world-renowned Georgia Tech faculty.

Georgia Tech President G.P. “Bud” Peterson, seated left, signed an agreement in a ceremony in Shenzhen, China, on Dec. 2, 2016, to create a new collaboration with the city of Shenzhen and Tianjin University. Co-signers with Peterson are Vice Mayor Yihuan Wu of Shenzhen Municipal People’s Government, center, and Tianjin University President Denghua Zhong, right.





Undergraduates Explore Social Entrepreneurship in Eastern Europe

Every summer, through the Leadership for Social Good Study Abroad Program, faculty and staff of the Institute for Leadership and Entrepreneurship (ILE) lead a group of undergraduates on an educational experience in Hungary, Poland, and the Czech Republic.



Carl Terns taught guitar at Domino Tanoda, an after-school and summer program for low-income children, in Budapest.

Through classroom lectures, site visits, and close work with nonprofits, students learn how social enterprises and nonprofit institutions work and what type of leadership is effective in this sector.

This past year, students spent the first week in Budapest, Hungary, visiting Bator Tabor, a therapeutic recreation camp for children living with cancer or other chronic illnesses.

“Hearing the impact and experiencing the impact [an organization has] is very different,” said Manaka Sato, a biomedical engineering major. “Our group had the opportunity to experience some of the influence that Bator Tabor has on the seriously ill children firsthand.”

During the five weeks that the students spent in Budapest working with nonprofit organizations, they had the opportunity to see how the theory they learned in the classroom worked in practice, witness the challenges small organizations face on a daily basis, and contribute to solving those problems.



Olympic Swimming Team Practices in Aquatic Center

Last summer the McAuley Aquatic Center hosted the U.S. Olympic diving and swimming teams leading up to the 2016 Summer Games in Rio de Janeiro, Brazil, providing the campus community and the public an opportunity to see them practice and get autographs.

The USA Diving Team hosted a send-off celebration that included open practices, team-building exercises, and visits to local children’s hospitals. The events also included members of the 1996 Diving Team from the Atlanta Olympics.

Michael Phelps swims at McAuley Aquatic Center during an open training session on July 30, 2016.





Students spent the first week in Budapest visiting Bator Tabor, a therapeutic recreation camp for children living with cancer or other chronic illnesses.

Alternative Service Break Efforts Continue to Grow

Each year, the number of Tech students choosing to devote their spring breaks to service-learning projects increases. Locations for service projects last spring included U.S. sites as well as Central America and South America.

Biology major Ann Johnson created a prototype device that would make water testing cheaper, easier, and more portable, and tested it at this storage tank outside Cochabamba, Bolivia.



› Bolivia

Joe Brown, assistant professor in the School of Civil and Environmental Engineering, traveled with students from his CEE 4350 course, Environmental Technology in the Developing World, to Cochabamba, Bolivia. The water quality-focused research trip included a group of 10 students and two teaching assistants.

Over 10 days, the group worked with local partners in Bolivia to conduct water quality surveys. The Catholic University of Bolivia joined with Tech students for a cultural and scientific exchange.

This course runs in parallel with similar courses at Duke University and Yale University. At the end of the semester, the three classes met at a research conference in New York to present their findings.

› Costa Rica

Third-year chemical engineering major Allison Sellers led a trip to Costa Rica. A team of 14 traveled to the Central American country to work on a sea turtle rescue project with Community Collaborations. In their free time, group members participated in canopy tours and rainforest hikes.

“I was excited about leading the trip to Costa Rica because I’m passionate about the environment and traveling abroad,” Sellers said. “This trip was unique because of its purpose and international destination.”

Sellers has attended service break trips since her first year at Tech. She was involved with service work throughout high school.

› Florida

The Office of International Education (OIE) and Serve-Learn-Sustain partnered to host an Alternative Service Break trip to DeFuniak Springs, Florida. The trip provided an opportunity for participants to take part in an environmental service project near the Gulf Coast. More than 40 students from the U.S. and around the world participated.

This year’s trip supported the Living Shoreline, a conservation project used in coastal regions to help promote the growth of micro-ecosystems and reduce erosion. It includes the bagging of fossilized oysters, which are strategically placed along beaches to help build up sand pockets, slowing the effects of erosion.

Alumnus Todd Stansbury Named Athletic Director

Former Tech football player and Oregon State University Athletic Director Todd Stansbury returned to his alma mater last year as athletic director.

Stansbury — a 1984 industrial management alumnus — had served as Oregon State’s athletic director since 2015 following a nine-year stint as the university’s executive associate athletic



director. During his time at Oregon State, Stansbury was part of a senior management team that raised \$150 million for a football stadium expansion, in addition to fundraising for the construction of a sports performing center. He also was part of a team that established several career development initiatives for student-athletes.

“Todd Stansbury is committed to athletes’ success both on and off the field,” said President G.P. “Bud” Peterson. “His global perspective and leadership experience in athletics and development, combined with a lifelong passion for Georgia Tech, make him the ideal candidate. I believe this is one of those rare golden moments in life where opportunity meets ambition. We welcome him home.”

Stansbury’s resume also includes roles as athletic director at the University of Central Florida and East Tennessee State University. He was Georgia Tech’s assistant athletic director for academics from 1988–1995.

Athletic Director Todd Stansbury brings extensive experience not only in athletics leadership but also philanthropy.

Josh Pastner won more games than any first-year coach in Tech basketball history.



Josh Pastner Begins New Era in Men’s Basketball

Former University of Memphis head coach Josh Pastner was named men’s head basketball coach last year.

Pastner, who was only 38 when he joined the Yellow Jackets, compiled a 167–73 record over seven seasons as the head coach at Memphis, where the Tigers earned bids to the NCAA Tournament four times. He is the second winningest active coach under the age of 40 in NCAA Division I.

Despite his young age, Pastner has been involved in basketball at the Division I level for 20 years, in both player and coaching roles. He has been a part of teams that have won 490 games, and played in 17 NCAA Tournaments and 18 total post-season events.

At the end of his first season at Tech, Pastner was named the John “Whack” Hyder Georgia College Coach of the Year by the Atlanta Tipoff Club. In his first year at Tech, he coached the Yellow Jackets to a 20–15 record and the final four of the National Invitation Tournament. He has won more games than any first-year coach in Tech history.

Josh Okogie, sophomore guard, goes up for a shot against N.C. State.





Finally Imani Tilford, point guard, drives up the court during Georgia Tech's 69–61 defeat of Washington State in the NIT semifinals. It would take three overtimes for Michigan to defeat the Jackets in the finals. Georgia Tech was only the third school ever to reach the final in both the men's and women's NIT in the same season.

Men's and Women's Teams Compete in NIT Championships

Both the men's and women's basketball teams advanced to the respective championship games of the National Invitation Tournament (NIT).

Although both teams ultimately were defeated, the NIT championships represented a stellar achievement for each of the programs. The men's team, which last reached the finals in 1971, fell to Texas Christian University in the championship game.

Despite the loss, it was a successful season for the Yellow Jackets. A program that Head Coach Josh Pastner referred to as a "major rebuild job" won 21 games and competed in a national post-season tournament. "I promise you," Pastner said after the game, "to be playing in this final game, it's miraculous."

The Michigan Wolverines defeated the women's team 89–79 in a dramatic championship match-up that went into triple overtime.

"I'm really proud of the progress we made throughout the course of the season," said Head Coach MaChelle Joseph. "We lost a lot of close games with a young team — four of our top eight scorers and rebounders were new to the program — so I thought we were kind of on a journey all season long to figure out our roles."

CELEBRATING ATHLETIC SKILL

The athletic field is a key setting for Tech students to develop their leadership and team-building skills — gifts that will help them succeed regardless of their career aspirations.



NCAA Graduation Success Rate Sets New Record

Georgia Tech athletics' NCAA Graduation Success Rate (GSR) reached an all-time high this past year of 87 percent, according to NCAA data.

The Institute's GSR is its highest since the NCAA began using the metric in 2005 and marks the fourth-straight year that Tech's GSR has increased.

At 87 percent, Georgia Tech's GSR also surpasses the Division I average of 84 percent.

Individually, 10 of Georgia Tech's 13 intercollegiate sports have GSRs higher than the national average for their respective sports. Five programs — men's cross country/track and field, women's cross country/track and field, golf, women's tennis, and volleyball — own perfect 100-percent GSRs.

GSR measures the success of an athletics department in graduating its student-athletes within a six-year period. Unlike the Federal Graduation Rate, which assesses only first-time, full-time freshmen, GSR also includes transfer students and mid-year enrollees in the sample.

The latest GSR cohort includes student-athletes who enrolled at Georgia Tech from 2006–09.

Running back Qua Searcy charges forward during the UGA–Georgia Tech match in Athens.

Football Team Caps Off Stellar Year with UGA, TaxSlayer Bowl Victories

In the final seconds of their annual "grudge match" against the University of Georgia, the Georgia Tech Yellow Jackets wanted to throw a pass to their quarterback.

When it was clear that wouldn't work, Qua Searcy decided to improvise.

The result: a soaring touchdown run with 30 seconds remaining that gave Georgia Tech a stunning 28–27 victory over Georgia last Thanksgiving weekend.

Searcy's 6-yard touchdown off a busted play capped a fourth-quarter comeback that sent the Yellow Jackets (8–4) into a joyous celebration before a mostly stunned crowd between the hedges in Athens.

The white-clad players stormed the field, defiantly planting their gold flag in the "G" in the middle of the field — a bit of payback for Georgia doing the same thing at Georgia Tech's stadium a year earlier.

"Not bad for a bunch of 80th-ranked recruiting classes," head coach Paul Johnson said. "I'm proud of our kids. They fought back."

A little more than a month later, on New Year's Eve, the Jackets defeated the University of Kentucky 33–18 in the TaxSlayer Bowl. Formerly the Gator Bowl, the TaxSlayer Bowl marked Georgia Tech's 44th all-time bowl appearance, which ranks 13th in major college football history.

Swim Team Goes Viral with Snow Video

At a moment when most Atlantans were left asking "Where is our snow?", the Georgia Tech swim team found itself snowbound in Virginia with its meet canceled.

A few of the teammates took advantage of the fresh powder to get some laps in despite being stuck in their hotel.

Georgia Tech shared a video originally posted by freshman Aidan Pastel that features several of the swimmers — clad only in Speedos and swimmer's caps — that went viral.

The Yellow Jackets were in Christianburg, Va., for a two-day tri-meet with Virginia Tech and Kentucky.



PHOTO CREDITS

Page 6: flying drones: Trevor Mahlmann; page 7: team: Shawn O'Sullivan/MultiGP; page 13: Cadonati: Josh Meister; page 24: Coda rendering: Courtesy of John Portman & Associates; page 28–29: courtesy Kaitlin Rizk; page 34: guitar: courtesy Carl Terns; archery: courtesy Carlin Zaprowski; page 35: Rachel Brashear; pages 36–38: Danny Karnik.

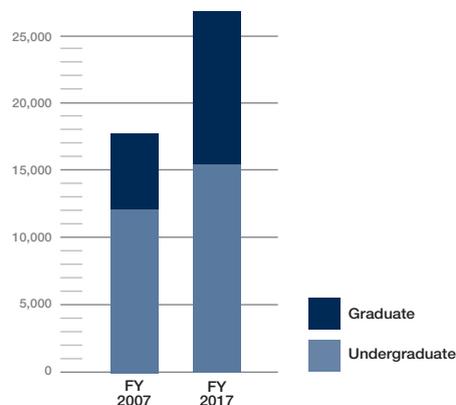
ENROLLMENT AND DEGREES

TOTAL HEADCOUNT ENROLLMENT

Enrollment	FY 2007	FY 2017	%Change
Undergraduate	12,360	15,489	25%
Graduate	5,575	11,350	104%
Total	17,935	26,839	50%
Full-time Equivalent (FTE) Enrollment	17,027	23,349	37%

Comparison of Headcount Enrollment by Level

FY 2007 & FY 2017



NEW DEGREES FROM 2007-2017

Bachelor's

Applied Languages & Intercultural Studies
 Biochemistry
 Biology*
 Business Administration*
 Environmental Engineering
 Literature, Media & Communication*
 Music Technology

Master's

Analytics
 Architectural Technology*
 Biology*
 Biomedical Innovation & Development
 Business Administration*
 Computational Science & Engineering
 Digital Media*
 Geographic Information Science & Technology
 History & Sociology of Technology & Science*
 MBA- Global Business
 Music Technology
 Professional Applied Systems Engineering
 Supply Chain Engineering
 Urban Design

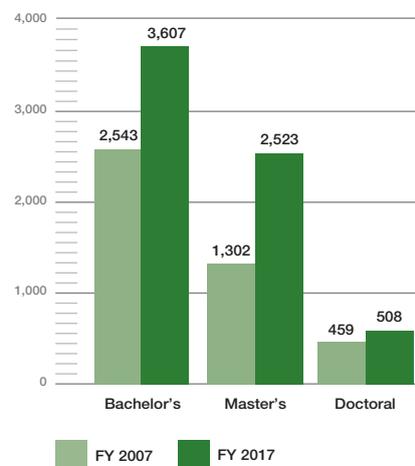
Doctoral

Applied Physiology
 Biology*
 Biomedical Engineering (Joint Emory/PKU)
 Building Construction
 City & Regional Planning
 Computational Science & Engineering
 Economics
 History & Sociology of Technology & Science*
 International Affairs, Science & Technology
 Music Technology
 Operations Research
 Polymer, Textile & Fiber Engineering*
 Quantitative Biosciences
 Robotics

* Updated programs

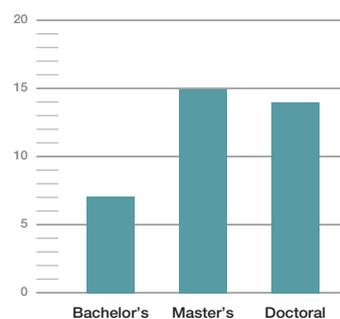
Comparison of Degrees Awarded by Level

FY 2007 & FY 2017



New Degree Programs

FY 2007 - 2017





THE PRESIDENT'S CABINET, 2016-17



Barrett H. Carson

Vice President for Development

Michael L. Warden

Vice President for Institute Communications

Lynn M. Durham

Assistant Vice President and Chief of Staff

G.P. "Bud" Peterson

President

Steven G. Swant

Executive Vice President for Administration and Finance

Stephen E. Cross

Executive Vice President for Research

Dene H. Sheheane

Vice President for Government and Community Relations

Rafael L. Bras

Provost and Executive Vice President for Academic Affairs

John M. Stein

Vice President for Student Life and Dean of Students

Colin Potts

Vice Provost for Undergraduate Education

Archie W. Ervin

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