2020-2021
ANNUAL REPORT

Georgia Tech | **School of Electrical and Computer Engineering**
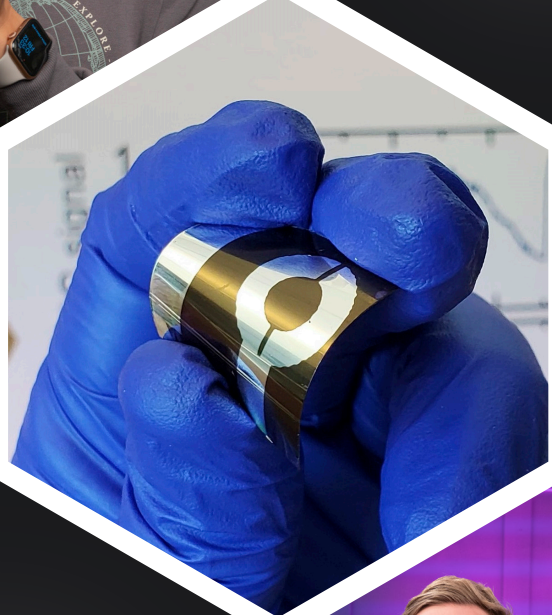
[+] From the Chair

I am proud to present the 2020-2021 annual report for the Georgia Tech School of Electrical and Computer Engineering (ECE). This report shows the continued commitment to hard work and excellence in a wide range of areas by our faculty, staff, students, and alumni. Their efforts have resulted in some very high profile and well-deserved awards that have been bright spots and welcome news during this past year as we have continued to grapple with Covid-19.

Several new and important programs and initiatives have been introduced in the School that are focused on diversity and inclusion, a threaded undergraduate degree program, and a continued focus on entrepreneurship education. Several pieces in this report focus on the dedicated efforts of our community in supporting and leading these efforts.

Even under these unusual conditions, our research programs have continued to prosper, and in fact, the School broke another record by acquiring almost $70.9 million in FY 21 research funding. Our work in cybersecurity, biomedical devices and imaging, electronics, energy, and in support of battling and better understanding Covid-19 addresses and provides solutions for the challenges facing our world today.

I began my service as ECE's interim chair on July 1, shortly before Magnus Egerstedt became the dean of engineering at the University of California, Irvine. I'd like to thank him for his service and leadership, and we wish him well in his new role. While this year will be one of transition both in leadership and in returning to campus operations that are hopefully more normal, I look forward to continuing our momentum and vital work with your help — our alumni, corporate and government partners, and friends.

Sincerely,

Douglas M. Blough

Douglas M. Blough
Professor and Interim Steve W. Chaddick School Chair

[+] Leadership Transitions

The year 2021 has been a period of transition and change for Georgia Tech and ECE leadership, but the tireless commitment to providing collegial leadership for the School and for our students, faculty, and staff remains the same.

On January 4, Raheem Beyah was named as dean and Southern Company Chair of the Georgia Tech College of Engineering (CoE). On April 1, Magnus Egerstedt was named as the dean of the Henry Samueli School of Engineering at the University of California, Irvine. After a period of careful consideration, CoE Dean Beyah announced on June 1 that Douglas Blough would serve as the Interim Steve W. Chaddick School Chair for ECE.

RAHEEM BEYAH NAMED DEAN OF GEORGIA TECH COLLEGE OF ENGINEERING

Raheem Beyah was selected as Georgia Tech's CoE dean and Southern Company Chair, succeeding Steven McLaughlin in that position. McLaughlin, who is an ECE professor, assumed duties as Georgia Tech's provost and executive vice president for academic affairs on October 1, 2020.

Prior to becoming dean, Beyah was Georgia Tech's vice president for interdisciplinary research, executive director of the Online Master of Science in Cybersecurity program, and the Motorola Foundation Professor in ECE. He began serving as dean on January 15, 2021.

Beyah leads the Communications Assurance and Performance Group and is affiliated with the Institute for Information Security and Privacy.

Beyah

[+] ECE Overview

[ENROLLMENT]

2,387
overall total

1,230
total undergraduate
enrollment, FY 21

632 B.S.E.E.
598 B.S.Cmp.E.

20% females
18% underrepresented
minorities

1,157
total graduate
enrollment, FY 21

461 M.S.E.C.E.
4 M.S. Bioengineering
2 M.S. Cybersecurity
74 M.S. Cybersecurity—online
548 Ph.D.
14 Ph.D. Bioengineering
21 Ph.D. Machine Learning
31 Ph.D. Robotics
2 Non-degree seeking

18% females
9% underrepresented
minorities

[DEGREES]

746
overall total

317
total undergraduate
degrees awarded, FY 21

164 B.S.E.E.
153 B.S.Cmp.E.

16% females
18% underrepresented
minorities

429
total graduate
degrees awarded, FY 21

1 M.S. Cybersecurity
334 M.S.E.C.E.
1 Ph.D. Bioengineering
91 Ph.D. E.C.E.
2 Ph.D. Robotics

19% females
6% underrepresented
minorities

[RANKINGS]

U.S. News & World Report
Graduate and
Undergraduate Rankings

#4
E.E.
undergraduate
program

#5
Cmp.E.
undergraduate
program

#5
Cmp.E.
graduate
program

#5
E.E.
graduate
program

MAGNUS EGERSTEDT NAMED DEAN OF UC IRVINE ENGINEERING SCHOOL

Magnus Egerstedt, Steve W. Chaddick School Chair and professor in the School of ECE, became the dean of the Henry Samueli School of Engineering at the University of California, Irvine, effective July 19, 2021.

During his 20-year tenure at Georgia Tech, Egerstedt served as a Schlumberger Professor, the Julian T. Hightower Chair in Systems and Controls, and executive director for the Institute for Robotics and Intelligent Machines. He led the Georgia Robotics and InTelligent Systems Laboratory, and he founded the Robotarium, a remotely accessible swarm robotics research platform that is accessible to the public.

Egerstedt

DOUGLAS BLOUGH NAMED AS ECE INTERIM CHAIR

Effective July 1, 2021, Douglas Blough began serving as the Interim Steve W. Chaddick School Chair. He joined the ECE faculty in 1999 as a professor and has served as the School's associate chair for faculty development since January 2018.

Blough is the director of the Critical Networking Laboratory. His research currently focuses on wireless networks and, in the past, also covered dependable/secure computing. He has more than 160 archival publications in these areas and has led 37 federally funded or industry-sponsored research projects, with a total funding level of more than $8 million.

Blough has been active in the ECE and campus communities. On the School level, he has chaired two technical interest groups and has served on standing committees key to the School's growth. Blough has also represented ECE in the Academic Senate.

[+] Georgia Tech ECE Launches New Threaded Curriculum Model

Electrical and computer engineering are vast and diverse areas of study—a huge strength in providing students with opportunities for interdisciplinary collaboration and ample job prospects. But this same strength can seem daunting for those beginning an undergraduate program in one of these majors.

The School of ECE at Georgia Tech listened to student, alumni, and industry feedback and made an exciting change to the curriculum that explains the myriad paths and careers in ECE while providing more flexibility, greater access to course options, and the ability to create unique degree experiences that fit students' long-term goals and interests. All of this comes without sacrificing the rigor and curricular strength of the programs.

Beginning in fall 2021, the School will officially adopt a threaded curriculum model for the Bachelor of Science in Electrical Engineering and the Bachelor of Science in Computer Engineering programs.

"This really is groundbreaking pedagogy. We have taken the old programs in electrical and computer engineering and turned them on their heads, creating degrees that are completely unique and able to be quickly revamped as technologies advance and industry needs change,"

> "We have taken the old programs in electrical and computer engineering and turned them on their heads, creating degrees that are completely unique and able to be quickly revamped as technologies advance and industry needs change."
>
> — ELLIOT MOORE

said Elliot Moore, ECE associate chair for undergraduate affairs.

A single thread represents a path through the curriculum, culminating in a select set of 3000/4000-level courses decided by faculty with knowledge of the area. But a thread only makes sense when combined with other threads to produce a "weave." As such, students will combine two threads for their degree, allowing them to "mix-and-match" areas based on their career interests.

The B.S. degree in computer engineering now consists of the three computer engineering foundation threads (Distributed Systems and Software Design, Cybersecurity, Computing Hardware and Emerging Architectures); three computer science threads (Devices, Information Internetworks, Systems and Architecture); and three electrical engineering threads (Robotics, Telecommunications, Signal and Information Processing).

The B.S. degree in electrical engineering consists of eight electrical engineering threads: Signal and Information Processing, Robotics, Bioengineering, Telecommunications, Sensing and Exploration, Electric Energy Systems, Electronic Devices, and Circuit Technology.

An important component of the new threaded curriculum is the 1-credit, freshman-level course called ECE Discovery Studio. The ECE Discovery Studio allows students to explore the broad field of electrical and computer engineering with respect to the big ideas in the discipline, relevant career options, and areas of research, and to engage with ECE at a much earlier point in their studies than under the old curriculum.

[+] Students & Student Groups

ECE student groups provide outlets for community building, K-12 outreach and service, and professional development. Our students also participate in interdisciplinary clubs and many social, professional, and cultural organizations at Georgia Tech.

[Student Groups]

ECE Ambassadors • ECE Graduate Student Organization • Eta Kappa Nu
Georgia Tech IEEE • The Hive • Women in Electrical and Computer Engineering

[Award Winners]

Our students received awards through the Roger P. Webb Awards Program in ECE and awards events held by other organizations and offices on campus. In spring 2021, Madeline Loui (pictured on the right) received the highest accolade presented to a graduating senior at Georgia Tech.

Georgia Tech Awards

Madeline Loui | Love Family Foundation Scholarship

Hossein Taghinejad, Mohammad Taghinejad, Mehrdad Tahmasbi, Hakki Mert Torun, Siddharth Varughese | Sigma Xi Best Doctoral Thesis Award

Andrew Hellrigel | Outstanding Undergraduate Researcher Award

Tohid Shekari | Center for Teaching and Learning Online Head Teaching Assistant of the Year Award

Roger P. Webb Awards

Baran Usluel | Outstanding Electrical Engineering Senior Award

Madeline Loui | Outstanding Computer Engineering Senior Award

Nishant Bilakanti, Aniruddh Marellapudi | ECE Graduate Teaching Assistant Excellence Award

Yu-Ching Liao, Siddharth Ravichandran | ECE Graduate Research Assistant Excellence Award

Pradyot Yadav Wins 2021 Barry Goldwater Scholarship

Pradyot Yadav received the 2021 Barry Goldwater Scholarship. He and two other students from Georgia Tech were chosen for their academic excellence in undergraduate research and dedication to furthering research and development in their respective fields.

A third-year electrical engineering major, Yadav worked on radio frequency and microwave power amplifier design. He also helped to implement a Gallium Nitride (GaN) monolithic microwave integrated circuit design. Yadav worked as a technical fellow with the Hughes Research Laboratory GaN process, which has the fastest GaN in the world and is opening an entirely new portion of the spectrum for wireless communication technologies.

After he graduates in spring 2022, Yadav will pursue a Ph.D. in microwave engineering and plans to pursue a career in industry research.

Biya Haile Awarded Paul & Daisy Soros Fellowship for New Americans

Biya Haile received a Paul & Daisy Soros Fellowship for New Americans. This national merit-based graduate fellowship is for immigrants and the children of immigrants.

Last spring, Haile graduated with a bachelor of science degree in mechanical engineering. In fall 2021, he will enter the ECE Ph.D. program and will be the first recipient of the Paul and Daisy Soros Fellowship to pursue a graduate degree at Georgia Tech.

Haile spent a year at Kennesaw State University before transferring to Tech. Since 2018, he has worked in the Institute for Electronics and Nanotechnology (IEN), where he is developing micro-electromechanical systems (MEMS)-based sensors. Haile will continue with his MEMS research while in graduate school and would like to work at a national laboratory in the future to pursue a career in industry research.

[+] Faculty & Staff
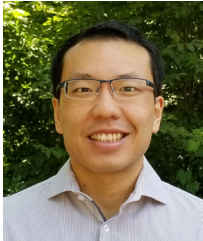
[New Faculty]

Frank Li
Assistant Professor
Computer Systems
and Software

Majority appointment is with the School of Cybersecurity and Privacy

Vidya Muthukumar
Assistant Professor
Digital Signal
Processing

Ashwin Pananjady
Assistant Professor
Digital Signal Processing

Majority appointment is with the H. Milton Stewart School of Industrial and Systems Engineering

[Faculty & Staff Awards]

ECE faculty members were honored by Georgia Tech and at the local, state, national, and international levels for their excellence in teaching, advising and mentoring, research, professional service, and commercialization. Two staff members were recognized for promoting a positive and productive culture in the School and for the high quality of their work and interactions with others.

Four faculty members received awards of top international acclaim in the last year. Two faculty members received IEEE medals; John Cressler received the IEEE James H. Mulligan, Jr. Education Medal and Justin Romberg received the IEEE Jack S. Kilby Signal Processing Medal. Russell Dupuis was honored with the Queen Elizabeth Prize for Engineering, and Omer Inan was presented with a Technical Achievement Award from the Academy of Motion Picture Arts and Sciences.
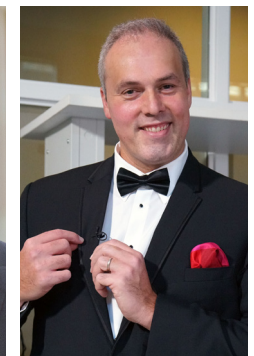

From left: Cressler, Romberg, Dupuis, and Inan.

External Awards

Vince Calhoun | Honorific Award for Outstanding Translational Research (Schizophrenia International Research Society)

Sam Coogan | 2020 Donald P. Eckman Award (American Control Conference)

John Cressler | IEEE James H. Mulligan, Jr. Education Medal; IEEE Atlanta Section Outstanding Educator Award

Russell Dupuis | Queen Elizabeth Prize for Engineering

Anna Holcomb | Governor's Teaching Fellow

Omer Inan | Technical Achievement Award from the Academy of Motion Picture Arts and Sciences

Nikil Jayant | National Academy of Inventors Fellow

Asif Khan | Intel Rising Star Award; NSF CAREER Award; DARPA Young Faculty Award

Daniel Molzahn | IEEE Power and Energy Society Outstanding Young Engineer Award

Tushar Krishna | Facebook Research's Faculty Award

Justin Romberg | IEEE Jack S. Kilby Signal Processing Medal

Hua Wang | 2020 and 2021 Qualcomm Faculty Award

Shimeng Yu | IEEE/ACM Design Automation Conference Under-40 Innovators Award; IEEE Circuits and Systems Society Distinguished Lecturer

Georgia Tech- and College-Level Awards

Teresa Askew | Culture Champion for ECE Award (College of Engineering)

Nivedita Bhattacharya | Women in Engineering Teaching Excellence Award

**Omer Inan** | Georgia Tech Outstanding Doctoral Thesis Advisor Award

Aaron Lanterman | Georgia Tech Class of 1934 Outstanding Innovative Use of Education Technology Award

Janine Lyn | Soaring Jacket Award (College of Engineering)

Andrew Peterson | Georgia Tech Class of 1934 Outstanding Service Award

Ying Zhang | Georgia Tech Senior Faculty Outstanding Undergraduate Research Mentor Award

[+] Research & Education Highlights
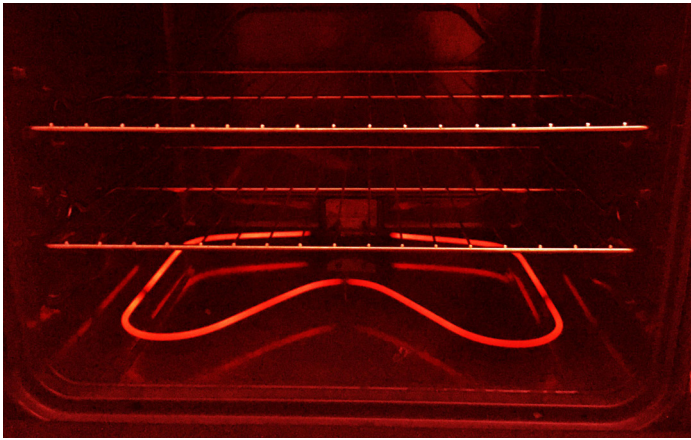
Baking and Boiling Botnets Could Drive Energy Market Swings and Damage

Evil armies of internet-connected, high-wattage appliances could be hijacked to slightly manipulate energy demand, potentially driving price swings and creating financial damage to deregulated energy markets, warned a report that was presented at the Black Hat USA 2020 conference. This effort is led by Raheem Beyah, who was the Motorola Foundation Professor in ECE at the time.

By turning the compromised equipment on or off to artificially increase or decrease power demand, botnets made up of these energy-consuming devices might help an unscrupulous energy supplier or retailer alter prices to create a business advantage, or give a nation-state a way to remotely harm the economy of another country. If done within the bounds of normal power demand variation, such an attack would be difficult to detect.

Believed to be the first proposed energy market manipulation cyberattack, the operation would depend on botnets composed of thousands of appliances that could be controlled centrally by attackers who had taken over their Internet of Things (IoT) controllers.

In the Race for Better Covid-19 Tests, Georgia Tech Expertise Plays a Crucial Role

Faculty at the School of Public Policy's HomeLab, the Institute for Electronics and Nanotechnology (IEN), and the Wallace H. Coulter Department of Biomedical Engineering are playing crucial roles in the National Institute of Health's (NIH) Rapid Acceleration of Diagnostics, a $500 million initiative to speed development, evaluation, and commercialization of new Covid-19 tests for use at home, doctor's offices, and labs.

The units are working with the Atlanta Center for Microsystems Engineered Point-of-Care Technologies (ACME POCT)—which includes Georgia Tech, Emory University, and Children's Healthcare of Atlanta—to vet candidate tests. ECE Professor and IEN Executive Director Oliver Brand is a principal investigator on ACME POCT.

The eventual widespread distribution of the test kits—which, in some cases, may offer almost instant results—of successful candidate tests could be key factors in helping limit spread of the disease, fully reopening the economy, and getting students back in classrooms. Technical validation of test kits competing in the program is being done at Emory, and Georgia Tech is handling the engineering and usability analyses.
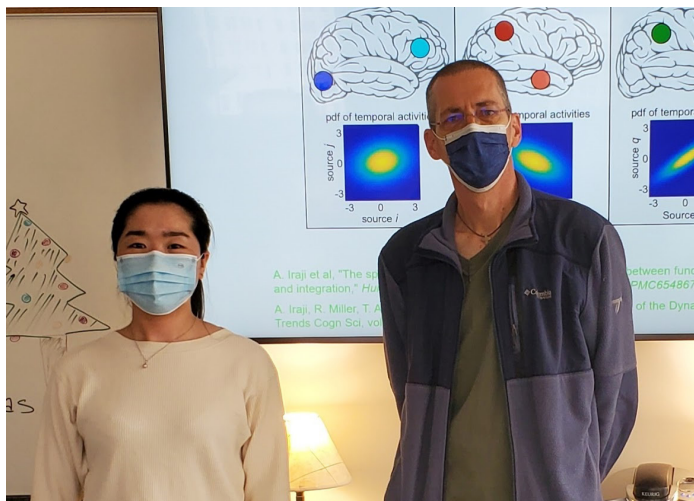

Covid-19 Alters Gray Matter Volume in the Brain, New Study Finds

Covid-19 patients who receive oxygen therapy or experience fever show reduced gray matter volume in the frontal-temporal network of the brain, according to a study led by researchers at Georgia State University and Georgia Tech.

The study found lower gray matter volume in this brain region was associated with a higher level of disability among Covid-19 patients, even six months after hospital discharge. Published in the May 2021 issue of *Neurobiology of Stress*, the study indicates gray matter in the frontal network could represent a core region for brain involvement in Covid-19, even beyond damage related to clinical manifestations of the disease, such as stroke.

The researchers, who are affiliated with the Center for Translational Research in Neuroimaging and Data Science (TReNDS), analyzed computed tomography scans in 120 neurological patients. TReNDS is led by Vince Calhoun, who is the Distinguished University Professor of Psychology at Georgia State. He holds a faculty appointment in ECE and is a Georgia Research Alliance Eminent Scholar.

[+] Research & Education Highlights
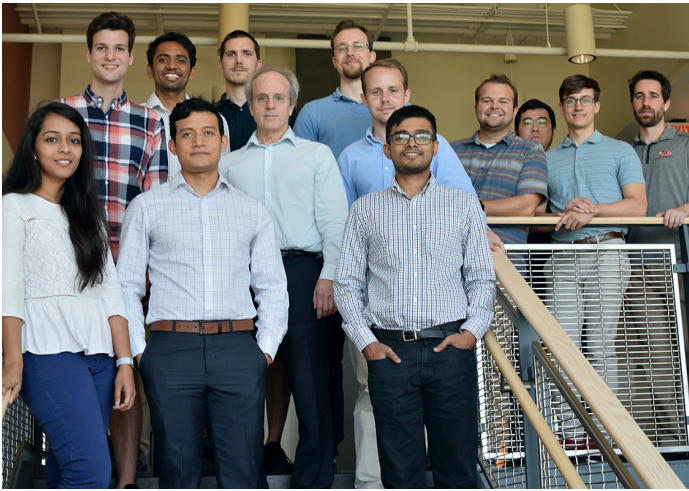
Stephen Ralph (center, 2nd row) is pictured with his research team in Fall 2019.

NSF Names Georgia Tech as Lead for New Integrated Photonics & Electronics Center

Georgia Tech has been awarded funding to lead a new Industry-University Cooperative Research Centers Program (IUCRC) in Integrated Photonics. This center, known as Electronic-Photonic Integrated Circuits for Aerospace (EPICA), is funded by the National Science Foundation.

Integrated photonics is a key enabling technology in many commercial, defense, and scientific applications such as fiber communications, data centers, RF analog links, quantum computing, and communications and sensing. Aerospace and spaceborne applications of integrated photonics present many challenges for researchers resulting from harsh environments. However, they provide enormous opportunities for increasing performance while reducing size weight and power.

EPICA was proposed by faculty in the Georgia Electronic Design Center (GEDC), a center based within IEN. It will be led by ECE Professor Stephen Ralph, who is GEDC's director and the Glen Robinson Chair in Electro-Optics.

Making Space for Black Tech

At the beginning of 2020, a group of Black scientists, researchers, and developers gathered at the Russell Center for Innovation and Entrepreneurship (RCIE) in downtown Atlanta, intent on changing what felt like a fractured community. Among the core group were four Georgia Tech ECE alumni: LaVonda Brown, Troy Nunnally, Nashlie Sephus, and Ivan Walker. The goal was to bring Black tech talent together under two main pillars: access to resources and opportunities for collaboration.

Although Atlanta is home to a large minority population, a thriving tech ecosystem, and multiple universities and technology companies, individuals of color in the tech field felt fragmented. Adding to the sense of isolation was the lack of resources. As former students now pursuing their careers in the city, Brown, Nunnally, Sephus, and Walker were keenly aware not only of the lack of representation in Atlanta's tech scene, but also the lack of the resources that were so abundant at Georgia Tech. The group could only imagine the challenges that minorities who never had such opportunities were facing.

At first, the group planned for a conference, but they quickly coalesced around the notion of a symbolic "home" for minority tech talent—physically embodied in a bricks and mortar location—a place to meet, brainstorm, learn, and collaborate. Thus, KITT Labs was born, with the acronym standing for Knowledge, Information, Technology, and Tools.
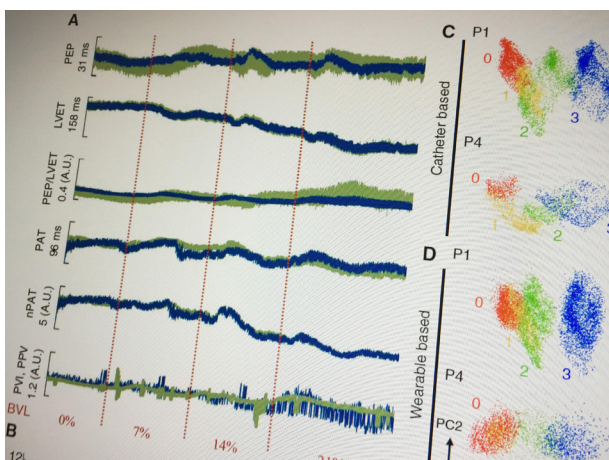
Wearable Device Could Help EMTs, Surgeons Assess Hemorrhage Blood Loss

Emergency medical technicians, military medics, and emergency room physicians could one day be better able to treat victims of vehicular accidents, gunshot wounds, and battlefield injuries thanks to a new device under development that may more accurately assess the effects of blood loss due to hemorrhage.

A research team led by ECE Associate Professor Omer Inan has now shown that it can accurately assess blood loss by measuring seismic vibrations in the chest cavity and by detecting changes in the timing of heartbeats. The knowledge, developed in the laboratory, could potentially lead to development of a smart wearable device that could be carried by ambulance crews and medics and made available in emergency rooms and surgical facilities.

## Large-area Flexible Organic Photodiodes Can Compete with Silicon Devices

The performance of flexible large-area organic photodiodes has advanced to where they can now offer advantages over conventional silicon photodiode technology, particularly for applications such as biomedical imaging and biometric monitoring that require detecting low levels of light across large areas.

The low-noise, solution-processed, flexible organic devices offer the ability to use arbitrarily shaped, large-area photodiodes to replace complex arrays that would be required with conventional silicon photodiodes, which can be expensive to scale up for large-area applications. The organic devices provide performance comparable to that of rigid silicon photodiodes in the visible light spectrum–except in response time.

Led by ECE Joseph M. Pettit Professor Bernard Kippelen and ECE Principal Research Scientist Canek Fuentes-Hernandez, the research team achieved the first demonstration that these devices, produced from solution at low temperatures, can detect as little as a few hundred thousand photons of visible light every second. The ability to coat these materials onto large-area substrates with arbitrary shapes means that flexible organic photodiodes now offer some clear advantages over state-of-the-art silicon photodiodes in applications requiring response times in the range of tens of microseconds.
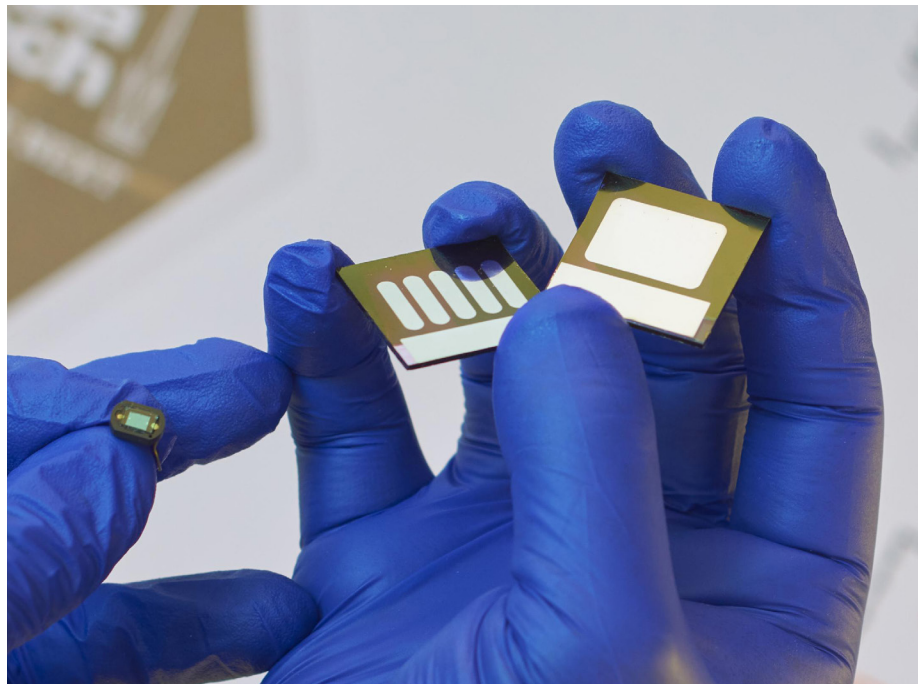
Organic photodiodes can be much larger than their silicon counterparts. On the left is a silicon photodiode compared to two large-area organic photodiodes.
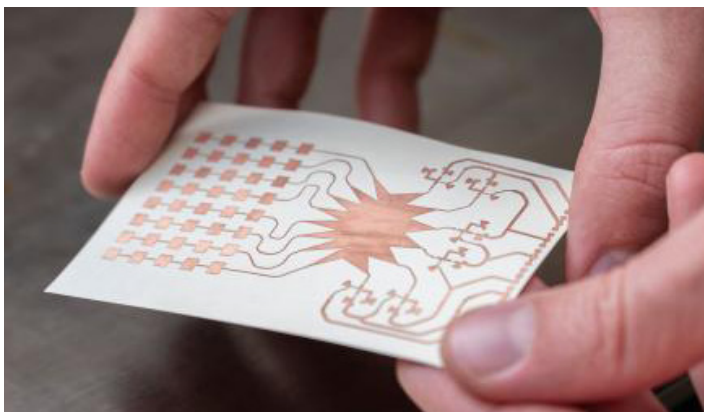
Leveraging the 5G Network to Wirelessly Power IoT Devices

Georgia Tech researchers have uncovered an innovative way to tap into the over-capacity of 5G networks, turning them into "a wireless power grid" for powering IoT devices that today need batteries to operate.

Led by ECE's Ken Byers Professor in Flexible Electronics Manos Tentzeris, the inventors have developed a flexible Rotman lens-based rectifying antenna system capable of millimeter-wave harvesting in the 28-GHz band. The Rotman lens is key for beamforming networks and is frequently used in radar surveillance systems to see targets in multiple directions without physically moving the antenna system.

But to harvest enough power to supply low-power devices at long ranges, large aperture antennas are required. However, large antennas have a narrowing field of view that prevents their operation if the antenna is widely dispersed from a 5G base station. The Federal Communications Commission has authorized 5G to focalize power much more densely compared with previous generations of cellular networks. While today's 5G was built for high-bandwidth communication, the high-frequency network holds rich opportunity to "harvest" unused power that would otherwise be wasted.

Top: Georgia Tech researchers Aline Eid (center), Manos Tentzeris (left), and Jimmy Hester (right) have developed a flexible Rotman lens-based rectifying antenna system for 5G energy harvesting that could eliminate the world's reliance on batteries for powering devices.

[+] Commercialization

StartProto Takes Second Place at 2021 InVenture Prize

Zach Cloud and Tim Felbinger won second place at the 2021 Georgia Tech InVenture Prize, held March 17 at the Ferst Center for the Arts. They developed a digital safety and analytics system, known as StartProto, that can be used to organize access and safety protocols in makerspaces at schools across the country. The software and app are already being tested by Georgia Tech's on campus makerspaces. Cloud is a mechanical engineering major and Felbinger is an electrical engineering major.

StartProto was among six finalists who made it to the 2021 InVenture Prize, which was broadcast live on Georgia Public Broadcasting. Other finalist teams with ECE students were Block Transfer and CADe.

Georgia Tech Entrepreneurship Programs and Activities Featured in *IEEE Potentials*

The May/June 2021 issue of *IEEE Potentials* introduces engineering entrepreneurship in both academic and corporate settings to the magazine's readers who are mainly undergraduate and graduate student members of IEEE and young professionals.

Coordinated by ECE Professor Pamela Bhatti, the articles in this issue were mostly written by faculty, staff, and alumni from ECE and other units at Georgia Tech. They demonstrate and highlight strategies and programs that are formative for engineering entrepreneurship as well as intrapreneurship, the corporate analog of entrepreneurship.
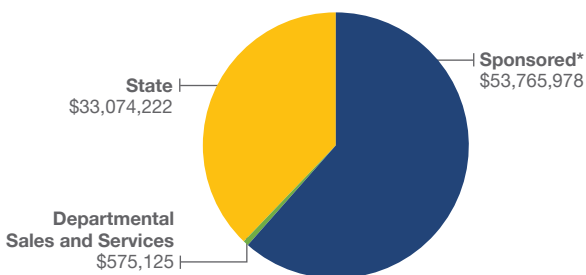

[+] Finances

Research funding for FY 21 totaled $70,876,145 from grants and contracts, an all-time record for the School and an increase of 9% over last year. Of the $70.8 million total, 26% came from industry, 73% came from federal government sources, and 2% came from other sources.
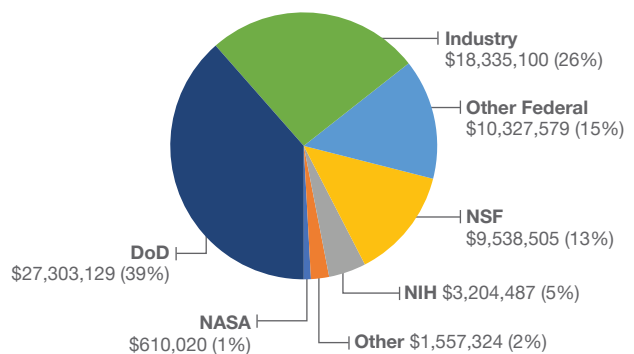
The School spent $87,415,326 from state, sponsored research, and departmental sales and services sources. This money mostly pays for faculty, staff, and researcher salaries, and the rest is used for materials and supplies, travel, and equipment in support of our research and educational missions.

FY 21 Expenditures

Sponsored* $53,765,978
State $33,074,222
Departmental Sales and Services $575,125

* Includes Georgia Tech Foundation and agency funds.

FY 21 Research Funding

Industry $18,335,100 (26%)
Other Federal $10,327,579 (15%)
NSF $9,538,505 (13%)
NIH $3,204,487 (5%)
Other $1,557,324 (2%)
NASA $610,020 (1%)
DoD $27,303,129 (39%)

[+] Development

The ECE Development Office cultivates and coordinates the School's fundraising efforts with industry, alumni, and other interested people and organizations. This group manages the ECE Access Program, the ECE Career Fair, and other networking and social activities to promote alumni and corporate involvement.

For more information about the School's fundraising activities, contact Jeff Colburn, director of ECE Alumni Development, at 404.894.0274, Etta Pittman, director of ECE Corporate Development, at 404.894.6888, and Caitlin Buro, development associate, at 404.385.0775.

[FY 21 Donors]

We would like to thank the following corporations, organizations, and individuals for contributing $3,296,682 to the School and its affiliates during FY 21.

INDIVIDUALS

Chaouki Abdallah and Catherine Cooper

Bill and Dee Allen

Frederick and Annette Anochie

Anonymous

Brian and Susan Banner

Glenda Bannister

Harry and Teresa Beck

Jishnu and Indrani Bhattacharjee

Pamela Bhatti and Srini Tridandapani

Keefe and Joanna Bohannan

Sharon Bowden

Bill Branch

Ben and Suzy Briggs

Austin Brown

Barbara Brown

Robert Brown

Nhung Bui

Rob and Gwyneth Butera

Barbara Camp

Steve and Barbara Chaddick

Qili Chen

Jeffrey Colburn

Harriett Coleman

Michael and Jennifer Coleman

Al and Mary Connelly

Pat Corbe

Taylor Crane

Alex Cueto

James and Wyndee DeBardelaben

Gail Dooley

Beth Dorsey

Tom Dyal

Kevin and Karol Frost

Jan and Tom Gaylord

Mary Gordon

William and Glenda Greer

Jerry Johnson

Bill and Jennifer Kaduck

Fawad and Rebecca Khan

Alan and Christina Krauss

Fred and Ginny Krauss

Beth and Michael Logan

Wade and Susan Little

Jian Liu

Taizhi Liu

Dennis and Christine Love

Kenn and Nicole MacKenzie

Theresa Maldonado

Lea McLees

Norma McLees

Iva Monroe

Fernando and Gayle Mujica

Kristine Nagel

Kari and William Newberg

Chad Patterson

John and Marilyn Peatman

Etta and Herman Pittman

Gael and Lindsay Pirlot

Darrell Preble

Sheri and Matthew Prucka

David Bell and Debra Raymer

Jennifer Riley

Jim and Teresa Shea

John and Cindy Slaughter

David Smith

Jim and Janie Stratigos

Paul Steffes

Gloria Tatum

Dawn Tolbert

Doug and Julie Turner

Seth and Anna Walker

Dennis Wathen

Sabine Wathen

Anita Wathen-Brownlee

Douglas and Kay Williams

He Xiao

Zhenhua Yu

James Zhang

Jun Zou

CORPORATIONS, FOUNDATIONS, & ORGANIZATIONS

3M Worldwide

The Aerospace Corporation

AGCO Corporation

Analog Devices, Inc.

Anaren Microwave, Inc.

ARCS Foundation, Inc.

Bank of America Charitable Gift Fund

Benevity Community Impact Fund of AEF

The Boeing Company

Boyce and Gail Dooley Family Foundation

Breast Cancer Research Foundation

CableLabs

Chevron

Ciena Canada, Inc.

Cisco Systems, Inc.

Community Foundation for Greater Atlanta

Cooper Lighting Solutions

Eaton Corporation

Exxon Mobil Corporation

Fidelity Investment Charitable Gift Fund

Florida Power and Light Company

General Motors Corporation

Google, Inc.

Honeywell

Intel Corporation

International Paper Company

John and Mary Franklin Foundation, Inc.

John Deere World Headquarters

John N. Gardner Institute for Excellence in Undergraduate Education

Keysight Technologies

L3Harris Foundation

Lockheed Martin

Lockheed Martin Corporation Foundation

LyondellBasell Industries

MathWorks

National Corporate College Consultants, Inc.

North American Electric Reliability Corporation

Northrop Grumman Corporation

Otto & Jenny Krauss Charitable Foundation Trust

Phillips 66

Polaris Wireless, Inc.

Qorvo US, Inc.

Qualcomm, Inc.

Radio Club of America, Inc.

Raytheon

Raytheon Technologies Corporation

Renaissance Charitable Foundation, Inc.

Roseburg Forest Products

SANDIA

Schwab Charitable Fund

Semiconductor Research Corporation

Shell Oil Company

Silicon Valley Community Foundation

Synopsys, Inc.

Texas Instruments, Inc.

Vanguard Charitable Endowment Program

ViaSat

[+] Alumni

ECE Alumni Honored in Inaugural 40 under 40 Program

At the beginning of the fall 2020 semester, the Georgia Tech Alumni Association announced honorees for its new program, 40 Under 40. The program celebrates distinguished alumni who have innovated industries and positively impacted communities across the globe.

Out of 250 nominees, four ECE alumni rose to the top and were included in the inaugural list. They include Braxton Davis, Greg Kolovich, Xiaohang Li, and Nashlie Sephus.

BRAXTON DAVIS
EE 06

GREGORY KOLOVICH
EE 04

XIAOHANG LI
PHD ECE 15

NASHLIE SEPHUS
MS ECE 10, PHD ECE 14

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