



# **ANNUAL REPORT ON THE STEVEN A. DENNING CHAIR FOR GLOBAL ENGAGEMENT**

*DECEMBER 2019*

The Vice-Provost for International Initiatives (VP II), who holds the Steven A. Denning Chair for Global Engagement, oversees Georgia Tech's international activities including education, research, innovation, as well as engaging with corporate, alumni, and government stakeholders. The Chair provides funding that gives Georgia Tech a competitive advantage as it strives to be a truly global technological university.

In 2018, 2,457 students went to study, intern, or perform research or service abroad. Over 56% of students who graduated with a Bachelors degree had a significant experience abroad during their education at Georgia Tech, making GT the top public university among the AAU for participation (in %) in education abroad. This report highlights some of our recent activities both abroad and at home in Atlanta.

**ADDITIONAL INFORMATION:**

<http://www.global.gatech.edu>

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# STUDENT EXPERIENCE ABROAD

EDUCATION ABROAD 2018-2019

**2,457**

students with international experiences

to

**67**

countries

## INTERNATIONAL EXPERIENCE BREAKDOWN

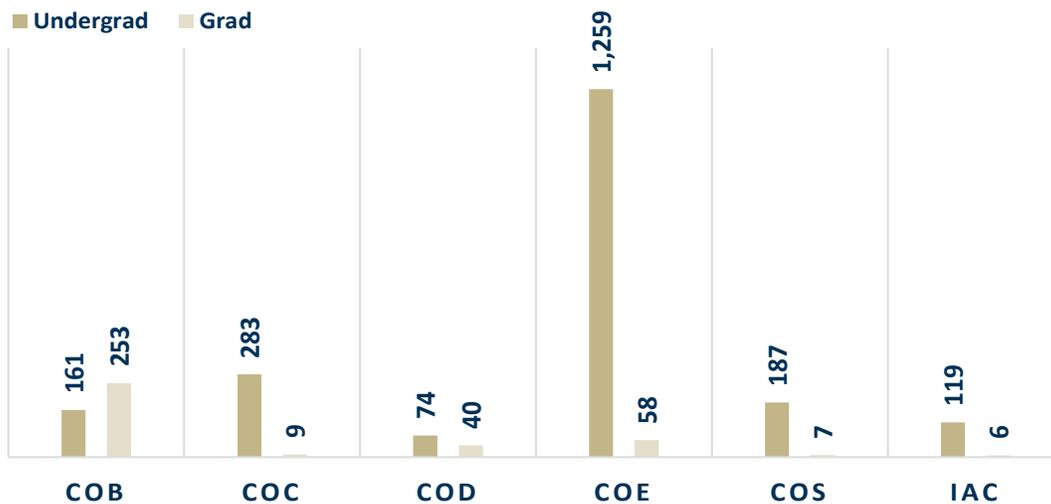
Faculty-Led Study Abroad	1,695
University Exchange	270
Global Internship	159
International Academic Project	312
Non-GT Study Abroad	21

## TOP 5 COUNTRIES Number of Students

France	657
China	223
Spain	195
Ireland	135
Germany	108



## OUTGOING STUDENTS Distribution per College



COB - College of Business  
COC - College of Computing  
COD - College of Design

COE - College of Engineering  
COS - College of Science  
IAC - Ivan Allen College

# GEORGIA TECH INCOMING INTERNATIONAL STUDENTS AND SCHOLARS

INTERNATIONAL STUDENTS 2018-2019

## 5,248

international F & J visa students

from

## 128

countries

### TOP 5 COUNTRIES Number of Students

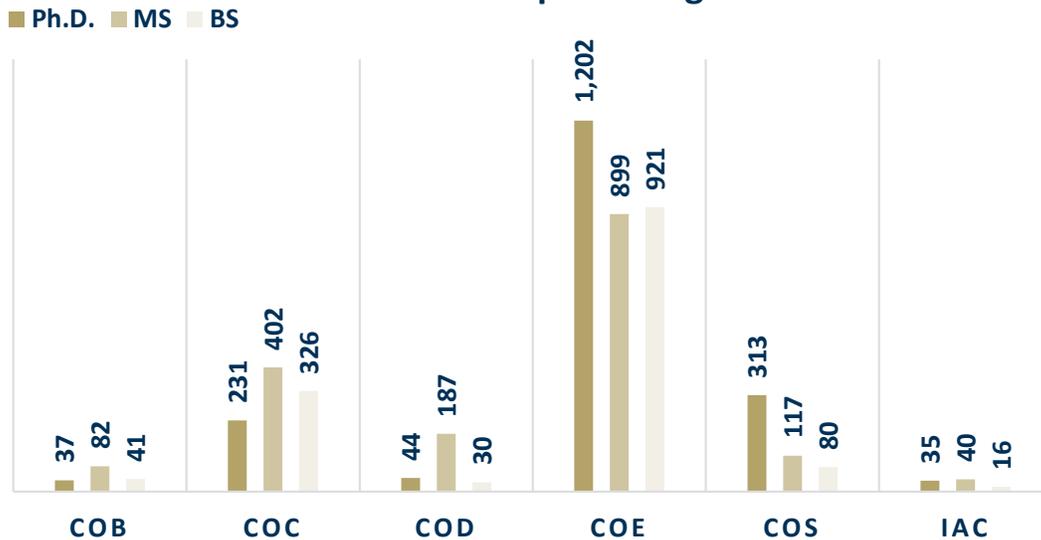
China	1,715
India	1,184
Korea, Republic of (South)	487
France	123
Taiwan	109

### INTERNATIONAL SCHOLARS & INTERNS

Research Scholars	748
Student Interns	165
Short-Term Scholars	114
Professors	14



### INTERNATIONAL STUDENTS Distribution per College



COB - College of Business  
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## GLOBAL EXPERIENCE FOR STUDENTS ON THE ATLANTA CAMPUS

There has been significant growth of on-campus activities to expose and enrich students understanding of global issues. Examples include:

- ◆ The Global Leadership Living and Learning Community (LLC) is off to a great start with 114 first year students living together and learning about global issues. Among their activities, they worked on the UN Sustainable Development Goals (SDG) and the Grand Challenges, which culminated in a campus wide competition.
- ◆ International Education Week is a national event in the US. Georgia Tech coordinated 30 events on campus in November to promote global awareness in our students.
- ◆ Georgia Tech's International Plan, which was recognized nationally, is a four-year undergraduate academic program aimed at developing the global competence of students within the



////// Global Leadership Living and Learning Community (LLC) UN Sustainable Development Goals (SDG) Student Showcase, Fall 2019



////// International Plan graduates, Spring 2019

context of their majors. Currently integrated into 27 of Georgia Tech's undergraduate majors, the program requires students to engage in a minimum of twenty-six weeks of international experience (work, research, or study), to develop proficiency in a language other than English, and to take internationally-oriented coursework. Degree requirements are not modified but are satisfied with specialized courses and appropriate choices of elective courses. This year, we expect that the IP student graduation will be the largest ever (around 55).

- ◆ Our TECHsplore program is launching a Summer program (expecting 46 students) in 2020. This program is designed to welcome international undergraduates from abroad for a short semester, providing them a strong academic experience combined with a wide variety of language and cultural events.
- ◆ The Center for International Business Education and Research (GT-CIBER) is a Title VI center hosted in the Scheller College of Business. It is funded by the US Department of Education. It has been very active, especially with the business community.



////// International Education Week 2019

- ◆ The Atlanta Global Study Center (AGSC) is also a Title VI funded by the US Department of Education. It is hosted in the Ivan Allen College of Business. <https://atlantaglobalstudies.gatech.edu/>.

The Denning funds were used to support various symposia and activities of GT-Ciber and the AGSC.

## CHINA: GEORGIA TECH-SHENZHEN



//// Opening Ceremony, April 2019

with many stakeholders on campus (mostly the Vice President for Research, the Provost Office, and Institute Communications) and off-campus to develop and implement resources to help guide faculty.

Our partners in Shenzhen have completed (and fully funded) renovation of our temporary campus in Shenzhen's highly coveted Nanshan district. The campus now has three building, (208,000 square feet total) including administration, classrooms, library, research, and dorms. We are expecting to get approval from the Ministry of Education sometime in 2020 to launch our 5 master degree programs (Electrical and Computer Engineering, Civil and environmental engineering, Analytics, Computer Science, and Industrial Design), taught by a combination of faculty members rotating from Atlanta and locally hired faculty members vetted by Atlanta. Graduate students will have the possibility to take Georgia Tech classes either in Atlanta, Shenzhen, or Lorraine (France), completing seamlessly their degree in three continents. The Shenzhen campus will also be used as a home for Study Abroad for GT undergraduates.

Georgia Tech continues to be fully committed to having a hub in Shenzhen despite the current political climate. The main challenge has been that US-China relations have deteriorated and negatively impacted the academic community. During the past year, a significant effort of our office has been to help define on campus the right balance between the open nature of our academic mission and the protection of nation-critical scientific and technological advantage. The Office of International Initiatives has worked



//// Transitional campus in Shenzhen

### CREATING THE NEXT IN EDUCATION

立足深圳，放眼全球，创造未来



Georgia Tech – Tianjin University Shenzhen Institute (GTSI)



Industry Visit



Internship



Maker Venture



Culture Experience

GT-Shenzhen MS ECE program alum Fandi Peng makes Forbes 30 Under 30 China list in 2019.

佐治亚理工深圳电子与计算机工程 (ECE) 硕士学位项目毕业生彭梵迪毕业后在虚大创业, 2019年成功入选“福布斯中国30岁以下精英榜”。



CREATING THE NEXT\*

ADDITIONAL INFORMATION:  
<http://www.shenzhen.gatech.edu/>

## FRANCE: GEORGIA TECH-LORRAINE

The Lorraine campus located in Metz, France, will celebrate its 30th anniversary in 2020. A special celebration will be held in Metz on May 27th, 2020 in the presence of President Cabrera and several dignitaries. It will be followed by an Alumni event in Paris.

A video was made for the event to give a comprehensive overview of Georgia Tech-Lorraine (GTL) and its impact on Georgia Tech's global footprint ([https://youtu.be/oeWGpR\\_TlwQ](https://youtu.be/oeWGpR_TlwQ))



//// Crystal Peach Award 2019

On October 17, 2019, GTL was recognized by the Atlanta Chapter of the French American Chamber of Commerce during its annual Crystal Peach award ceremony. GTL won in the category of Economic Development for its sustained impact and success. The ceremony took place during the 10th edition of France-Atlanta, a series of events organized annually by Georgia Tech and the French Consulate in Atlanta.

Enrollment in 2019 was at 715 students. In 2019, we launched at the GTL the first phase of Create-X, a program designed to instill confidence and innovation skills in our students. We also launched an immersive, experiential program for upper-class undergraduates in sustainability combined with French language skills.

In 2019, we have also focused our efforts on Institut Lafayette, our open-innovation platform for applied research and industry-focused applications in optoelectronics. Institut Lafayette located on the GTL campus. It is still in its infancy, much like a startup, but was able to achieve its milestones in terms of attractive funding.



//// Students in the Serve-Learn-Sustain (SLS) - France Program learn about composting from a French professor at the Université de Lorraine in Metz, France.



//// Dr. Tarik Moudakir setting up characterization experiments of optoelectronic components at Institut Lafayette.

ADDITIONAL INFORMATION:  
<https://lorraine.gatech.edu/>

## 2019 RECIPIENT OF THE DENNING FACULTY AWARD

The Steven A. Denning Award for Global Engagement recognizes a Georgia Tech faculty member who has demonstrated sustained outstanding achievement and commitment to the advancement of the Institute's global engagement. The award includes a \$5,000 stipend. This program is funded through the generous support provided in the establishment of the Steven A. Denning Chair in Global Engagement. It seeks to recognize an academic faculty member who has made a significant and sustainable impact in one or more of the following areas:

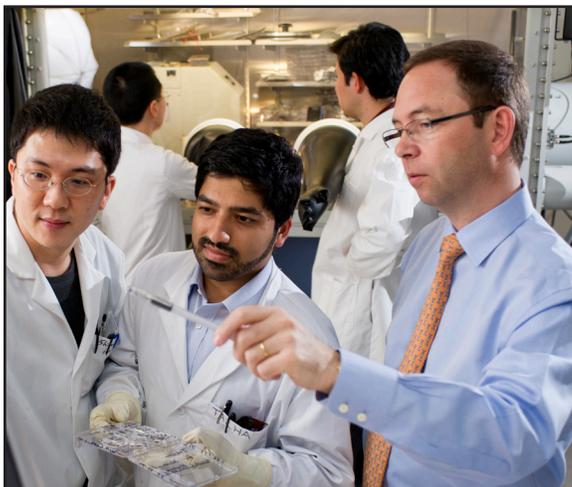
- Promoting the recognition of Georgia Tech in other countries;
- Advancing research, education, and economic development engagement at the international level;
- Enriching the experiences of international students and scholars;
- Incorporating global perspectives in teaching or international components into the curriculum;
- Giving of their time and influence to organize and/or promote international events, visitors, or other international exchanges at Georgia Tech;
- Creating new ideas, structures, procedures, or products which promise to eliminate international inequalities, to promote global cooperation, or to foster respect for human dignity among nations and peoples of the world.



### **Dr. Bernard Kippelen**

Joseph M. Pettit Professor, School of Electrical and Computer Engineering  
Director, Center for Organic Photonics and Electronics  
Co-President, Lafayette Institute

Dr. Bernard Kippelen has brought successful leadership and involvement in Europe, which has resulted in important industrial contracts with Georgia Tech, and the creation of "Institut Lafayette," a platform of technology transfer and international innovation located on the Metz Technopôle, in Metz, France.



//// Studying solar cells made from trees

Dr. Kippelen's seminal contributions have been key to the success of Georgia Tech's European program in research and commercialization.

Dr. Kippelen is one of the best brand ambassadors of Georgia Tech in Europe, and his achievements, dedication, and relentless passion for the promotion of Georgia Tech's global engagement and reputation, will have a profound and sustainable impact.

#### ADDITIONAL INFORMATION:

<https://www.ece.gatech.edu/faculty-staff-directory/bernard-j-kippelen>

## DENNING SEED FUND AWARD

The Office of the Vice-Provost for International Initiatives (VP II) seeks to seed-fund exploratory initiatives in global engagement. This program is funded through the generous support provided in the establishment of the Steven A. Denning Chair in Global Engagement, currently held by the Vice Provost for International Initiatives.

Goal 4 of the Georgia Tech strategic plan is to “Expand our global footprint and influence to ensure that we are graduating good global citizens” with specific strategies to a) expand the world’s footprint at Georgia Tech; b) extend and leverage Georgia Tech’s impact around the world; and c) Embrace and support globally engaged students. Implementation is discussed in the Global Positioning Strategy (GPS) available at <http://www.global.gatech.edu/>.

The Denning Global Engagement Seed Fund has four goals:

- Support feasibility studies of innovative, transformative research and educational ideas in global engagement with significant emphasis on their impact on students;
- Develop new and creative international experiences for students;
- Promote and develop the Institute’s global engagement in new and creative ways;
- Facilitate the development of new and strategic relationships with international partners (e.g. universities, governments, companies, NGOs) in areas that are aligned with Georgia Tech’s strategic plan and lead to a sustainable program in education, economic development, or research, including programs with one or more of the Institute’s Interdisciplinary Research Centers (IRCs).

### EXAMPLE OF PROJECTS ACCOMPLISHED IN 2019

#### International Research and Education in Cell Manufacturing

*Dr. Johnna Temenoff, Professor, Department of Biomedical Engineering*

*Dr. Andrés Garcia, Rae S. and Frank H. Neely Endowed Chair, School of Mechanical Engineering*

*Dr. Melissa Lambeth Kemp, Associate Professor, Department of Biomedical Engineering*

*Dr. Krishnendu Roy, Robert A. Milton Chair and Professor, Department of Biomedical Engineering*

*Mr. Carl Rust, Senior Director, Office of Industry Research*

Cellular therapies represent the next generation of therapeutic products with the potential to cure cancer and treat a broad range of currently incurable conditions, thus making a transformative impact on global health and the economy. However, delivering on the promise of cellular therapies requires a global collaborative to solve critical cell manufacturing technological, regulatory, and commercialization challenges. Furthermore, providing top cell manufacturing students with international innovation experiences, multi-cultural skills, technical knowledge within different regulatory systems in the world, and broader professional networks is critical to fuel the workforce demands of the fledgling cell therapies industry.

With generous support from the Denning Seed Grant and also leveraging other sources, the Cell Manufacturing Technologies (CMA T) Center – an Engineering Research Center (ERC) of the National Science Foundation (NSF) – made three major strides towards these goals. First, the Georgia Tech team assembled a prestigious group composed of three partner institutions from Japan, Canada, and

Ireland, and arranged research-based internships for CMaT students in the labs of each international partner. Secondly, through a series of workshops, the team provided thought leadership to help shape NSF's future international collaboration programs for ERCs. Finally, three CMaT faculty spent part of the summer in Ireland developing a \$5 million dollar proposal that will be submitted to NSF, Science Foundation Ireland (SFI), and Invest Northern Ireland (Invest NI) in January 2020. Similar proposals with Japan and Canada will be explored in the future.



◆ **Nature, Governance, and Sustainability in Costa Rica: A New Study Abroad Program**

*Dr. Michael Goodisman, Associate Professor, School of Biological Sciences*

*Dr. Terry Snell, Emeritus Professor, School of Biological Sciences*

*Ms. Lorie Páulez, Director of Education Abroad, Office of International Education*

The Nature, Governance, and Sustainability in Costa Rica program was by all accounts successful. Two Georgia Tech faculty led 11 students through Costa Rica as they learned about politics, sustainability, and biology. As part of the program, the students jointly generated a press release, which was ultimately published on the Georgia Tech main website, describing their trip (except below).



//// Identifying a beetle at La Salva Biological Station

*“Our program started in early May in the capital city of San José. We experienced new culture every step of the way, through the museums we visited and atop the country’s highest volcano. We made a difference in the community by teaming up with Lead University to reduce plastic pollution by sorting and recycling plastic bottle caps. (...)”*

*“Next, we went deep into the tropical rainforest to La Selva Biological Station, one of the leading research institutions studying tropical ecology. Hundreds of species of trees towered over us, filled with multicolored bromeliads and orchids and teeming with strange insects and birds. Oh yeah, and sloths!*

*We then traveled to Monteverde, a mountain town enveloped by clouds. We partnered with the Monteverde Institute, which aims to educate the local community about the importance of sustainability. Visiting small, sustainable farms forced us to confront the unique challenges of sustainable, organic farming.”*



//// Field work with peccaries

*“Our experiences have been part of two interconnected classes, BIOL 4813: Tropical Biology & Sustainability and PHIL 3127: Science, Technology, and Human Values. These classes have integrated biological and social sciences so students can better understand how Costa Rica, the United States, and the world construct political mechanisms to organize societies and sustain natural systems.”*



//// Eyelash viper perched on a leaf

“ In just five weeks, we interviewed a former vice president of Costa Rica, scrambled up the slopes of a volcano, and came face to face with sloths, vipers and bullet ants. The Nature, Governance, and Sustainability in Costa Rica study-abroad program has been an unbelievable experience.”

*Georgia Tech student  
(2019 NGS-CR study abroad program)*

ADDITIONAL INFORMATION:  
<http://costarica.oie.gatech.edu/>

● **Smart Commons: A Co-design Workshop for Georgia Tech’s Global Campus in Shenzhen**

*Dr. Perry Yang, Associate Professor and Director of Eco Urban Lab, School of City & Regional Planning*

*Ms. Deborah Lam, Managing Director for Smart Cities and Inclusive Innovation*

The Denning Seed Fund Award supported the project of a co-design workshop intended to highlight Georgia Tech’s interests, ideas, and proposed requirements as they pertain to the Georgia Tech Tianjin University Shenzhen Institute (GTSI) I campus, and to serve as a reference and guide for our partners from Tianjin University. The workshop brought together undergraduate and graduate students, research faculty and administrators, who, based on case studies of several buildings around the world, concluded that the campus be constructed with minimal interference to the existing landscape, and for the design to take its cue from the natural lay of the land. The vision of *the Smart Commons* sees Georgia Tech’s Shenzhen Campus as a living laboratory for cultivating cross-disciplinary research, to focus on sustainable infrastructure, urban systems design and innovative technologies of future smart cities.

//////////////////// **PROJECTS INITIATED IN 2019** //////////////////////

● **Sustainable Georgia Tech-France Collaborations at the Intersection of Music, Science, and Technology**

*Dr. Jason Freeman, Professor and Chair, School of Music*

*Dr. Grace Leslie, Assistant Professor, School of Music*

*Dr. Chaowen Ting, Assistant Professor, School of Music*

SUMMARY: The School of Music hosted a series of events and hands-on workshops during France-Atlanta 2019 that engaged Georgia Tech students, faculty, and researchers in collaborations with French scientists and artists. These events are the foundation of a sustained collaboration between Georgia Tech and the Institute for Research and Coordination in Acoustics/Music (IRCAM) in Paris, France, one of the world’s oldest and largest public research centers dedicated to musical creation and scientific research. In the past three years, the School of Music has grown substantially and it is the School’s strategic priority to elevate the global perspective of its students and increase the global reach of its research. The GT-IRCAM collaboration will result in IRCAM hosting current Georgia Tech students for internships in their research labs; joint applications for research funding from both American and French/EU sources; and the joint organization of future events of international scope in both France and Atlanta.

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● **Design and Deployment of Community Knowledge Networks Targeting Sustainable Global Development**

*Dr. Nema Kumar, Assistant Professor, School of International Affairs & School of Interactive Computing*

*Ms. Azra Ismail, Ph.D. candidate, Human-Centered Computing, Georgia Tech*

*Mr. Aditya Vishwanath, Ph.D. candidate, Learning Sciences & Technology Design, Stanford University*

SUMMARY: The research is aimed at the development of community knowledge networks in India that will enable knowledge sharing and collaborations between students/faculty at Georgia Tech, and Indian organizations and institutions working towards social impact. These networks will be centered around the United Nations’ Sustainable Development Goal (SDG) #17, “Partnership for the Goals,” to target the other 16 SDGs and extend Georgia Tech’s impact in India. The project will test the feasibility of such a model for transformative research and education in global engagement, providing insights for deploying knowledge networks in other contexts.

## ● **Training a New Generation of Creative, Global Researchers Able to Face Current and Future Challenges**

*Dr. Natalie Stingelin, Professor, School of Materials Science and Engineering / School of Chemical & Biomedical Engineering, Georgia Tech*

*Dr. Carlos Silva, Professor, School of Chemistry & Biochemistry / School of Physics, Georgia Tech*

*Dr. Seth Marder, Professor, School of Chemistry & Biochemistry, Georgia Tech*

SUMMARY: Some of the most successful programs that the European Commission (EC) has been running since decades are the Marie-Curie Innovative Training Networks (ITN)s which support competitively selected joint Research & Training programs, implemented by partnerships of universities, research institutions, research infrastructures, businesses, SMEs, and other socio-economic actors from different countries across Europe and beyond. They use well-defined research activities as the ultimate platform for training highly skilled mobile scientists with strong interdisciplinary skills and insight, and prepare them for the global market. However, the US is lacking such specific, highly funded research and training networks. The team aims to use the Denning Global Engagement Seed fund to integrate GT Ph.D. students and PIs into a specific ITN (“Understanding and Application of Doped Organic Materials from Low to High Carrier Density Regimes, or ADMIREto assist in developing new and creative international experiences for students based on well tested programs such as the Marie-Curie ITN’s; and to facilitate the development of new and strategic relationships with international partners (University of Bordeaux, France, and Unidad Merida, Mexico) both on the educational and research side.



## ● **Rwanda Sustainable Development: Georgia Tech Engagement**

*Dr. Valerie M. Thomas, Professor, School of Industrial & Systems Engineering, and School of Public Policy*

*Dr. Jonathan Colton, Professor, School of Mechanical Engineering*

*Dr. Anthony Giarrusso, Senior Research Scientist, College of Design*

*Dr. Chen Zhou, Associate Chair-Academic, School of Industrial & Systems Engineering*

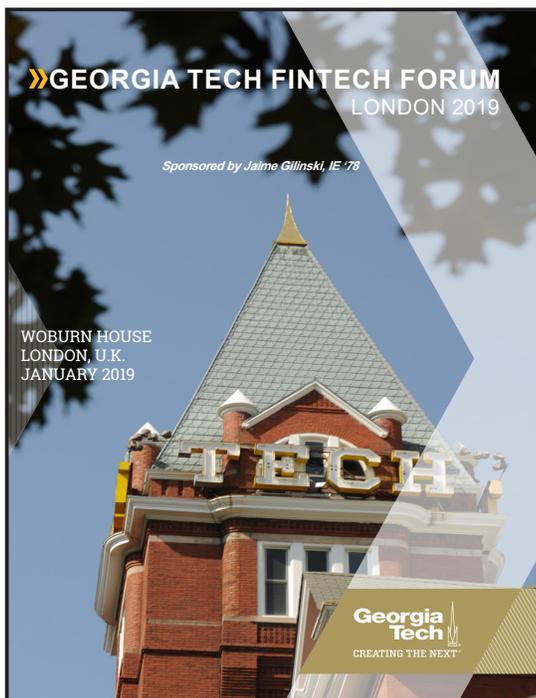
SUMMARY: This proposal is for a new approach to Georgia Tech undergraduate and graduate student global engagement and research program in Rwanda, within a framework of reciprocal activities and leveraging the potential of distance technologies. Through this approach, Georgia Tech students can contribute to achieving the United Nations Sustainable Development Goal # 7 (clean and affordable energy), Goal # 2 (industry, innovation, and infrastructure), and Goal # 15 (life and land).

## INTERNATIONAL DEVELOPMENT: INNOVATION FORUMS

Recognizing the untapped energy and experience of Georgia Tech's European alumni, International Development launched the first in an ongoing series of Entrepreneurship Forums for Georgia Tech alumni in Europe. The first Forum took place in Paris in May 2018, and focused on the culture of business development in start-ups and growing companies. In addition to hearing engaging talks by speaker from Georgia Tech along with alumni entrepreneurs from Europe and the U.S., alumni had the chance to network with each other and the speakers. By all accounts, this first event was a great success, paving the way for future Forums.

The second Forum, focused on Fintech, took place in London in January 2019, followed by a third Forum in Munich in September 2019, on Artificial Intelligence. A common thread in all of the forums has been the palpable energy of the young entrepreneurs, and their desire to connect with the Georgia Tech community.

We are in the process of planning similar programs for 2020 in Mexico, Europe, Colombia and China.



////// Fintech Forum, London



////// Innovation Forum, Munich

## IN OTHER NEWS...

Seventy governments from around the world have consular offices and/or trade representation in Georgia, primarily in metro Atlanta. Georgia Tech cultivates relationships with the Atlanta Consular Corps to promote opportunities for collaboration between the Institute and the consulates.

On March 20, the VPII Office hosted a luncheon for the Atlanta Consular Corps during which Dr. Chaouki Abdallah, Executive Vice-president for Research (EVPR) gave a presentation on Georgia Tech's global engagement.



//////Dr. Chaouki Abdallah, Georgia Tech's EVPR, sharing the Institute's global vision and engagement with members of the Atlanta Consular Corps.



//////Musician Diemo Schwartz (IRCAM) demonstrating how brain waves can steer a musical voyage through a landscape of sounds.

For the 10th edition of France-Atlanta, the annual series of events designed to foster transatlantic cooperation centered on innovation in science, culture, business, and humanitarian affairs, the French Consulate in Atlanta and Georgia Tech offered three cultural events at the intersection of music, science, and technology.

One of the events included an interactive lecture and performance between a Georgia Tech researcher and a researcher from the Institut de Recherche et Coordination Acoustique/ Musique (IRCAM) who demonstrated the connections between music perception, neuroscience, machine learning, computers and technology.

This event prompted the School of Music, the Office of the Arts, and the Office of International Initiatives at Georgia Tech to develop a partnership with IRCAM, to host jointly visiting resident artists.