Georgia Tech Envisions ‘Deliberate Innovation, Lifetime Education’ in Commission Report

SUSIE IVY
INSTITUTE COMMUNICATIONS

On April 25, the Institute’s Commission on Creating the Next in Education released its final report: Deliberate Innovation, Lifetime Education.

Using the year 2040 as a long-term vantage point, the Commission — a group of more than 30 faculty, staff, and students — was asked to explore and evaluate innovative approaches to higher education, address current and future learner needs, and make recommendations on alternative educational models to reduce costs, improve the effectiveness of current methodologies, and increase opportunities and accessibility to serve the needs of the next generation and beyond.

The Commission was convened in late 2015 by Provost Rafael L. Bras and co-chaired by Richard DeMillo, executive director of Georgia Tech’s Center for 21st Century Universities; and Bonnie Ferri, vice provost for Graduate Education and Faculty Development.

“The Georgia Tech of 2040 will need to provide educational services along a continuum and serve the needs of...”

How Regional Development, Economic Incentives Are Changing

ALYSON POWELL
INSTITUTE FOR PEOPLE AND TECHNOLOGY

In a new book, editors of the international journal Regional Studies and authors from universities around the world explore the shift in global power toward economies in the East, the impact of immigration on economies, and the consequences of urbanization.

Jennifer Clark, associate professor in the School of Public Policy, helped edit Transitions in Regional Economic Development, which also looks at hyper-globalization and what it means for regional economies. In light of its release, she talks about the evolution of the field and how the bid for Amazon’s new headquarters highlights an important economic development policy question for cities.

What are some of the changes occurring in the development of cities and regions?

Some of the big questions in regional policy and regional economic development are things like industrial transformation — the shift from manufacturing economies into service-based economies.

What does that mean for jobs? What does that mean for wages and income? What does that mean for policy? How do you create economic development policies that support the ability of communities to support themselves? What kind of industries do you invest in? If you think about something like the competition for the new Amazon headquarters, that sort of policy question is central here. Do you see...
Faculty Study LGBTQ Inclusion in Engineering with NSF Grant

GEORGIA PARMELIE
COLLEGE OF ENGINEERING

A paradigm exists within the engineering field, according to recent literature. It's that engineers think in binary terms, setting aside personal connections in favor of purely technical skills.

Researchers have identified that the field as a whole is particularly masculinist and heteronormative, as well. For an LGBTQ (lesbian, gay, bisexual, trans, queer, and others) individual, this environment can be daunting and unfriendly, and often keeps them in the margins.

Four Georgia Tech faculty members want to challenge the existing culture in engineering and promote inclusivity and diversity in schools across the country. Chloe Arson (School of Civil and Environmental Engineering), Jennifer Hasler (School of Electrical and Computer Engineering), Manu Platt (Department of Biomedical Engineering), and Anne Pollock (School of Literature, Media, and Communication) are trying to understand why LGBTQ people are less visible in engineering disciplines than in other fields, even within STEM. One of the core questions to answer is: Does engineering attract fewer LGBTQ students and employees because of its binary reputation? Or are they present, but just invisible?

To answer the question, the four professors received a grant from the National Science Foundation (NSF) with the goal of making LGBTQ individuals more present and visible in the engineering field. The grant provided funds to run a conference in March that brought together faculty from across the country to discuss how to attract more diversity in engineering, as well as collect metrics and data on invisible identities, such as sexual orientation.

“Receiving this grant from the NSF is something very symbolic, and their support enhances our credibility,” Arson said. “Our proposal was peer-reviewed, and people will trust the results. The support from the NSF will put our work in the public domain and encourage other LGBTQ projects to get started.”

The Inclusivity in Engineering conference included engineering faculty, as well as professors from the humanities and social sciences with expertise on inclusion in engineering. The multidisciplinary model of the conference created an environment where many perspectives were brought to the table.

Although it was discussed at length, there was no definitive answer as to why engineering attracts fewer LGBTQ students and employees, or if they are in fact present, but invisible. More work will have to be done to make that determination.

“LGBTQ individuals’ lives do not fit neatly into an engineering department,” Pollock said. “It makes it difficult to negotiate being out because personal life and the technical aspects of the job are generally thought to be completely separate.”

A few conclusions did come out of the conference. There was common agreement that other aspects of identity also affect how LGBTQ faculty navigate the workplace, including gender, race and partnership status. Also, some longitudinal data was presented that indicated that over the course of students’ engineering education, they become less aware of and interested in making a social impact. The grant’s principal investigators recognize that this two years was important to study and address going forward.

Hasler, Platt, and Pollock hope that the NSF grant will bring more attention to LGBTQ issues in engineering and help to develop an unbiased culture. They plan to develop a methodology for collecting data and to create benchmarks for how the engineering field can be more inclusive. The exploration and research fostered by the conference is the first step in creating an environment that celebrates differences and ensures everyone feels welcome.

FACULTY AND STAFF ACHIEVEMENTS

Muhammad Bakir, professor in the School of Electrical and Computer Engineering, was named the recipient of the 2018 IEEE Electronics Packaging Society Exceptional Technical Achievement Award.

School of Electrical and Computer Engineering Professor Robert J. Bussa has been named a Distinguished Lecturer for the IEEE Engineering in Medicine and Biology Society for a two-year term through December 2019.

Archie Ervin, vice president for Institute Diversity, was recently re-elected as president of the National Association of Diversity Officers in Higher Education for a second two-year term from 2018 to 2020.

Kim Harrington, associate vice president for Human Resources, earned the Ruth-Whiting Award from ACUI. The award recognizes outstanding leaders who have made significant contributions to the college union and student activities movement.

Felix Herrmann, professor in the School of Earth and Atmospheric Sciences, has been named as a 2019 Distinguished Lecturer for the Society of Exploration Geophysicists for January-June 2019.

Omer Inan, assistant professor in the School of Electrical and Computer Engineering, received a National Science Foundation CAREER Award.

George W. Woodruff School of Mechanical Engineering Professor Surya Kalidindi has been named a recipient of the 2018 Department of Defense Vannevar Bush Faculty Fellowship.

Joseph H. Saleh, associate professor in the Daniel Guggenheim School of Aerospace Engineering, was named 2018 Outstanding Faculty Member of the Year by Sigma Gamma Tau, the honor society for aerospace engineers.

Brendan D. Saltaformaggio, assistant professor in the School of Electrical and Computer Engineering, received the CISE Research Initiation Initiative Award from the National Science Foundation.

School of Electrical and Computer Engineering Assistant Professor Fatih Sarıgül received a National Science Foundation CAREER Award for his project entitled Feedback-Controlled Microfluidic Chips with Integrated Sensor Networks for Blood Analysis.

Robin Thomas, professor in the School of Mathematics, has been named to the Society for Industrial and Applied Mathematics Class of 2018 Fellows.

Hua Wang, assistant professor in the School of Electrical and Computer Engineering, has been named as a distinguished lecturer for the IEEE Solid-State Circuits Society for a two-year term through December 2019.

Ford. The Ph.D. Commencement Ceremony will take place at 9 a.m. at McCamish Pavilion. Tickets are not required. Graduates are required to RSVP.

The Master’s Commencement Ceremony will take place at 3 p.m. at McCamish Pavilion. Tickets are not required. Graduates are required to RSVP.

May 5
Bachelor’s Commencement Ceremonies will take place at 9 a.m. and 3 p.m. at McCamish Pavilion. Tickets are required for guests, and an RSVP is required for graduates.

More information is available at commencement.gatech.edu.

WORKSHOPS AND TRAINING

May 10
All faculty, staff, and students interested in working to reduce the environmental impact of campus labs are invited to this Green Labs Working Group meeting. Our group charter will be shared as working groups will be rescheduled. The event takes place from 11 a.m. to noon in Room 423, Clough Commons.

More information is available at sustainable.gatech.edu.

SEMINARS AND LECTURES

May 2
George W. Rebok, John Hopkins University, will discuss Optimizing Everyday Function in Older Adults: Translating the Evidence from 3:30 to 5 p.m. in the Peachtree Room, Student Center, during a School of Psychology colloquium.

psychology.gatech.edu

May 3
Professional Education hosts Reimagining Education, with guest speaker Amrit Agarwal, CEO of edX and professor at MIT, at 11 a.m. in the Goody Room, Wardlaw Center.

pe.gatech.edu

EVENTS

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In Memoriam
Rochelle Williams

Rochelle Williams, a financial administrator in the School of Electrical and Computer Engineering (ECE)’s accounting office, died Sunday, April 15.

Williams started her career at Georgia Tech in 1988. She joined ECE in 1991, where she was a trusted, respected, and beloved colleague and friend. “The faculty that Rochelle supported relied heavily on her to ensure all aspects of their financial grants were properly observed, and she always ensured that things were done accurately and on time,” said Raheem Beyah, Interim Steve W. Chaddick School Chair and Motorola Foundation Professor in the School of Electrical and Computer Engineering. “She was a very positive and supportive person to everyone who crossed paths with her, and she will be missed by all of us very much.”

Services for Williams will be held Friday, May 4, at 3 p.m. at Willie A. Watkins Funeral Home in the Riverside Chapel, 6580 Church Street, Riverdale, Georgia 30274.

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create subsidies to attract firms, or do you invest in place? For academics in regional economic development, all of the evidence that we have empirically shows that subsidies do not pay off.

Why is that?
The cities and regions that are creating economic development packages pay too high a price to firms in terms of concessions. It’s also because cities undercut each other, which is part of what’s going on with the Amazon bid right now. You get into a bidding war rather than an empirical analysis of what the cost-benefit analysis would be for what you’re trying to attract. But it’s also because firms often don’t do what they say they’re going to do, and there is no policy mechanism to hold them to it. So when firms say they’ll bring 5,000 jobs, what ends up happening is they bring 2,500 jobs in the end. There are some policy proposals and people who advocate for things like clawback policies so that you get your subsidy back if the firm doesn’t meet the promises made.

One of the most significant debates in economic development policy is the question of, would you be better off if you took that, say, $500 million, and invested it in your K-12 schools, or in your transportation system? What if you just take $500 million and, instead of putting it in a tax subsidy to an individual firm, you put it into your universities for more Hope Scholarships? Would the competition still exist because they want the talent? And what you did is you invested in your people as the attraction. More and more, what we’re seeing is that investments in human capital pay off more than investments in individual firms.

The book also examines immigration from a European perspective and whether, according to the book’s description, immigrants “displace local workers and depress wages, or bring benefits in the form of know-how, new technology, and investment.”

Just like in the U.S., in the broader debate about cities and regions, immigration is a huge hot-button issue. In the U.K. there’s Brexit, in addition to the recession and what that means for the industrial composition of cities and regions. The question of who’s doing the work and who’s living in the cities and regions is a big question, as well as how you think about immigration policy from an economic perspective rather than a social, hot-button-issue perspective.

In our research here in the U.S., we are consistently finding that 25 percent of the economy is people who are working in the formal economy and are working in jobs that don’t have specific certifications or degrees. It’s cooks, it’s janitors, it’s people who are part of what we are calling the “essential economy.” Those are the kinds of jobs that people who are immigrants and migrants often get, certainly when they first come because they usually don’t have certifications, or whatever certifications they have are not recognized. If you do the economic analysis, it’s a labor supply, labor demand question. If you decrease the labor supply by having more restrictive immigration policies, you have to be interested in paying a lot more for the work performed in that 25 percent in the essential economy as well as in specialized high-skilled occupations where immigrants are well represented. This is what businesses and consumers are already experiencing in the U.K.

ed-innovation

For a more comprehensive listing of events, or to add your own, visit calendar.gatech.edu.
In October 2016, the Academic Senate approved new appointment and promotion guidelines for untenured track faculty with academic professional and lecturer titles, and added the category of "principal academic professional." These guidelines apply to about 100 members of the academic faculty who are full-time. Prior to this, untenured track faculty members were considered on a case-by-case basis with no standard guidance or criteria for when someone should or could be promoted.

Starting in 2017, the Office of Faculty Affairs implemented the new process. Between last year’s and this year’s cycles, 38 academic professionals and lecturers have been promoted from lecturer to senior lecturer, academic professional to senior academic professional, and senior academic professional to principal academic professional. This year, Bonnie Ferr, vice provost for Graduate Education and Faculty Development, reviewed the process and gathered input from faculty, associate deans, and chairs, resulting in a few changes. This month, the Faculty Senate approved some revisions to the Faculty Handbook based on the feedback.

These changes included clarifying the roles of the academic professionals, providing more specificity on external reference letters, and adding language that the colleges and other units should provide guidance on how the criteria apply to their faculty.

The guidelines can be found in the Georgia Tech Faculty Handbook, section 3.2.2, at gatech.edu/ftp. More information about untenured track hiring, reappointments, and promotions can be found at faculty.gatech.edu.

In May, Faculty Affairs will release a guidance document and host several summer workshops to provide further direction and answer questions on this process.

Congratulations to the following individuals who received promotions during the 2017-18 cycle:


Employees and guests visit during the Service Recognition Luncheon on April 19 at the Georgian Terrace. The luncheon honored those who had reached 10 and 25 years of service. See more photos from the event at c.gatech.edu/servicelunch.