



# Message from the Director



## Message from the Director

Dear Colleagues:

The 2020-2021 academic year has been quite a year in higher education—and at this point, there are few ways to highlight what we’ve been through that don’t exhaust everyone’s patience. When we hear words such as “unprecedented” to describe the pandemic—or “pivot” to report our response—or “the new normal” to express where we are now, our brains yell “stop”. The media has used these words too many times in the last several months!

So, as I ponder how to introduce the 2020-2021 FY report of the Center for Teaching and Learning (CTL) to you and not use any of the trite phrases I mentioned above, I think it’s best just to come out and say it: once again a record number of faculty, future faculty, postdoctoral scholars, and TAs have engaged in our programming. We’ve provided service to approximately 10,422 participants through orientations, workshops, courses, consultations, recognitions, and online resources. Though we needed to learn how to offer all our programming in a virtual or online format, our constituents honored our efforts with their participation and rated our programs highly. We’ve once again experienced growth—another 9% this year to complement last year’s 65% increase in service to individuals.

Details of the connections we made this year are highlighted on the following pages. We in the Center for Teaching and Learning appreciate the many faculty, TAs, and campus units who partnered with us this year in order to provide Georgia Tech students with outstanding learning experiences in a fully remote environment. It’s been our pleasure to work with you!

With best wishes,

Joyce Weinsheimer  
Director of the Center for Teaching and Learning



# Mission & Vision Statements

## The CTL Mission

The Center for Teaching and Learning promotes and supports an on-campus and online instructional community where excellence in teaching and learning is valued and where educators engage in evidence-based, state-of-the-art practices that foster opportunities in which diverse students and instructors can thrive.

## The CTL Vision

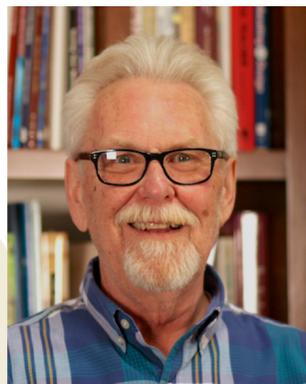
The Center for Teaching and Learning envisions a campus culture that creates meaningful learning for all students, empowers people to engage in effective instruction, and values excellence in teaching.



# Faculty and Staff



Joyce Weinsheimer, Ed.D.  
Director



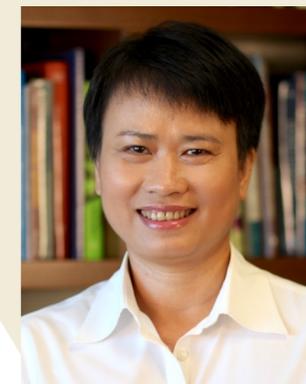
David Lawrence, Ph.D.  
Associate Director



Carol Subiño Sullivan, Ph.D.  
Assistant Director of  
Faculty Teaching and  
Learning Initiatives



Rebecca Pope-Ruark, Ph.D.  
Faculty Teaching and  
Learning Specialist



Chaohua Ou, Ed.D.  
Assistant Director of  
Learning and Technology  
Initiatives



Vincent Spezzo, Ed.D.  
Program Manager of  
Teaching and Learning  
Online



Rui Hu, Ph.D.  
Learning and Technology  
Initiatives Specialist



Kate Williams, Ph.D.  
Assistant Director of TA  
Development and Future  
Faculty Initiatives



Tammy McCoy, Ph.D.  
TA Development and  
Future Faculty Specialist



Sarah Kegley, M.A.  
International TA Program  
Manager



Felicia Turner  
Academic Program  
Coordinator II



Anastasia Volokhova  
Administrative Professional II



Terri Dunbar  
Graduate Teaching Fellow



Angela Yoo  
Graduate Teaching Fellow



Evan Mallen, Ph.D.  
Postdoctoral Scholar

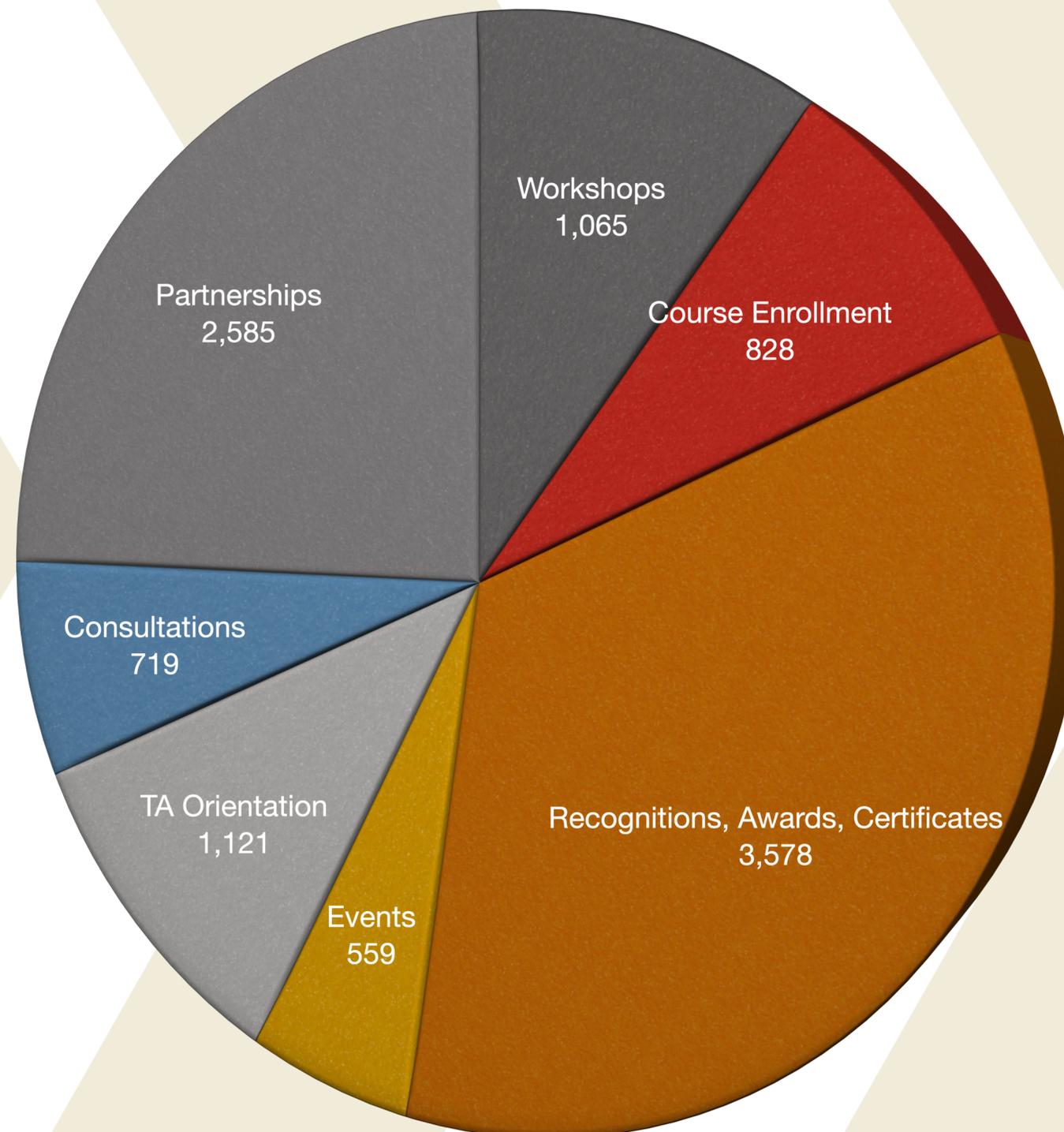


Camryn Burke  
Student Writer

CTL faculty provided **719** consultations, classroom observations, and class dialogues in FY 2020 - 2021.

# By the Numbers

## CTL Programming and Services



In FY2020 - 2021, the Center for Teaching and Learning had over **10,422** contact points with members of the Georgia Tech community, a **9%** increase over the previous fiscal year.

- Workshops
  - Attendees
- Courses
  - Students enrolled in CTL course offerings
- Recognitions, Awards, and Certificates
  - Thank a Teacher, CTL BP Awards, CIOS Recognitions, TA Awards, Tech to Teaching and CIRTLL Certificates
- Events
  - Celebrating Teaching Day and Teaching and Learning Forum
- TA Orientation
  - Graduate and undergraduate students completing TA training
- Consultations
  - One-on-one consults, class observations, and class dialogues
- Partnerships
  - Services conducted in collaboration with other stakeholders

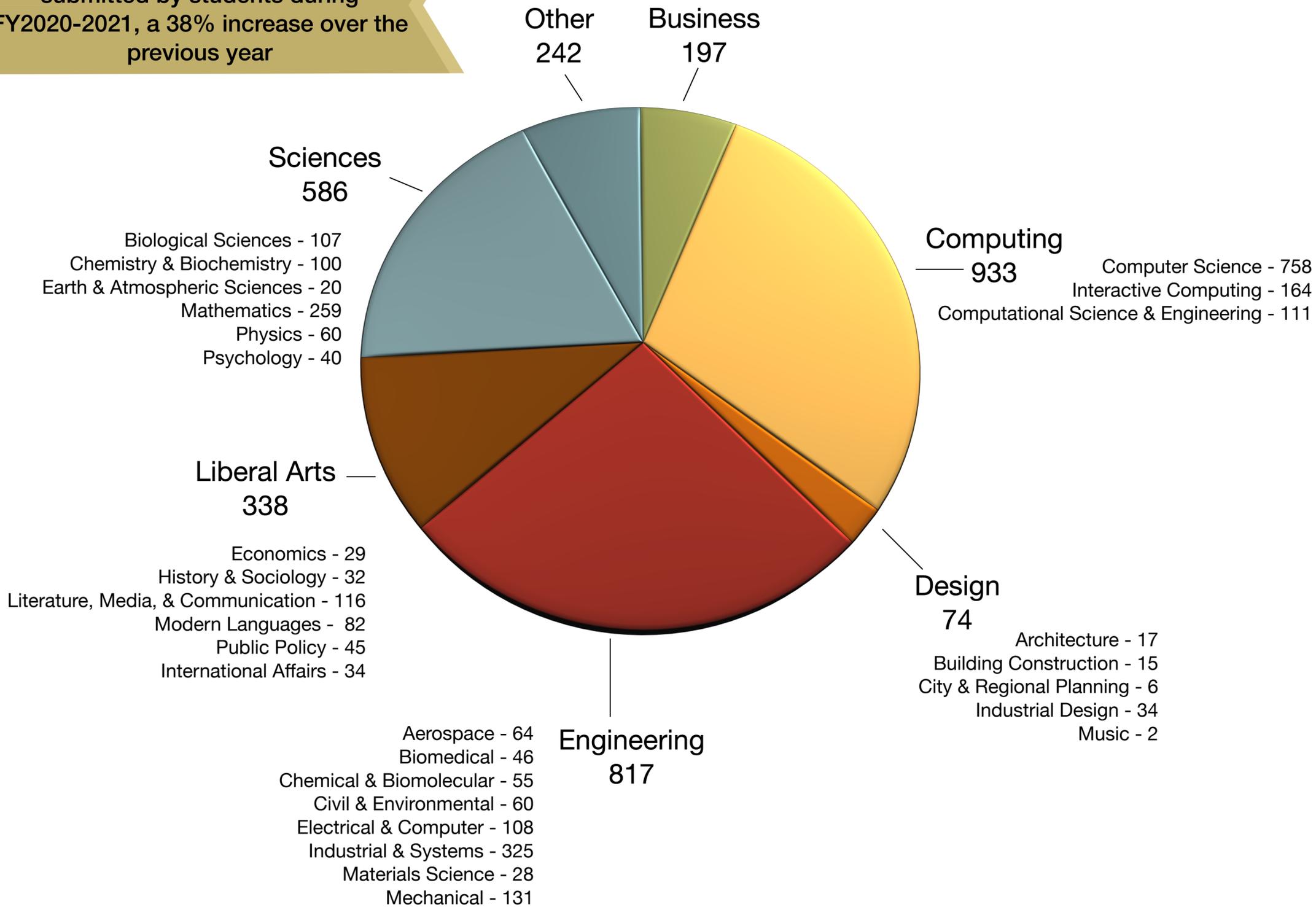
**NOTE:** The data presented in the pie chart represents contact points, not unique individuals. For example, if a faculty member attends a CTL workshop and receives a Thank a Teacher note, then two contact points would be counted.

# Thank a Teacher Program

The *Thank a Teacher* program recognizes outstanding contributors to the learning environment at Georgia Tech. Any student can submit a *Thank a Teacher* note to a faculty member, TA, or staff member on campus. Recipients are recognized at Celebrating Teaching Day.



**3,187** *Thank a Teacher* notes were submitted by students during FY2020-2021, a 38% increase over the previous year



## Events

### Celebrating Teaching Day

Celebrating Teaching Day is an annual event hosted by the Center for Teaching and Learning that honors and celebrates the dedication of Georgia Tech faculty and instructors who create engaging, challenging, and supportive learning experiences for their students throughout the year.

For FY2020-2021, Celebrating Teaching Day featured events on two separate days. The first day included a keynote presentation and webinar on the topic of equitable grading. The keynote address, "Assessment Hacks Revealed: Lowering Barriers while Preserving Rigor," was presented by Dr. Thomas Tobin, the Program Area Director for Distance Teaching & Learning on the Learning Design, Development, & Innovation (LDDI) team at the University of Wisconsin-Madison. This interactive webinar session introduced a framework of expert-level teaching practices, all backed by the science of how our brains learn. Participants discussed how adopting an assessment plan that de-emphasizes numerical grades can help to make learners more active, curious, and engaged

A poster session comprised day two of Celebrating Teaching Day and featured 28 educational initiatives carried out by CTL's faculty teaching fellows, faculty learning communities, Britain Fellows, and other members of the broader Georgia Tech community.

**493** members of the Georgia Tech community participated in Celebrating Teaching Day.

**89%** of attendees gave the event an overall rating of very good or excellent and an average rating of **4.3 / 5.0** with 5 being excellent.

**Poster Session Recordings**

**Tabletop Quadrotor Platform for Teaching Fundamental Controls Concepts**  
Ellen Yi Chen Mazumdar

Hands-on Learning | Design | Control | Electronics | Simulation

**Teaching Sociology through The Autobiography of Malcolm X**  
Kate Pride Brown

**Supporting Academic Effectiveness at Georgia Tech**  
Franz H. Reneau, Ph.D.

academic effectiveness

**Redesigning an Open Textbook by Leveraging Media, Pedagogy, and Student Collaboration**  
Chaohua Ou

Open Education | learning design | Open educational resources

**Examining Perspectives of Teaching among Biology Teaching Assistants**  
Emily Weigel

**Anti-Racist Education Faculty Learning Community**  
Provost Teaching and Learning Fellows

**Graduate students practice presentation and networking skills at virtual poster session**  
Dr. Kate Williams

**International TA program**  
Sarah Kegley/ Center for Teaching & Learning

International TAs

**Accessing students creative energies in the classroom: The effect of video-based final projects**  
Dobromir Rahnev

Final project | student learning | student videos

**Should we Use Project-Based Learning (PBL) in the Language Classroom?**  
Natalie Khazaal

PBL | language learning | Arabic | semester-long project | Modern Languages

**Beyond the Building Report: On-Site Architectural History**  
Danielle S. Willkens

architecture | design | photography | architectural history | annotation | InDesign | survey

**Reimagining Tech's Monuments in Public Spaces**  
Julia Tigner

**Inquiry-Based Learning in Integrated Product Design Classroom**  
Sang-won Leigh and HyunJoo Oh

Interactive Products | Inquiry-based learning | 1969 Teaching Fellows

**The Art of Engineering: A New SECME Competition**  
Julaunica Tigner

**small TEACHING**  
Everyday Lessons from the Science of Learning  
JOSSEY-BASS

**DIGITAL PLACE NARRATIVE**  
DANIELLE N. GILMAN, PH.D. WRITING AND COMMUNICATION PROGRAM DEPARTMENT OF LITERATURE, MEDIA, AND COMMUNICATION GEORGIA INSTITUTE OF TECHNOLOGY

**The Digital Place Narrative: An English 1101 Project**  
Danielle Gilman

first-year writing | multimodal composition | multimodal | archives | digital learning | Georgia Tech

**Writing and Communication QuickTakes Spring 2021**

**TWO CAN PLAY AT THAT GAME!**  
RECIPROCAL EXPERIENCE-BASED DESIGN LEARNING  
ANNE SULLIVAN

**STEM FORCE THE BRAIN AWAKENS**

**Small Teaching Online for**

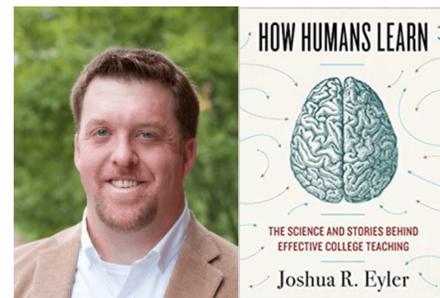
## Events

### Teaching and Learning Forum

#### Building a Post-Pandemic Future for Higher Ed without Losing Sight of Our Students and Ourselves

This event, co-hosted by the Center for Teaching and Learning and the Provost Teaching and Learning Fellows, provided participants with an opportunity to reflect on what they missed during the pandemic, to discuss what they learned about students and teaching from this experience, and to explore the future of what teaching and learning might look like at Georgia Tech in upcoming years. The event began with Dr. Josh Eyer's keynote address and webinar titled, "Building a Post-Pandemic Future for Higher Ed without Losing Sight of Our Students and Ourselves."

In the second half of the forum, participants gathered in college groups facilitated by their Provost Teaching and Learning Fellows. Each group discussed how their college can leverage this moment in time to enhance current teaching and learning practices. Ideas and recommendations were shared after the event with College Deans.



Josh Eyer is the author of *How Humans Learn: The Science and Stories behind Effective College Teaching* (WVU, 2018) and a frequent speaker at colleges and universities across the country. Josh is the Director of Faculty Development and Director of the Thinkforward Quality Enhancement Plan at the University of Mississippi.

A total of **66 participants** attended the Teaching and Learning Forum and rated the overall effectiveness at **4.77 / 5.00** with 5 being excellent.

## Partner Events and Initiatives

### New Faculty Orientations

#### New Faculty Orientation

In August, CTL facilitated "Teaching at Tech" for new faculty. Joyce Weinsheimer and David Lawrence shared "Expectations: Spoken and Unspoken," a video CTL recently produced that illustrates what not to do on the first day of class, and then facilitated a speed networking exercise for participants to share ideas on how to set a positive learning environment. Carol Subiño Sullivan then shared the *Teaching at Georgia Tech* Guidebook and used an open-book quiz to facilitate a discussion about policies and procedures that pertain to teaching at Georgia Tech.

In partnership with the Office of Faculty Affairs, CTL contributed to an extended new faculty orientation series designed to support faculty throughout their first year. In October, CTL facilitated a workshop for new faculty on "Engaging Students in the Classroom with Active Learning." Faculty explored strategies that would help their students process new information, practice applying it, and then use feedback to understand the quality of their learning.

#### New Faculty Welcome and Orientation to Teaching at Georgia Tech

In August and January, CTL co-hosted this event for new instructors with the Office of Faculty Affairs. Participants included new part-time, temporary, and visiting faculty as well as new graduate student instructors of record. At the event, participants learned about Georgia Tech traditions, had a question-and-answer session with a panel of experienced instructors, learned about policies and procedures that pertain to teaching, and reviewed Thank a Teacher notes written by Tech students that express what they value about good teaching.

### Serve-Learn-Sustain



#### Going Global: A Sustainable Development Goals (SDG) Curriculum Design Workshop

Georgia Tech's new strategic plan highlights the Institute's commitment to empower students as agents of change, prepared to "help define and address the most critical problems of our time, locally and globally." Incorporating the United Nations Sustainable Development Goals (SDGs) into our teaching can help students make connections between their disciplinary knowledge and skills and the world's most pressing challenges. These "real world" connections often make course content more relevant to students, enhancing motivation.

During the first portion of the workshop, participants listened to three faculty members (from Georgia State, Spelman College, and Georgia Tech) discuss how they incorporated the SDGs into their courses. Then, workshop attendees formed small groups organized according to the goals of workshop participants. Facilitators with experience in course design and teaching with the SDGs provided support and resources as faculty worked on integrating SDGs into their own lessons, units, and/or courses. These work sessions helped faculty make progress toward their SDG course integration goals, whether new to the SDGs or experienced and wanting to do more.

## Partner Events and Initiatives

### GTRHTA

#### Design Your Fall Syllabus

During the 2020 spring semester and summer as well, the Tech teaching community was focused on what was essentially remote emergency teaching. The courses finished in spring and summer were not originally intended to be anything other than face-to-face, so instructors had to pivot as a community quickly. In fall 2020, the Center for Teaching and Learning collaborated with the Georgia Tech Remote and Hybrid Teaching Academy (GTRHTA) to design and deliver a workshop on creating a syllabus that would prioritize on-campus learning, but be flexible enough to adjust at any point should public health and safety require it. In this workshop, participants

- Identified the foundational pillars that grounded their courses and would not change regardless of teaching mode.
- Applied characteristics of effective learning objectives to revise their existing objectives as necessary for variable teaching environments.
- Created learning objectives to align decisions about repurposing/remixing instructional activities in the course with student learning and situational factors in mind.

Major collaborators for the workshop included CTL, the Center for 21st Century Universities, the Digital Learning Team of the Office of Information Technology, Georgia Tech Professional Education, the Library, Summer Session Initiatives, CEISMC, and the Center for Inclusive Design and Innovation.

#### Ask Me Anything

CTL partnered with GTRHTA to present three virtual sessions where faculty from the College of Design, College of Engineering, and Scheller College of Business were invited to attend and ask any questions that they had about remote and hybrid teaching for fall 2020. There were 53 faculty who participated in these sessions.

#### Designing Effective Assessments

Effective assessments not only identify what students have learned, but actually support students in that learning process. In this workshop, facilitators used a design approach to help instructors identify changes to their assessment plan appropriate for the remote teaching environment.

### University System of Georgia

#### Reframing Assessments in Uncertain Learning Landscapes

In this USG Teaching Series Workshop, Carol Subiño-Sullivan and Rebecca Pope-Ruark led participants in the following activities:

- compared assessment for learning and assessment of learning.
- identified strategies for formative and summative assessments.
- used principles of assessment for learning to develop an assessment flow for one learning goal.
- considered how the remote learning environment impacted the strategies they chose.

### Scheller College of Business

#### Inclusive Teaching: Fostering Racial Equity in the Classroom

In fall 2020, Dr. Carol Subiño-Sullivan, CTL's Assistant Director for Faculty Teaching and Learning Initiatives, was invited by the Scheller College of Business to facilitate a workshop for their Diversity, Equity, and Inclusion (DEI) speaker series on inclusive teaching.

The goals of the workshop were to help participants

- explain how students of color experience racism in courses and reflect on how these conditions may exist in their own courses.
- use the marginalizing-centralizing continuum to identify opportunities for strengthening anti-racist teaching practices.
- identify strategies for engaging in anti-racism pedagogy.

### Tutoring and Academic Support

#### Learning Assistant Program

During the Spring 2021 term, the Center for Teaching and Learning partnered with Stephanie Reikes from TAS to develop and facilitate a cohort-based approach to supporting faculty in integrating Learning Assistants (LAs) into their courses. The faculty cohort included faculty who had been assigned a LA for their classes. The faculty met regularly to learn about best practices on how to best leverage LAs to support their students' learning.

LAs are undergraduate students who facilitate small group collaboration inside the classroom by working alongside faculty during breakout activities. Learning assistants promote 1-to-1 and small group discussion to boost comprehension and problem-solving skills during class. LAs can help facilitate active learning and collaborative instruction in lecture, recitation, studio, and/or lab.

Tutoring and Academic Support (TAS) provided pedagogical training for LAs to assist them in promoting student learning outcomes. One of the biggest advantages of having an LA in the classroom is it provides another point of contact for the student. Learning Assistants decrease the student-to-teacher ratio, which can be valuable for larger lecture courses.

The Learning Assistant Program faculty cohort included

**Antonia Antoniou**, Mechanical Engineering, *Associate Professor*

**Mike Evans**, Chemistry and Biochemistry, *Senior Academic Professional*

**Jacqueline Garner**, Finance, *Senior Lecturer*

**Stephanie Reikes**, Mathematics, *Lecturer*

**Tatiana Rudchenko**, Operations Management, *Senior Lecturer*

**Himani Sharma**, Materials Science and Engineering, *Lecturer*

**Carrie Shepler**, Chemistry and Biochemistry, *Principal Academic Professional*

**Chaowen Ting**, Music, *Associate Professor*

**David Torello**, Mechanical Engineering, *Academic Professional*

**Turab Zaidi**, Aerospace Engineering, *Lecturer*

## CTL Programming

### Course Design Studio



The Center for Teaching and Learning collaborated with Serve-Learn-Sustain consultants and with campus colleagues to offer a professional development experience in course design. In this virtual short course, participants accessed asynchronous modules via Canvas that provided frameworks, models, and structured exercises designed to help them build course elements. These elements included learning goals, assessments, and learning activities. Participants could select to focus on the fundamentals of backwards course design, integrating the UN SDGs, and/or making their courses more equitable and inclusive. Additionally, participants engaged in synchronous collaborative sessions via BlueJeans and shared their course element designs with colleagues and CTL consultants. Participants expressed appreciation for a dynamic mix of both synchronous and asynchronous work embedded in the Course Design Studio.

## CTL Programming

### Reflective Teaching Badge

During FY2020-2021 fiscal year, 77 Tech faculty participated in CTL's new Reflective Teaching Badge program. This program encourages faculty to explore new teaching ideas and experiment with a teaching innovation in the classroom while having support from other faculty members. The intent of the program is to foster a community of instructors who will support each other in trying out innovative teaching ideas and documenting their effectiveness.

Events of the past year have ignited major changes in the teaching and learning that has traditionally occurred in courses across campus. In response, faculty have participated in multiple professional development opportunities. However, the array of new teaching approaches available can quickly become overwhelming. Often instructors find themselves falling back into familiar patterns even when they really want to try out new ideas.

That's where the Reflective Teaching Badge program comes in. Once a month, participants come together virtually with colleagues to reflect deeply on their particular teaching context, identify the challenges they are interested in addressing, and reflect on how they might apply new teaching approaches towards those challenges. As a community, participants create a space for listening, asking thought-provoking questions, and offering mutual encouragement and affirmation. By participating in this program, instructors can find the support to move beyond thinking about making a change to actually doing it.

In addition, participating in the program provides faculty an opportunity to get started on documenting the ways they are making their teaching more effective. As Georgia Tech expands its emphasis on teaching effectiveness, having this documentation will be useful.

## CTL Programming

### Teaching and Technology Studio

Due to the continuing pandemic, fall semester 2020 was full of uncertainty, but also provided an opportunity to rethink courses and assessments for student learning in any environment. The Teaching and Technology Studio provided faculty a three-day forum to (re)imagine assessment methods and strategies for teaching in different learning environments – remote, hybrid, and socially distanced in-person classes.

The first day focused on designing an overall assessment plan. Participants mapped out how they would assess each of the course objectives and plan out the mix of low stakes assessments leading up to major high-stakes assessments. Attendees also explored how to leverage technology to develop a flexible assessment plan that lets students learn in either in-person but socially distanced or remote settings as needed.

The second day was about discovering strategies and techniques for implementing the assessment plan crafted during Day 1. Workshop facilitators demonstrated how to use a variety of tools to develop and administer online assessments. Finally, participants developed concrete and efficient solutions for effectively carrying out their assessment plan to measure students' learning progress, knowledge, and skills.

On the final day of the Studio, attendees built grading and feedback opportunities into their assessment plan. Topics covered by facilitators included formative vs summative feedback on students' work; flexible and equitable grading practices; three types of feedback - expert, peer, and automated; and rubric design.

**100%** of the participants attending the Teaching and Technology Studio rated the overall effectiveness very good or excellent.

## Programming

### Faculty Teaching Workshops

#### Engaging Students in Physically Distanced Active Learning

The Covid-19 pandemic has changed many things about teaching, but what remains true is that students learn more effectively when they are actively engaged in the learning process. The precautions the campus community must take to prevent the spread of the virus during in-person instruction means that faculty need to make changes to the active learning strategies that they have previously used in their courses. In this virtual session, participants identified strategies for overcoming the challenges of active learning while physically distancing, including using classroom technology and low tech strategies for facilitating student engagement. Following the workshop, participants were provided an opportunity to share their plan for implementing physically distanced active learning in order to receive feedback from a colleague.

#### How to Be an Anti-Racist Educator

Ibram X. Kendi writes in *How to Be an Anti-Racist* (2019) that “there is no neutrality in the racism struggle. The opposite of ‘racist’ isn’t ‘not racist.’ It is ‘anti-racist.’ ...The only way to undo racism is to consistently identify and describe it—and then dismantle it.” Racism is reproduced in institutions throughout our society, and higher education is not exempt. Faculty have an important role to play in dismantling racism in their own classrooms. In this virtual workshop, participants listened to stories from students who have experienced racism at Georgia Tech. Participants then identified concrete strategies to engage in anti-racism pedagogy through their course goals, content, classroom facilitation, and assessment strategies.

A total of **318 participants** attended Faculty Teaching Workshops and rated the overall effectiveness at **4.47 / 5.00** with 5 being excellent.

#### Teaching During a Contentious Election

The teaching environment during Fall 2020 was troubled by an on-going pandemic and social unrest. With the approach of the 2020 election, stressors increased among faculty, staff and students at Tech.

As instructors struggled to focus on course content and wrapping-up the semester, both faculty and students reported feeling disoriented. Faculty and students wanted to engage—yet good intentions don’t always bring great results.

Workshop panelists addressed questions of how members of our campus community could acknowledge the strong emotions and results of the election without offending someone.

Panelists and topics included

- *Welcome and introduction to the workshop topic and panelists:* Joyce Weinsheimer, Director, Center for Teaching and Learning
- *Teaching inclusively during the 2020 election season:* Gordon Moore, Executive Director, Student Diversity and Inclusion
- *Teaching students with diverse political views:* Mark Zachary Taylor, Associate Professor, Public Policy
- *Connecting course content to the election season:* Kim Cobb, Georgia Power Chair and ADVANCE Professor, Earth and Atmospheric Sciences
- *Teaching strategies that communicate care/support to students in turbulent times:* Carol Subiño Sullivan, Assistant Director, Faculty Teaching and Learning Initiatives, Center for Teaching and Learning
- *Guidance for faculty on academic freedom/free speech at election time:* Kathleen Gosdsen, Managing Chief Counsel, Employment and Litigation, Legal Affairs

#### Keeping the Spark: Ways to Maintain Energy in Trying Times

Over the last few years, Georgia Tech has engaged in important work to study the learning environment and the academic well-being of students. As Fall semester 2020 came to a close, it was evident that many faculty and students were deeply impacted by the uncertainty that engulfed Tech’s campus and the world.

So how do we keep the spark in our teaching and mentoring as well as our students’ learning within this context? What is likely to give us energy or zap our energy? How can we identify and mitigate the symptoms of burnout for both faculty and students? In this virtual workshop, participants explored aspects of well-being that can translate into the classroom as well as ways to keep up their own energy during these trying times.

#### Engaging in Conversations with Peers About Teaching

Research indicates that student evaluations should not be the sole source of feedback on teaching. As a result, many faculty have turned to colleagues for critique and suggestions. Yet without training, it is easy for peer observers to fall back on their own teaching preferences or overly focus on content.

At the Center for Teaching and Learning, providing feedback on teaching is part of what we do. In this workshop, facilitators shared frameworks and tools that faculty can use to enrich conversations about teaching. Faculty considered how collaborating with colleagues might lead to substantial discussions that inform classroom practice.

**95%** of the participants attending Faculty Teaching Workshops rated the overall effectiveness very good or excellent.

## Ongoing Groups

### Chancellor's Learning Scholars

In 2018, the University System of Georgia (USG) launched an initiative across its 26 campuses in an effort to foster pedagogical leadership, develop collegiality among faculty, and create course enrichment products for faculty to share. In 2020 - 2021 four Chancellor's Learning Scholars (CLS) at Georgia Tech led a Faculty Learning Community on a special topic. The 2020 - 2021 Chancellor's Learning Scholars included Ellen Yi Chen, Pamela Pollet, Mary Lynn Reaff, and Christopher Stanzione.

#### Chancellor's Learning Scholars 2020 - 2021



**Ellen Yi Chen**  
Mechanical Engineering  
Assistant Professor

#### Topic: Remote and Hybrid Laboratory Classes

##### Members:

- Michael Evans, Chemistry and Biochemistry
- Ben Galfond, Chemical and Biomolecular Engineering
- Edwin Greco, Physics
- Meg Grantham, Earth and Atmospheric Science
- David MacNair, Mechanical Engineering
- Christopher Saldana, Mechanical Engineering
- Himani Sharma, Materials Science and Engineering
- Emily Weigel, Biological Sciences



**Pamela Pollet**  
Chemistry and Biochemistry  
Senior Academic Professional

#### Topic: Blended Course Design

##### Members:

- Linda Green, Biological Sciences
- Peter Hesketh, Mechanical Engineering
- Himani Sharma, Materials Science & Engineering
- Christie Stewart, Biological Sciences
- Aselia Urmanbetova, Economics
- Amanda Weiss, Modern Languages

#### Chancellor's Learning Scholars 2020 - 2021 (cont.)



**Mary Lynn Reaff**  
Materials Science & Engineering  
Associate Professor

#### Topic: Transforming Classroom Engagement to an On-Line Classroom

##### Members:

- Caroline Dotts, Campus Recreation Center and Well-being
- Lacy Hodges, Academic Engagement Programs
- Stephanie Merrick, College of Design
- Sharon Riehl, Gallup Certified Strengths Coach and Human Resources Expert
- Kelli Rockwell, Campus Recreation Center, Staff Development
- Gerome Stephens, Center for Student Engagement
- Christie Stewart, Applied Physiology
- Kerry Wallaert, Materials Science & Engineering and Education



**Christopher Stanzione**  
Psychology  
Senior Lecturer

#### Topic: Transforming Classroom Engagement to an On-Line Classroom

##### Members:

- Meghan Babcock, Psychology
- Mirjana Brockett, Biological Sciences
- Stacey Doremus, Leadership Education & Development
- Kelly Griendling, Aerospace Engineering
- Mary Holder, Neuroscience
- Mayur Patil, Aerospace Engineering
- Enid Steinbart, Mathematics
- Alonzo Whyte, Neuroscience

## Ongoing Groups

### Teaching Fellows

#### Class of 1969 Teaching Fellows

The Class of 1969 Teaching Fellows is an interdisciplinary group of early career faculty who meet regularly for pedagogically focused support and professional development. The Fellows explore evidence-based best practices and new and innovative teaching methods. In addition, the Fellows develop and pilot initiatives that can be used for the education component of major award applications. A number of the fellows presented their initiatives in posters at Celebrating Teaching Day 2021:

“Beyond the Building Report: On-Site Architectural History” by **Danielle Willkens**, Architecture, Assistant Professor

“*Inquiry-Based Learning in Integrated Product Design Classroom*” by **Sang-won Leigh & HyunJoo Oh**, School of Industrial Design

“*Two Can Play at that Game! Reciprocal Experience-Based Design Learning*” by **Anne Sullivan**, Digital Media

“*Integrating Communication Components into Engineering Curriculum*” by **Ryan Sherman**, Civil and Environmental Engineering

“*Accessing students creative energies in the classroom: The effect of video-based final projects*” by **Dobromir Rahnev**, Psychology

“*Should we Use Project-Based Learning (PBL) in the Language Classroom?*” by **Natalie Khazaal**, Modern Languages

#### Class of 1969 Teaching Fellows 2020 - 2021

**Dylan Brewer**, ECON  
**Kate Pride Brown**, HTS  
**Lily Cheung**, ChBE  
**Natalie Khazzal**, ML  
**Srijan Kumar**, CSE  
**Chris Lai**, CEE  
**Seung Hoo Lee**, ECON  
**Sang Leigh**, ID  
**Jorge Macedo**, CEE

**Todd Michney**, HTS  
**HyunJoo Oh**, ID  
**Dobromir Rahnev**, PSYC  
**Brendan Saltaformaggio**, ECE  
**Ryan Sherman**, CEE  
**Anne Sullivan**, DM  
**Danielle Willkens**, ARCH  
**Karen Xueqing Yan**, ECON  
**Qirun Zhang**, CS

## Ongoing Groups

### Teaching Fellows

#### Provost Teaching and Learning Fellows

The vision for the Provost Teaching and Learning Fellows (PTLF) program is to connect the expertise of evidence-based teaching and learning professionals in the Center for Teaching and Learning with the expertise of disciplinary faculty in each college/school. The goal of this hub-and-spoke model is to strengthen teaching and learning in the disciplines through an embedded system of on-going instructional support and special initiatives.

In an effort to provide a greater opportunity for PTLFs to contribute to Institute priorities, a new feature was added to the program this year. Each member of the 2020-2022 cohort of Provost Teaching and Learning Fellows became a member of a Faculty Learning Community (FLC). The goal of each FLC was to study, understand, and contribute to an important issue related to teaching and learning at Georgia Tech. Each FLC worked together throughout the year to develop knowledge, materials, and activities to address one of the following Institute-defined strategic plan priorities:

- Promotion of student academic well-being and supportive classroom learning environments.
- Support for faculty in becoming anti-racist educators.
- Professional development for faculty who want to teach “blended” courses that incorporate best practices for both face-to-face and online teaching.
- Promotion of faculty pedagogical success in fully online courses and recommendations for appropriately assessing online teaching.

#### Provost Teaching and Learning Fellows 2020 - 2021

**Laura Bier**, History and Sociology, *Associate Professor*  
**Kirk Bowman**, International Affairs, *Professor*  
**Polo Chau**, Computational Science & Engineering, *Associate Professor*  
**Brian Gunter**, Aerospace Engineering, *Associate Professor*  
**Satish Kumar**, Mechanical Engineering, *Professor*  
**Julia Melkers**, Public Policy, *Professor*  
**Alex Orso**, Computer Science, *Professor*  
**Pardis Pishdad-Bozorgi**, Building Construction, *Associate Professor*  
**Charles Rudolph**, Architecture, *Associate Professor*  
**Jake Soper**, Chemistry and Biochemistry, *Associate Professor*  
**Adam Steinberg**, Aerospace Engineering, *Associate Professor*  
**Ignacio Taboada**, Physics, *Professor*  
**Linda Wills**, Electrical and Computer Engineering, *Associate Professor*  
**D. J. Wu**, Information Technology Management, *Professor*  
**Lizhen Xu**, Information Technology Management, *Associate Professor*  
**Josephine Yu**, Mathematics, *Associate Professor*  
**Ying Zhang**, Electrical and Computer Engineering, *Professor*

#### Hesburgh Award Teaching Fellows

The Hesburgh Award Teaching Fellows brings together mid-career and senior faculty who have demonstrated strength in the classroom and are interested in working on initiatives that further enhance student learning. This is an “invitation” program that honors individuals who are already successful in their own careers and who have the potential of providing leadership in teaching and learning to their colleagues as well.



Dr. Ayhab



Dr. Flamming



Dr. Garmestani



Dr. Mantalaris



Dr. Srinivasarao

#### Hesburgh Teaching Fellows 2020 - 2021

**Hayriye Ayhab**, Industrial & Systems Engineering, *Professor*  
**Doug Flamming**, History and Sociology, *Professor*  
**Hamid Garmestani**, Materials Science and Engineering, *Professor*  
**Sakis Mantalaris**, Biomedical Engineering, *Professor*  
**Mohan Srinivasarao**, Materials Science and Engineering, *Professor*

The Hesburgh Award Scholars met weekly in the Fall and chose to frame their semester around the book, *How Humans Learn: The Science and Stories Behind Effective College Teaching* (2018) by Dr. Joshua Eyer. Topics explored included the main chapters of the book – curiosity, sociality, emotion, authenticity, and failure – connecting these themes to the Fellows’ courses, especially as related to the shifts in teaching and learning during the pandemic. Within this framework, participants discussed active learning approaches, the science of learning, the role of the professor in student learning, and academic well-being.

#### Research Faculty Teaching Fellows

The Research Faculty Teaching Fellows (RFTF) program is a partnership between the Executive Vice President for Research (EVPR), the Georgia Tech Research Institute (GTRI), and the Center for Teaching and Learning. This initiative offers research faculty the opportunity to become first-time instructors—or, for those who have taught in the past, the opportunity to turn their cutting-edge research programs into instructional programs that enhance the teaching mission of an academic unit. The Fellows teach one course during their award year while participating in teaching enrichment activities. The Fellows were joined by the Research Faculty Teaching Scholars, other research faculty and postdoctoral scholars who teach, for bimonthly discussions about teaching in the Fall.

**Benjamin Yang**, Electrical & Computer Engineering, *Senior Research Engineer*  
**Thomas Martin**, Electro-Optical Systems Lab, *Principal Research Engineer*  
**Joshua Wells**, Electro-Optical Systems Lab, *Research Engineer*

47 Georgia Tech faculty representing each of the six colleges participated in CTL’s Teaching Fellows programs.

## Programming

### Faculty Learning Communities (FLC)

#### Academic Well-being

Georgia Tech's new strategic plan calls for the cultivation of well-being both in and out of the classroom where all can grow and learn. To promote this goal and contribute to its realization, this Faculty Learning Community (FLC) created a project on academic well-being that will feature faculty voices from across colleges and disciplines. Members of the Academic Well-being FLC included four Provost Teaching and Learning Fellows:

**Satish Kumar**, Mechanical Engineering, *Associate Professor*

**Charles Rudolph**, Architecture, *Associate Professor*

**Jake Soper**, Chemistry and Biochemistry, *Associate Professor*

**Linda Wills**, Electrical and Computer Engineering, *Associate Professor*

The FLC was facilitated by CTL's director, Dr. Joyce Weinsheimer and associate director, Dr. David Lawrence.

#### Assessment of Online Teaching

The Assessment of Online Teaching FLC spent time this past year exploring the challenges and issues relevant to how teaching is assessed in the online environment. Additionally, the FLC launched a project to discover how various areas of campus were constructing high quality online learning environments as well as their plans to measure them. Members of the Assessment on Online Teaching FLC included

**Polo Chau**, Computational Science & Engineering, *Associate Professor*

**Brian Gunter**, Aerospace Engineering, *Associate Professor*

**Julia Melkers**, Public Policy, *Professor*

**Alex Orso**, Computer Science, *Professor*

**Christopher Poch**, Division of Computing Instruction, *Lecturer*

**Joel Sokol**, Industrial and Systems Engineering, *Professor*

**Lizhen Xu**, Information Technology Management, *Associate Professor*

The FLC was facilitated by CTL's Dr. Vincent Spezzo, program manager for teaching and learning online, and Troy Courville, academic professional in GTPE.

#### Blended Learning

Faculty members of the Blended Learning FLC explored the components of effective teaching and learning practices in blended learning environments. Members of this FLC included four Provost Teaching and Learning Fellows:

**Pardis Pishdad-Bozorgi**, Building Construction, *Associate Professor*

**Adam Steinberg**, Aerospace Engineering, *Associate Professor*

**Ignacio Taboada**, Physics, *Professor*

**Ying Zhang**, Electrical and Computer Engineering, *Professor*

The FLC was facilitated by CTL's Dr. Rebecca Pope-Ruark, faculty teaching and learning specialist, and Dr. Chaohua Ou, assistant director for teaching and learning technology.

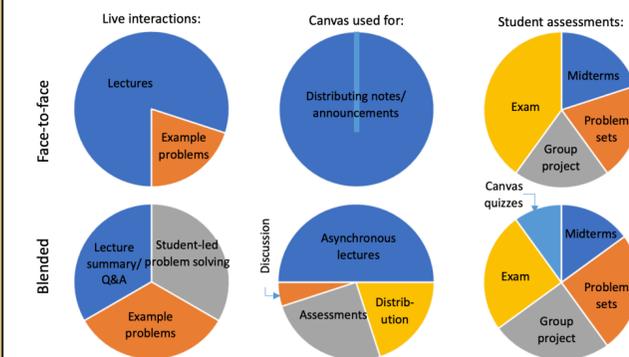
#### Blended Learning as a Motivator for AE Course Refresh

Designing an effective "blended" course follows modern principles for "face-to-face" course design, but with strategic use of technology.

- Content designed to meet learning objectives
- Increased student-led active learning
- Frequent low-stakes formative assessments



Comparison of aerospace propulsion courses in "face-to-face" and "blended" modes



#### Typical Student Feedback on Blended Mode

"Great lecture videos and helpful live sessions and examples."

"The structure of watching lectures and having Q&A live sessions worked very well."

"I think the example problem format was great."

"While I do think the flipped classroom model was executed well, I still prefer live lectures since I often fell behind on the recorded lectures... I personally need the structure of scheduled class time."

"Sometimes when its just someone sharing their screen in the breakout room, the group aspect kinda falls apart."

Adam Steinberg, School of Aerospace Engineering

#### Anti-Racist Education

The mission of the Anti-Racist Education FLC was to engage in study and discussion of resources to deepen their understanding of inclusive teaching and anti-racist education, support each other in applying these insights into their respective teaching practices, and develop resources to support their colleagues in becoming anti-racist educators.

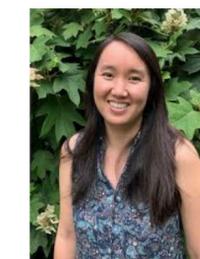
**Laura Bier**, History and Sociology, *Associate Professor*

**Kirk Bowman**, International Affairs, *Professor*

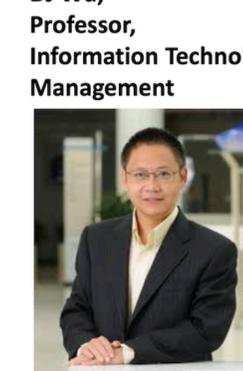
**DJ Wu**, Information Technology Management, *Professor*

**Josephine Yu**, Mathematics, *Associate Professor*

The FLC was facilitated by Dr. Carol Subiño-Sullivan, assistant director for faculty teaching and learning initiatives in CTL, and Dr. Ruthie Yow, service learning and partnerships specialist in Tech's Serve-Learn-Sustain initiative.



**Josephine Yu**,  
Associate Professor,  
Mathematics



**DJ Wu**,  
Professor,  
Information Technology  
Management



**Kirk Bowman**,  
Professor,  
International Affairs



**Laura Bier**, Associate  
Professor,  
History and Sociology

The FLC is facilitated by:

**Carol Subiño Sullivan**, Assistant Director of Faculty Teaching and Learning Initiatives, Center for Teaching and Learning

**Ruthie Yow**, Service Learning and Partnerships Specialist, Center for Serve-Learn-Sustain

## Faculty Awards and Recognitions

Each year, the Center for Teaching and Learning coordinates campus awards to honor outstanding faculty contributions to the educational mission of Georgia Tech, including the following:

- CTL/BP Junior Faculty Teaching Excellence Award
- Curriculum Innovation Award
- Education Partnership Award
- Faculty Award for Academic Outreach
- Geoffrey G. Eichholz Faculty Teaching Award
- Innovation and Excellence in Laboratory Instruction Award
- Innovation in Co-curricular Education Award
- Scholarship of Teaching and Learning Award
- Student Recognition of Excellence in Teaching: Class of 1934 CIOS Award
- Teaching Excellence Award for Online Teaching
- Undergraduate Educator Award

In Spring 2021, 17 faculty members received teaching excellence awards, winning a combined total of \$51,000. CTL annually updates the names of all campus faculty award winners and USG Regents' Teaching Excellence Awards on the CTL Teaching Award Wall on the fourth floor of Clough Commons.

### CTL/BP Junior Faculty Teaching Excellence Award (\$3000 Each)

- **Ellen Yi Chen Mazumdar**, *Assistant Professor*, Mechanical Engineering
- **Claudio V. Di Leo**, *Assistant Professor*, Aerospace Engineering
- **Young C. Jang**, *Assistant Professor*, Biological Sciences
- **Koushyar Rajavi**, *Assistant Professor*, Scheller
- **Danielle S. Willkens**, *Assistant Professor*, Architecture

### Curriculum Innovation Award (\$3000)

- **Andreas S. Bommarius**, *Professor* & **Mark R. Prausnitz**, *Professor*, Chemical and Biomolecular Engineering
- **Dima Nazzal**, *Senior Academic Professional*, Industrial and Systems Engineering

### Faculty Award for Academic Outreach (\$3000)

- **Chandra Raman**, *Associate Professor*, Physics

### Geoffrey G. Eichholz Faculty Teaching Award (\$3000 each)

- **Amy D'Unger**, *Senior Academic Professional*, History and Sociology
- **Dan Margalit**, *Professor*, Mathematics

### Innovation and Excellence in Laboratory Instruction Award (\$3000)

- **Himani Sharma**, *Lecturer*, Materials Science & Engineering

### Innovation in Co-curricular Education Award (\$3000)

- **Monica Halka**, *Senior Academic Professional*, Honors, **Paul Verhaeghen**, *Professor*, Psychology, and **Ameet Doshi**, *Librarian III*, Library

### Scholarship of Teaching and Learning Award (\$3000)

- **Michael J. Evans**, *Senior Academic Professional*, and **Carrie G. Shepler**, *Principal Academic Professional*, Chemistry and Biochemistry

### Teaching Excellence Award for Online Teaching (\$3000)

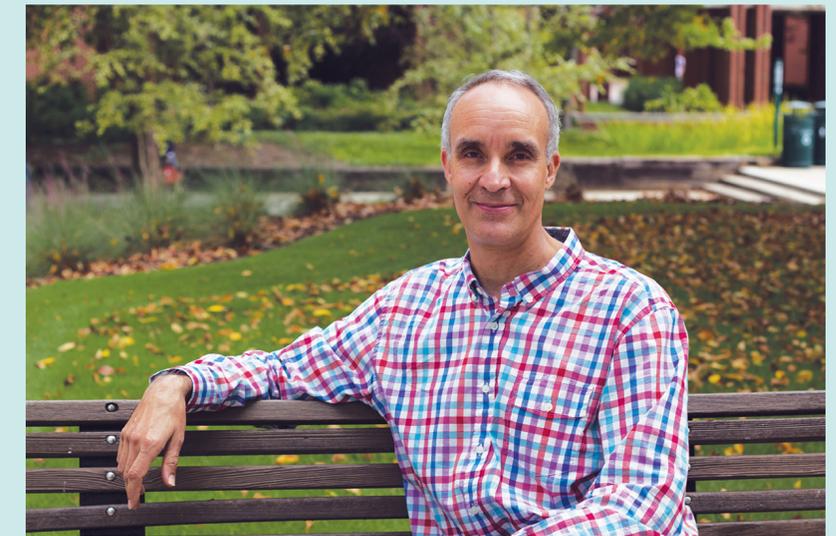
- **Pascal Van Hentenryck**, *Professor*, Industrial and Systems Engineering

### Undergraduate Educator Award (\$3000 each)

- **Todd Fernandez**, *Lecturer*, Biomedical Engineering
- **Stephanie Reikes**, *Lecturer*, Mathematics

The Center for Teaching and Learning coordinates Georgia Tech's nominations for USG Board of Regents Awards.

### 2021 Georgia Tech Recipients of the University System of Georgia Regents' Awards



**Regents' Award for Excellence in Online Teaching**  
Michael Schatz, *Professor*, Physics

**Writing and Communication – WOVEN**  
*Rhetoric, Process, and Multimodality*

Communication involves more than the ability to put words on paper. Students at Georgia Tech benefit from an Institute-wide program whose mission is to create a culture of communication across our extended campus. The Writing and Communication Program encourages students to communicate productively and confidently, as individuals and as teams, about a range of topics and contexts, drawing on the expertise of the instructors.

The **WOVEN** approach emphasizes rhetoric, process, and multimodality. Student learn that modes and media are synergistic as they invent and plan; create and construct; disseminate and use; and interpret, critique, and assess written, oral, visual, electronic, and nonverbal communication.

W	O	V	E	N
<b>Written Communication</b> forms a foundation for rhetoric, process, and multimodality. Students create artifacts ranging from essays, research articles, and proposals to websites, wikis, podcast video scripts, tweets, and blogs.	<b>Oral Communication</b> is the core of individual /team presentations for classroom, work-place, and community. Students develop listening and speaking strategies for collaboration, engagement, and leadership.	<b>Visual Communication</b> focuses on information design for pages as well as screens—typography, images, and animation—to interpret the ways visual rhetoric shapes our perceptions and actions.	<b>Electronic Communication</b> uses sound, image, and text in digital forms. Students learn media shape messages as they consider the psychological, social, political, economic, and ethical dimensions of digital media.	<b>Nonverbal Communication</b> begins with body language, eye contact, and voice and extends to attire, pacing of information, physical movement, and use of space as factors that affect audience response and trust.

Georgia Tech

**Regents' Teaching Excellence Award for Department or Program**  
Writing and Communication Program



## Student Recognition of Excellence in Teaching: Class of 1934 CIOS Award

This award is one of CTL's annual initiatives to honor outstanding teaching. Specifically, the award recognizes faculty members with exceptional scores and response rates on the Course Instructor Opinion Survey (CIOS). CIOS is completed by students at the end of each semester to provide feedback to instructors about the learning experience in their respective courses.

During the 2020 calendar year (Spring 2020 and Fall 2020), forty Georgia Tech instructors were recognized for their excellence in teaching. The sum of student responses on three CIOS scale items constituted the criteria for selection for this award: (#16) Instructor's respect and concern for students; (#17) Instructor's level of enthusiasm about teaching the course; (#18) Instructor's ability to stimulate interest in the subject matter. Ties were broken by response rate.

## Award Winners for Calendar Year 2020

- **Muhannad Bakir**, Electrical and Computer Engineering, *Professor*
- **Hector Daniel Banos Cervantes**, Mathematics, *Instructor*
- **Cristi Bell-Huff**, Biomedical Engineering, *Lecturer*
- **Matthieu Bloch**, Electrical and Computer Engineering, *Associate Chair-Academic*
- **John Cressler**, Electrical and Computer Engineering, *Professor*
- **Carl DiSalvo**, Interactive Computing, *Associate Professor*
- **Amy D'Unger**, IAC-History & Sociology, *Senior Academic Professional*
- **Jason Freeman**, Music, *School Chair-Academic*
- **Michael Gamble**, Architecture, *Associate Professor*
- **Srinivas Garimella**, Mechanical Engineering, *Professor*
- **Koki Ho**, Aerospace Engineering, *Assistant Professor*

- **Manpreet Hora**, Scheller College of Business, *Associate Professor*
- **Martin Jacobson**, Biomedical Engineering, *Lecturer*
- **George Johnston**, Architecture, *Professor*
- **Britta Kallin**, Modern Languages, *Associate Professor*
- **Keith Kaseman**, Architecture, *Assistant Professor*
- **Bernard Kippelen**, Electrical and Computer Engineering, *Professor, Vice Provost for International Initiatives*
- **Frank Li**, Electrical and Computer Engineering, *Assistant Professor*
- **Siva Theja Maguluri**, Industrial and Systems Engineering, *Assistant Professor*
- **Dan Margalit**, Mathematics, *Professor*
- **Mirjana Milosevic-Brockett**, Biological Sciences, *Senior Academic Professional*
- **Lee Oh**, Modern Languages, *Lecturer*
- **Kate Pride Brown**, IAC-History & Sociology, *Assistant Professor*
- **Dobromir Rahnev**, Psychology, *Associate Professor*
- **James Rains**, Biomedical Engineering, *Professor of the Practice*
- **Amit Reddi**, Chemistry and Biochemistry, *Associate Professor*
- **Tatiana Rudchenko**, Scheller College of Business, *Senior Lecturer*
- **Carrie Shepler**, Chemistry and Biochemistry, *Principal Academic Professional*
- **David Smith**, Mechanical Engineering, *Lecturer*
- **Thad Starner**, Interactive Computing, *Professor*
- **James Stubbs**, Biomedical Engineering, *Professor of the Practice*
- **Satomi Suzuki Chenoweth**, Modern Languages, *Lecturer*
- **William Todd**, Scheller College of Business, *Professor of the Practice*
- **David Torello**, Mechanical Engineering, *Academic Professional*
- **Pascal Van Hentenryck**, Industrial and Systems Engineering, *Associate Chair-Academic*
- **Lutz Warnke**, Mathematics, *Associate Professor*
- **Alonzo Whyte**, Biological Sciences, *Academic Professional*
- **Damon Williams**, Industrial and Systems Engineering, *Senior Lecturer*
- **Benjamin Yang**, GTRI Electro-Optical Systems Labs, *Senior Research Engineer*
- **Sotira Yiacoumi**, Civil and Environmental Engineering, *Professor*

## New "Honor Roll" Recognition of Teaching

At the end of Fall 2021, the Center for Teaching and Learning announced the **Student Recognition of Excellence in Teaching: Class of 1934 CIOS Honor Roll**. Instructors must have a minimum of 70% CIOS response rate to be eligible for the recognition and place in the top 25% of the composite CIOS scores for items #16, 17, and 18 to be eligible for the Honor Roll.

The Honor Roll is compiled and announced at the end of each semester. Then, at the end of each calendar year, the 40 Honor Roll recipients with the highest rankings are notified in January that they have won the Student Recognition of Excellence in Teaching: Class of 1934 CIOS Award.

In Fall 2020, there were 102 individuals recognized on the Honor Roll. In Spring 2021, there were 98 individuals on the Honor Roll. For a full listing of honorees, see <https://ctl.gatech.edu/content/student-recognition-excellence-teaching-class-1934-honor-roll>.

## Teaching with Technology Partnerships

Teaching with Technology Partnership is a learning and technology initiative that aims to support and promote the effective and innovative use of technology in teaching and learning. The partnerships are a collaboration between faculty, who sponsor a project, and CTL. **Dr. Chaohua Ou** and **Dr. Rui Hu** from CTL meet with individual faculty fellows regularly and serve as a creative partner for developing and implementing their projects. All faculty fellows meet as a cohort and discuss their projects, as well as other topics related to teaching with technology.

During Spring 2021, eight faculty fellows partnered with CTL to work on their teaching with technology projects:

### STACEY DOREMUS

**Department:**

Leadership Education and Development

**Project:**

Online Simulated Leadership Case Studies

### JACQUELINE GARNER & STEPHANIE REIKES

**Department:**

School of Business & School of Mathematics

**Project:**

Correct My Mistake Podcast

### LIZ HOLDSWIRTH & MARLEE GIVENS

**Department:**

Library

**Project:**

Library Canvas Modules

### DAVID HU

**Department:**

Mechanical Engineering and Biology

**Project:**

Online Math Review Course for Engineering Students

### HAIYING HUANG

**Department:**

Civil and Environmental Engineering

**Project:**

Creating a Question Bank for CEE4405

### MELINDA MCDANIEL

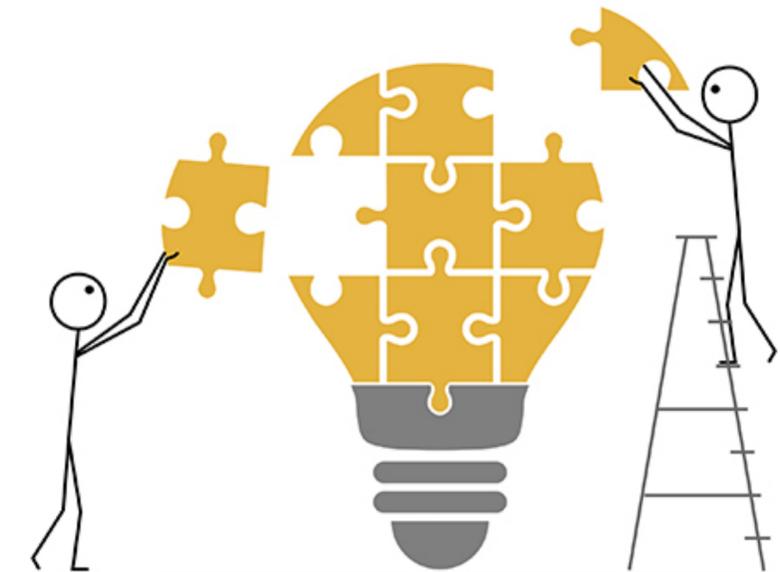
**Department:**

Division of Computing Instruction,  
Computing

**Project:**

Lecture Poll Creation for  
Enhanced Student Engagement

### Teaching with Technology Partnership



You want to **INTEGRATE TECHNOLOGY**  
into teaching and learning.

We want to **PARTNER** with you.

Together we will turn great ideas into  
**SUCCESSFUL PROJECTS.**

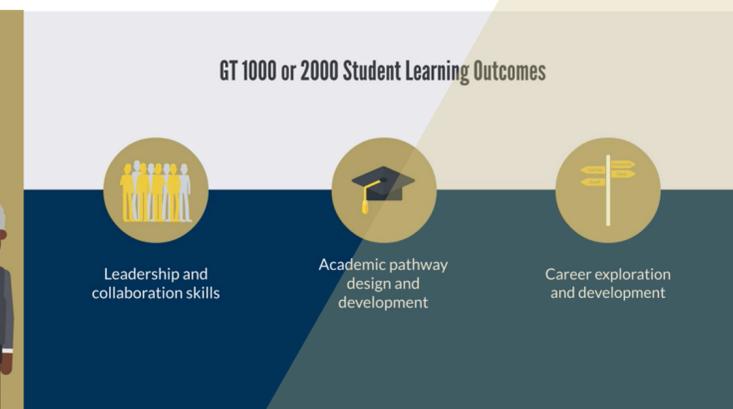
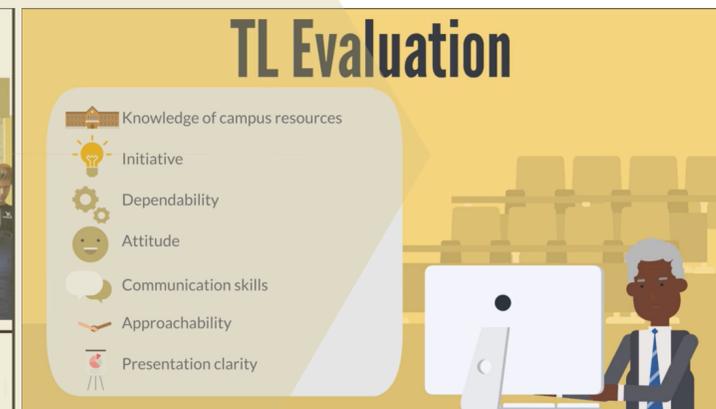
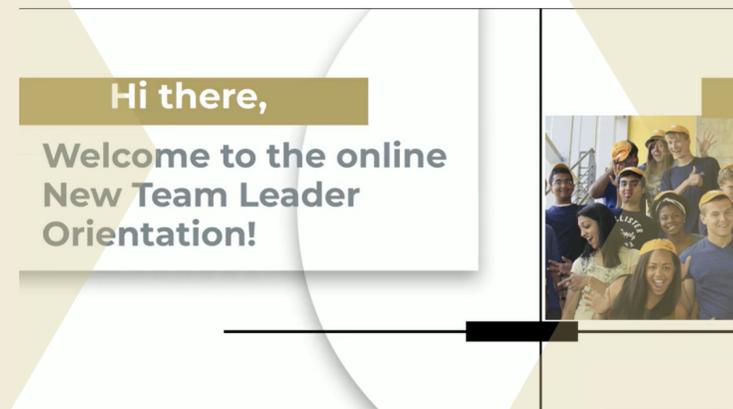
For more information about Teaching with Technology Partnerships,  
please visit <http://ctl.gatech.edu/ttp>.

## Teaching with Technology Spotlight

### Redesigning GT-1000 & 2000 Team Leader Online Orientation

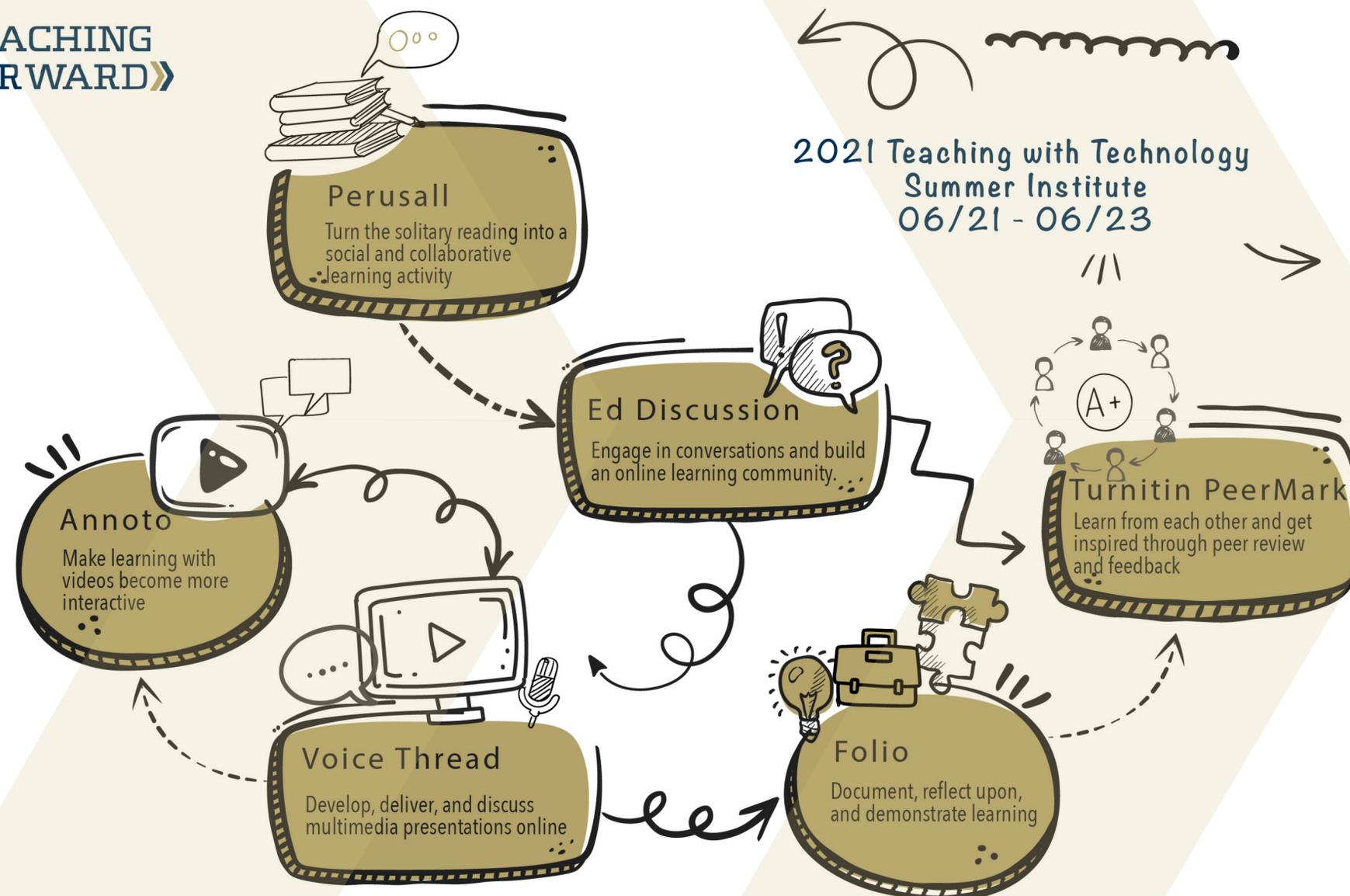
Each year, more than 2000 Georgia Tech first-year students and incoming transfer students take the GT 1000 & 2000 courses. These courses introduce students to the campus resources and help familiarize them with the campus culture. Each year, these courses utilize more than 200 student Team Leaders (TLs) to serve as resources for GT 1000/2000 instructors and as role models and mentors for the new Georgia Tech students. The Team Leader Orientation is crucial for TLs to understand the class structure, their responsibilities and roles as a TL, and ways to access resources to support the class.

Prior to COVID, TL orientations had been held in person. As a quick response to COVID, the Office of Undergraduate Education created an online version of the TL orientation. Team leaders appreciated the online format. However, they also wished there would have been more interactions and more engaging content. **Dr. Chaohua Ou** and **Dr. Rui Hu** in CTL worked with **Lacy Hodges** and **Savitra Dow** in the Academic Transition Programs of the Office of Undergraduate Education to redesign the New TL Orientation and Returned TL Orientation courses. They designed and developed interactive course videos and assessment by integrating pedagogy and technologies to create more engaging learning experiences. The redesigned online courses were taken and completed by 54 Summer TLs and 193 Fall TLs. The course redesign received very positive feedback.



## Teaching with Technology Summer Institute

TEACHING  
FORWARD»



The 2021 Teaching with Technology Summer Institute was conducted virtually in June 2021. The three-day institute offered six sessions, facilitated by the learning technology professionals from the Center for Teaching and Learning, Georgia Tech Professional Education, and the Office of Information Technology. Each session focused on leveraging a different technology to effectively engage students.

The participants of the summer institute had opportunities to

- Explore how to expand and extend the capabilities of Canvas by using several integrated third-party technologies to engage students.
- Reflect on how they engaged students and share their experiences with colleagues.
- Create engaging learning activities for their Fall teaching by integrating technologies and strategies.
- Get feedback from colleagues on the engagement activities they design and get inspired by reviewing their activities.

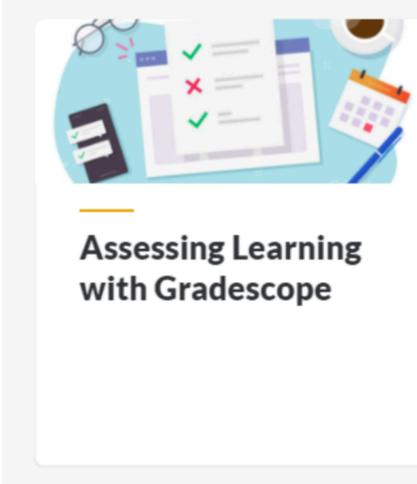
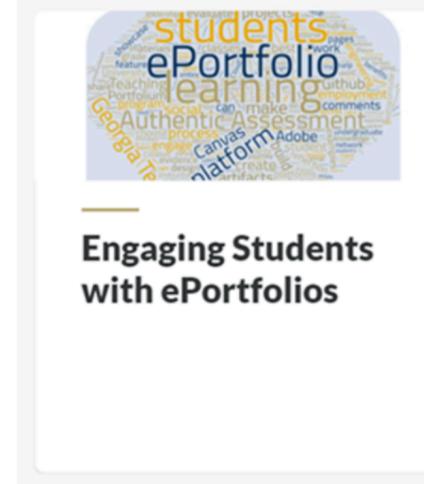
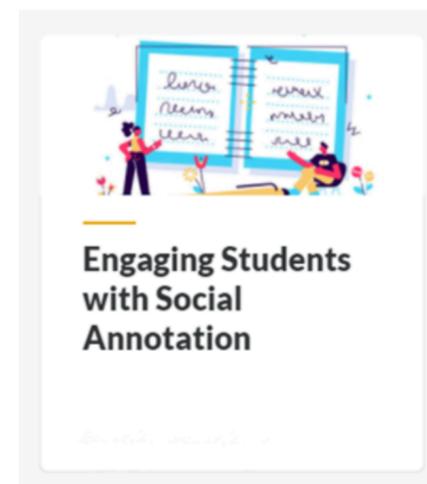
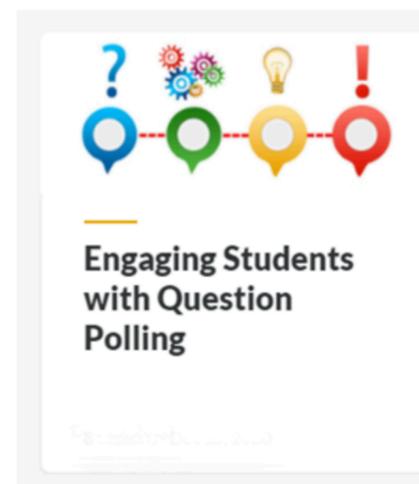
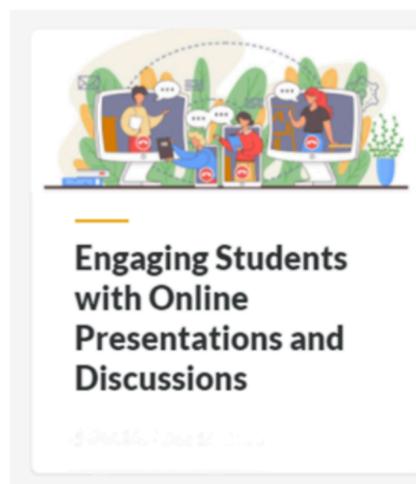
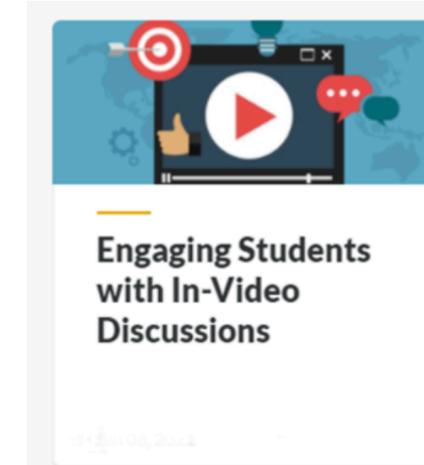
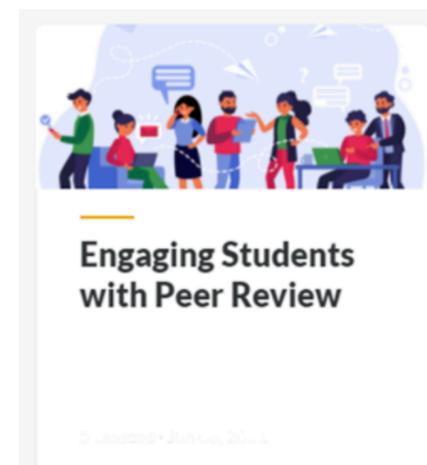
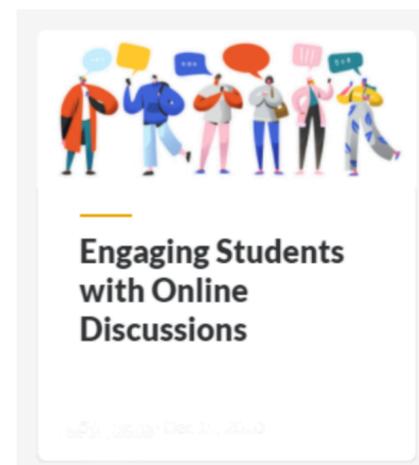
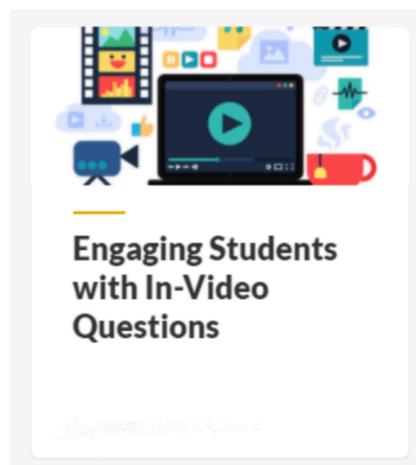


A total of **76 participants** attended the three-day Summer Institute and rated its overall effectiveness at **4.67 / 5.00** with 5 being excellent.

To learn more about the Teaching with Technology Summer Institute, please visit <http://ctl.gatech.edu/summerinstitute>

## Teaching with Technology Strategies

During the past year when teaching and learning primarily took place in an online or hybrid environment, the CTL Learning & Technology Initiatives team designed and developed a series of modules on using technologies and strategies to engage students and assess learning. These modules introduced various technologies to instructors and teaching assistants: (1) How do the technologies work? (2) What can you do with these technologies in teaching and learning? (3) What are strategies for using these technologies effectively in teaching and learning? CTL carefully crafted the modules to be concise and informative, and they are available for free access online.



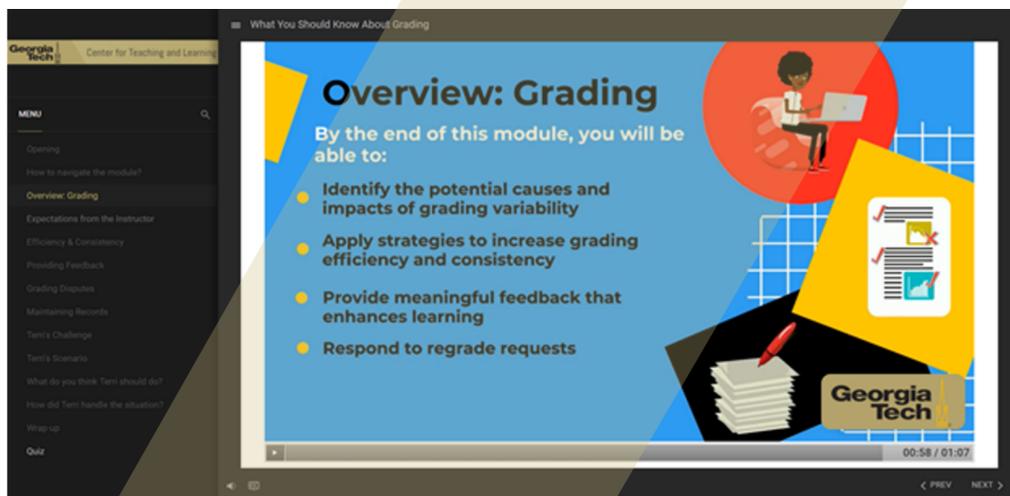
For more information about Teaching with Technology Strategies, please visit <http://ctl.gatechedu/technologies-and-strategies>.

## Georgia Tech OMS TA Training & Development Course

The Online Master of Science (OMS) TA Training and Development course is housed in Canvas for new and existing Teaching Assistants who are teaching in Georgia Tech's Online Master of Science programs. Through a series of asynchronous modules and synchronous sessions, participants are provided with an overall orientation to some of the key elements of their job responsibilities, Georgia Tech policies, and skills needed to provide a high-quality online experience for students in the OMS programs.

The training series features modules on what online TAs need to know about FERPA, Disability Services, Academic Integrity, grading, and online communication, as well information around the technologies and platforms utilized in the OMS programs.

During FY 2020-2021, 388 OMS TAs participated in one or more of the six available modules. TAs were required to pass an evaluation at the end of each module to earn a completion badge. In total, these TAs successfully completed 1,704 modules. Additionally, seven OMS-only synchronous events were offered throughout the year and recorded for later viewing; in total, 272 TAs attended or viewed these sessions.



Total Completed Modules by OMS Teaching Assistants



### A Collaborative Project

The OMS TA Training and Development course was a collaborative project created and refined over multiple semesters. The project was a joint effort of the CTL Learning and Technology team and individuals from the CTL TA Development and Future Faculty team, GT Professional Education, the OIT Digital Learning Team, and GT Language Institute.

The creation of the course involved an in-depth assessment of the training and development needs of OMS Teaching Assistants, review and reconstruction of three existing Online TA Orientation modules to fit the needs of TAs teaching in a fully online environment, and the creation of several new content items such as additional modules and development of synchronous training offerings. While much work has already been completed, more modules and developmental offerings are being planned for future release.



In total, **388** OMS TAs participated in one or more of the six available training modules. These TAs successfully completed **1,704** modules.

Date	Partner(s)	Event	Attendance
July 6, 8, & 10, 2020	FTL	2020 Teaching and Technology Studio	84
July 22 & August 12, 2020	GTRHTA	Course Engagement Best Practices	131
July 29 & August 14, 2020 January 8, 2021	DLT	Administering and Grading Exams with Gradescope	112
July 29 & August 13, 2020 January 7, 2021	DLT	Assessment Technologies Overview	74
August 12 & 14, 2020 January 8, 12, 2021	GTPE	OMS Technology and Platforms	122
September 1, 3, 15, & 22, 2020; October 6, 2020 January 13, 2021	GTRHTA	Ask Me Anything - GTRHTA Experts Panel	124
September 4, 2020	School of Biomedical Engineering	Using TurningPoint to Promote Interaction and Feedback	15
September 29, 2020	Office of Faculty Development, University System of Georgia	Engaging Students Online	127
September 30, 2020 February 25, 2021	GTPE, DLT	Proctoring with Honorlock in OMS	14
October 21, 2020	GTRHTA	GTRHTA Engagement Session - Perusall	16
October 22, 2020	TAFF	Teaching with Technology	32
October 27, 2020	GTRHTA	GTRHTA Engagement Session - TurningPoint	25
October 29, 2020	DLT	GTRHTA Engagement Session - Should I (and how do I) use Digital Proctoring?	34
Fall 2020, Spring and Summer 2021	GTPE	Faculty Learning Community on the Success and Assessment of Online Teaching	153
Fall 2020, Spring and Summer 2021	TAFF, GTPE, DLT	GT TA Training and Development- OMS (online)	388
Fall 2020, Spring and Summer 2021	FTL	Provost Teaching and Learning Fellows Community on Blended Learning	86
Spring 2021	College of Computing & Library	Blended and Online Learning Design Graduate Fellowship Seminars	77
March 31, 2021	DLT	Getting the Most Out of Gradescope in OMS	7
April 21, 2021	TAFF	TA and Future Faculty Awards	149
June 21, 22, & 23, 2021	GTPE, DLT	2021 Teaching with Technology Summer Institute	76
		<b>Total</b>	<b>1846</b>

## Learning Technology Campus Partnerships and Outreach

The Learning and Technology team partnered with others in the Center for Teaching and Learning that included the faculty teaching and learning team, as well as the TA development and future faculty team. These collaborations consisted of projects and events that incorporated technologies to enhance teaching and learning.

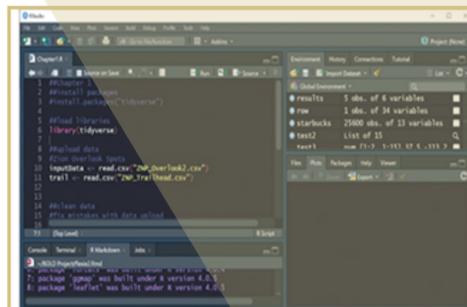
The team also worked with other campus units to support and promote effective use of learning technologies in different learning environments, such as:

- Georgia Tech Remote and Hybrid Teaching Academy (GTRHTA)
- Digital Learning (DLT)
- Faculty Teaching and Learning Initiatives (FTL)
- Georgia Tech Professional Education (GTPE)
- TA Development and Future Faculty Initiatives (TAFF)



A total of **1846 participants** attended various events by the learning technology team in CTL with its campus partners.

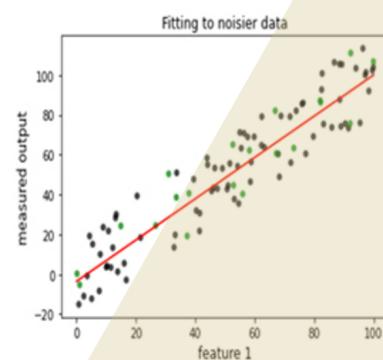
## Blended and Online Learning Design Projects



A Beginner's Tutorial in R: An Adventure through Zion National Park



Math for Fluid Mechanics



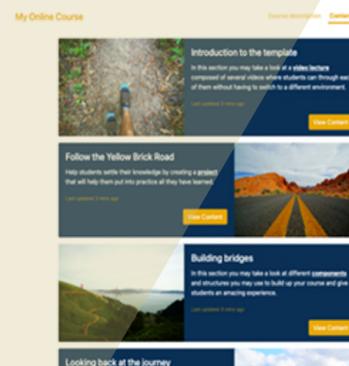
basicML: machine learning basics for working with biomedical data



E-lab: A YouTube channel for analyzing analog electronics circuits



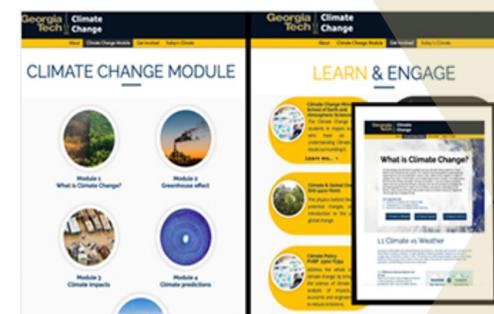
Big Data Analytics in Healthcare



Canvas Template for Online Courses



Adaptive Leadership Simulation



Climate Change Online Module



Industrial Control Systems Security Lab

## Open Education Initiatives

### 2021 Blended and Online Learning Design (BOLD) Graduate Fellowship Program

The Blended and Online Learning Design (BOLD) Graduate Fellowship Program is an open education initiative supported and funded by the Provost Funds for Excellence in Graduate Studies. The program aims at enabling and empowering graduate students to become knowledge producers through designing, developing, and contributing open educational resources (OER) for blended and online learning. Eleven graduate students from various disciplines were selected as the first cohort of the BOLD graduate fellows. In Spring 2021, they worked on an OER project of their interest and all of them successfully fulfilled the requirements of the fellowship. The program was led by the three Affordable Learning Georgia champions at Georgia Tech: **Dr. Chaohua Ou** in CTL (Design Champion), **Dr. David Joyner** from Computing (Faculty Champion), and **Dr. Liz Holdsworth** from Library (Librarian Champion).

### 2021 Affordable Materials Transformation Grant

In Spring 2021, **Dr. Chaohua Ou** in CTL, along with **Dr. David Hu**, Professor of Mechanical Engineering, and **David Ancalle**, a BOLD graduate fellow, received an Affordable Materials Transformation grant of \$30,000 from the Affordable Learning Georgia to support their OER project. The purpose of this project is to prepare and support undergraduate students to succeed in upper-level engineering courses by designing, developing, and delivering an online short course on Mathematics. This free and open course will review the math topics essential for upper-level engineering courses and will consist of video lectures and graded assessments delivered to students at Georgia Tech and beyond through an online platform.

### Presentation at the 2020 Open Education Conference

On November 10, 2020, **Dr. Chaohua Ou**, along with **Dr. Aselia Urmanbetova** from the School of Economics, presented their work on redesigning an open textbook at the Open Education Conference. They discussed how they led a team to work on the project by leveraging media, pedagogy, and student collaboration. A total of approximately 140 people attended the presentation. Details about the presentation can be found in [a CTL blog post](#).

To learn more about their projects, please visit the [OER Project Showcase page](#) on the website of the **Open Education at Georgia Tech**.

## Future Faculty Initiatives

"My experience with Tech to Teaching and CIRTLL was incredibly beneficial towards preparing for my role as an assistant professor in a teaching university. I constantly refer to my notes from Course Design when I prepare new courses and improve courses I've taught before. When I do mid-semester class evaluations and self-evaluations of my courses, I think about the feedback I received during my teaching capstone. I also take some time every semester to brainstorm about how I can make learning most effective for a variety of students, and I look back at some of the active learning strategies we discussed in CETL 8713. Although transitioning to a virtual environment has been challenging, some of the active learning techniques are still applicable using a virtual platform, and I'm so thankful to have all of the resources from CETL to use as references when I've been planning courses both before and after COVID-19."



**Dr. Xenia Wirth**  
Assistant Professor  
Civil Engineering  
California State  
University, Fullerton

"My transition to remote learning was smooth and effective by relying on the skills learned and practiced in Tech to Teaching. The program taught me deep pedagogical thinking and allowed me to adapt to new circumstances with relative ease."



**Dr. Anthony Bonifonte**  
Assistant Professor  
Data Analytics  
Denison University

The Center for Teaching and Learning offers extensive programming, support, and recognition for teaching assistants at the undergraduate, graduate, and postdoctoral levels, as well as pathways for those interested in a faculty career. In addition to courses in teaching and learning, TAs and future faculty can choose from a number of workshops, online training modules, and other opportunities to increase their knowledge of effective pedagogy in the college classroom.

### Teaching Certificate Programs

#### Tech to Teaching and CIRTLL

The Tech to Teaching certificate program helps prepare Georgia Tech graduate students and postdocs for college teaching positions. Participants develop a thorough understanding of the scholarship of teaching and learning and demonstrate their ability to apply skills in the classroom.

When participants complete the ten learning outcomes through a combination of classes, workshops, and online programming, they earn an Associate Certificate from the Center for the Integration of Research, Teaching, and Learning (CIRTLL). Next, they complete a significant teaching experience, most often through co-teaching a course or serving as instructor of record, and engage with future faculty peers in a weekly learning community seminar.

In 2020-2021, Tech to Teaching enrolled 347 graduate students and postdoctoral scholars, a 26% increase in enrollment over the previous year. This year, 53 participants earned the CIRTLL Associate Certificate, and 45 participants completed the full Tech to Teaching certificate.

#### Courses

As one route to earning the Tech to Teaching certificate, courses offer an in-depth study of learning theory to prepare future faculty for teaching positions in higher education. This year, 101 graduate students completed one of the three Tech to Teaching courses, a 18% decrease from the previous year:

- CETL 8713 Fundamentals in Teaching and Learning
- CETL 8717 Course Design
- CETL 8718 Teaching Practicum

#### Teaching Workshop Series

The 9-part teaching workshop series provides graduate students and postdocs the opportunity to explore central tenets of effective pedagogy. A total of 189 participants attended these workshops over the course of the year. All workshops were transitioned to remote delivery, receiving an average overall rating of 4.5 out of 5.0.

#### Classroom Observations

Feedback on instructional practices helps novice instructors identify strengths in their emerging pedagogy and opportunities for improvement. In the capstone experience, CTL representatives observe and record live lessons, and provide written feedback. After an observation, participants are encouraged to meet with a CTL representative to discuss topics including learning goals and assessment, instructional strategies, classroom climate, and presentation skills. Each participant in the teaching capstone receives two classroom observations, and other graduate students and postdocs can request individual observations. In 2020-2021, CTL faculty and Graduate Teaching Fellows conducted 159 classroom observations, an increase of 66% over the previous year.

**159** classroom observations - 66% increase

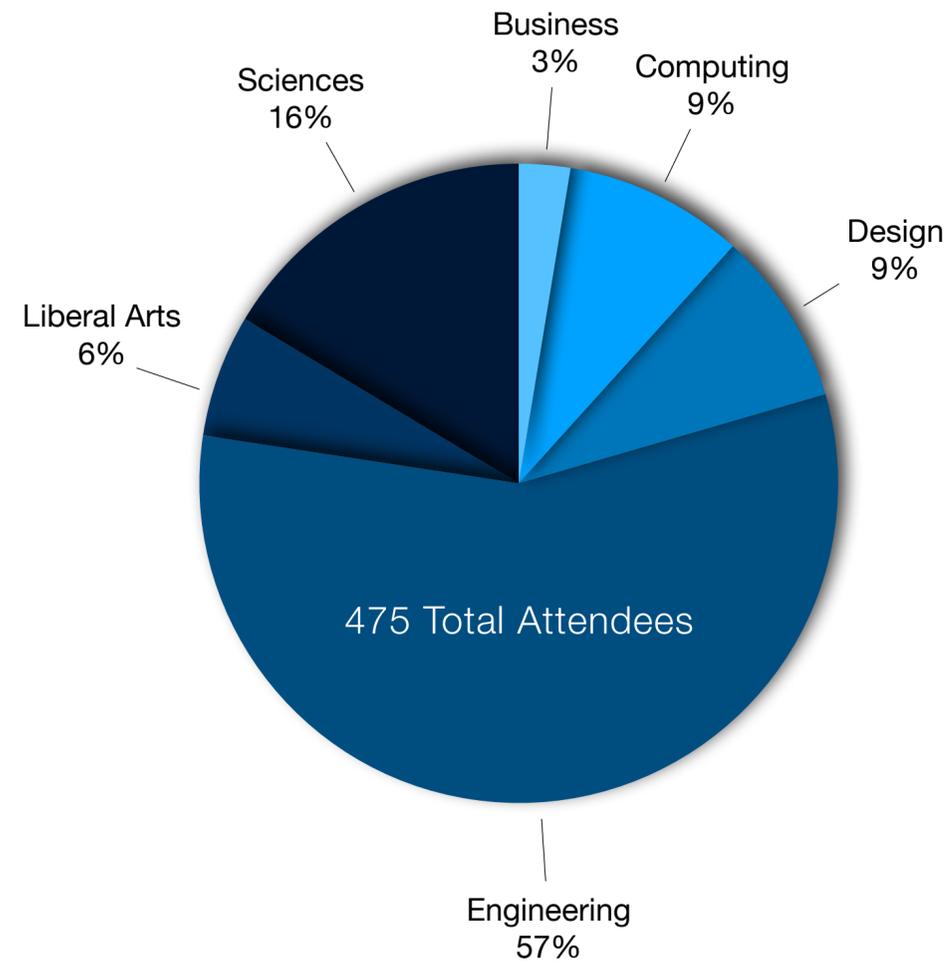
**189** teaching workshop participants - 9% increase

**101** students enrolled in CTL courses - 18% decrease

**45** Tech to Teaching Certificates and **53** CIRTLL

Associate-Level Certificates were awarded to graduate students and postdoctoral scholars during FY2020–2021.

## Workshop Attendance by College



**475** graduate students and postdoctoral scholars participated in career development and teaching workshops during FY2020–2021.

**91%** of participants gave the workshops an overall rating of very good or excellent.

## Future Faculty Initiatives

### Academic Career Support

#### Future Faculty Job Search Academy

CTL typically offers a series of workshops for graduate students and postdocs to prepare them for all aspects of the faculty hiring process. This year, CTL transformed this series into the Future Faculty Job Search Academy, a multi-week learning community that leveraged prerecorded videos and independent activities that prepared participants to engage in flipped-format workshops. The fall Academy introduced academic job searching and crafting an effective job search packet, including the CV, cover letter, and teaching, research and diversity statements. The spring series focused on conducting successful interviews, presenting dynamic job talks, and managing professional online presence.

The Future Faculty Job Search Academy synchronous remote workshops were attended by 286 graduate students and postdocs, an increase of 41% over the previous year’s academic career programming. Of these participants, 97% rated the Academy as “very good” or “excellent”. CTL faculty were invited to present the program format at the Southeast Regional Graduate Careers Consortium conference.

#### Individual Consultations

Future faculty entering the academic job market receive additional support through individual consultations. CTL provided individual consultations to 96 graduate students and postdocs about their academic job search an increase of 17% from the previous year.

### Postdoctoral Development

#### AGEP

The purpose of the National Science Foundation’s Alliances for Graduate Education and the Professoriate (AGEP) program is to increase the number of underrepresented minority (URM) faculty in STEM disciplines and education research. The AGEP alliance connecting Georgia Tech, Rice University, Florida A&M University, and the University of Colorado at Colorado Springs is developing and implementing an innovative model that increases the number of URM engineering postdoctoral scholars who transition successfully into tenure-track faculty positions. CTL’s Dr. Tammy McCoy provides academic enrichment to the alliance, covering teaching and learning in higher education, course design, and practical teaching experience.

#### Postdoc Course

Each spring, CTL offers a non-credit course on teaching for postdocs. This year, the course was redesigned to fully align with the Tech to Teaching outcomes and 23 postdocs completed the course.





## TA Development Programs

### TA Orientation

New undergraduate and graduate TAs serving in traditional residential courses are introduced to their job responsibilities and Georgia Tech policies through TA Orientation (TAO). This year, CTL expanded a series of online interactive modules about FERPA, academic integrity, and disability services to include additional modules on online communication skills and efficient grading. Along with optional modules to help TAs working in remote courses, new TAs were able to prepare for their TA positions from anywhere prior to the start of classes. In addition to the asynchronous resources, CTL offered a series of engaging remote workshops on facilitating remote learning, equitable grading, and supporting student wellbeing. A total of 733 new TAs completed the asynchronous training with 267 attending at least one synchronous workshop.

The Center for Teaching and Learning partnered with the Online Masters programs to produce a series of synchronous and asynchronous training materials for TAs in the OMS programs. A total of 448 online TAs were trained through these resources.

### Residential TA Orientation Programming

Asynchronous GT TA Training modules via Canvas

Required TA Training modules:

- Module 1: What you should know about FERPA
- Module 2: What you should know about Disability Services
- Module 3: What you should know about Academic Integrity
- Module 4: What you should know about Online Communication
- Module 5: What you should know about Grading

Optional TA Training modules:

- Module 6: Technology for the Remote TA
- Module 7: Tips for the Remote TA

Remote Synchronous TA Orientation Workshop Series

- Working as a TA in the Socially-Distanced Classroom
- Working as a TA in a Remote Learning Environment
- Advanced Grading: Mastering Canvas, Rubrics, and More
- International TA Orientation



**733** residential teaching assistants completed the online training modules during FY2020—2021, a 110% increase.

**388** online teaching assistants completed the orientation modules during FY2020—2021.

## TA Development Programs

### CTL 2000, 2001, and 8000

In addition to TA Orientation, new TAs from certain departments develop teaching, tutoring, and other relevant skills through CETL 2000 and 2001 for undergraduate TAs and CETL 8000 for graduate TAs. This year, 298 students enrolled in CETL 8000, and 264 completed CETL 2000/2001, a 24% increase for both courses.

### International Teaching Assistant Program

The International TA (ITA) program began offering a two-credit course, CETL 8802: Special Topics in ITA Development in the 2020-2021 academic year. The course was delivered remotely both fall and spring, and the enrollment of 19 students included four (4) students joining from outside the U.S. After ITAs completed the course, Sarah Kegley (program manager) provided a follow-up observation of ITAs in their TA roles. Schools/programs represented were Electrical and Computer Engineering, Biomedical Engineering, Industrial and Systems Engineering, Biochemistry, Machine Learning, Physics, Building Construction, Mechanical Engineering, and Public Policy.

**100%** of the participants rated the ITA workshops very good or excellent. The overall rating for all workshops was **4.89 / 5.00** with 5 being excellent.

## Institute-Wide Partnerships and Outreach

### Preparing Future Faculty Partnerships

Although many graduate students and postdocs learn about CTL's future faculty programming through CTL marketing and word of mouth, a growing number of schools have established partnerships with CTL to formalize and encourage their students' participation. These Preparing Future Faculty Partnerships created a consistent flow of students from participating schools, which demonstrates those schools' commitment to fully preparing their graduate students and postdocs for careers in the academy.

#### Civil and Environmental Engineering (CEE)

Each year, CEE select a cohort of three to five graduate students to join the Preparing Future Faculty program. Selected participants complete the Tech to Teaching program and receive a monetary stipend from CEE to support their ongoing professional development.

#### Economics

Ph.D. students in the School of Economics are required to participate in the Tech to Teaching program as part of their graduate training. Incoming students complete the Tech to Teaching courses in their first or second year and can become eligible to teach as instructor of record beginning in their third year.

#### Biomedical Engineering (BMED)

The course BMED 7004 Teaching & Research Practicum I satisfies four of the foundation level outcomes in Tech to Teaching. Participants from this field can use any pathway to satisfy the remaining outcomes and then participate in the teaching capstone.

#### Industrial & Systems Engineering (ISyE)

The course Fundamentals of Teaching & Learning satisfies five of the foundation level outcomes. Participants from ISyE can use any pathway to satisfy the remaining outcomes.

#### Psychology, Mechanical Engineering, Materials Science & Engineering

These schools offer a teaching practicum course that students may complete instead of the CTL teaching capstone. Students in these practicum courses still participate in the two classroom observations and submit the capstone portfolio to satisfy the capstone learning outcomes.

#### LEAD (Leadership Education and Development) Program

LEAD hires co-instructors for leadership sections of GT 1000 and for the Public Policy section of PUBP 4140 Foundation of Leadership for PUBP students. Preference for these teaching assignments is given to Tech to Teaching members. The teaching assignment can be used for the capstone requirement.



## Institute-Wide Partnerships and Outreach

Date	Partner	Event	Attendance
3 September 2020	GTRHTA	Ask Me Anything Experts Panel	57
17 September 2020	ME	Course Design Basics	24
5 November 2020	CTL	Mindful Mentoring Workshop	7
6 November 2020	Grad Career Serv.	CV and Job Search Workshop for LOGRAS	10
3 December 2020	BME	Biomedical Engineering NSF RED Grant: Faculty Learning Committee	4
21 January 2021	CHEM	Communication Essentials for Scientists Workshop (CHEM 8002 class)	39
28 January 2021	MSE	Teaching for Student Learning Workshop (MSE Practicum Class)	8
16 February 2021	ME	Course Design Basics	32
2 March 2021	AE 8801	CTL Resources   Principles of Teaching and Learning	66
21 April 2021	Multiple	TA and Future Faculty Awards Day	185
29 April	USG	Inspire, Empower & Motivate: A leadership development workshop for mid-level managers	18
		Total	450



**450** members of the Georgia Tech community participated in TA Development and Future Faculty partnership and outreach events.

## Graduate Student Ambassador Programs

### Graduate Teaching Fellows Program

The Graduate Teaching Fellows (GTF) program launched in summer 2018. Designed on the hub-and-spoke model developed for faculty outreach programs, the GTFs consist of a cohort of 11 advanced graduate students who serve as peer leaders for teaching development. The Fellows designed and delivered TA Orientation, conducted classroom observations and feedback sessions, and independently created individual projects to further support graduate student teaching developing in their home academic unit.



“What I like best about participating in the GTF program is that it has connected me to people across campus who are incredibly passionate about teaching. These connections have inspired me to continually improve and reflect on my own teaching as well as help support effective instruction for students across campus.”

- Terri Dunbar, GTF

### Graduate Teaching Fellows FY2020 - 2021

**Kera Allen**, History and Sociology  
**Paloma Casteleiro Costa**, Electrical and Computer Engineering  
**Terri Dunbar**, Psychology  
**Ana Maria Estrada Gomez**, Industrial Systems and Engineering  
**Leonardo Garcia Bottia**, Building Construction  
**Markace A. Rainey**, Chemistry and Biochemistry  
**Julian A. Rose**, Biomedical Engineering  
**Andrew Schulz**, Mechanical Engineering  
**Tongyang Yang**, Economics  
**Yushuo Yang**, Economics  
**Angela Yoo**, Psychology

### International TA Liaisons Program

In Spring 2021, The Center for Teaching and Learning offered a pilot initiative, International TA Liaisons for CTL. This initiative, supported by a PEGS grant, brought together seven qualified ITAs from five schools to design and create materials that would support the development of incoming ITAs. Each ITA liaison completed CETL 8802, Special Topics in ITA Development, and successfully served as a TA in his or her respective school. The pilot program was facilitated by Sarah Kegley, ITA program manager in CTL. As a leadership team of graduate students, ITA Liaisons for CTL is an extension of the hub-and-spoke model that CTL created with the Provost Teaching & Learning Fellows (PTLFs) and the Graduate Teaching Fellows (GTFs).



### International TA Liaisons FY2020 - 2021

Top Row

**Rui Chen**, Mechanical Engineering

Middle Row (L-R)

**Mohammad Nikbakht**, Electrical and Computer Engineering

**Jung Hyun Lee**, Building Construction

**Arpit Bhardwaj**, Civil and Environmental Engineering

Bottom Row (L-R)

**Daniyar Omarav**, Mathematics

**Fan Jiang**, Computer Science, Robotics

**Ximena Pizarro Bore**, Public Policy

## TA & Future Faculty Awards

CTL celebrates the contributions to teaching excellence at Georgia Tech made by our graduate and undergraduate teaching assistants. This year CTL recognized graduate and undergraduate TA Award winners, Tech to Teaching and CIRTLL certificate recipients, Thank a Teacher recipients, and TA Fellows. Awards are usually presented in-person at the annual TA and Future Faculty event, but this year the event was hosted via the BlueJeans video conferencing platform.

The annual awards process opened in January. CTL requested all schools/departments conduct an internal competition to produce one person per each category: (1) Graduate Student Instructor of the Year; (2) Graduate Teaching Assistant of the Year; and (3) Undergraduate Teaching Assistant of the Year. CTL was excited to introduce two new award categories to this year's lineup: Online Head Teaching Assistant of the Year and Online Teaching Assistant of the Year. The new awards recognized current students who worked as TAs in courses where at least 95% of the class time was online. Each school-level winner was invited to submit an application to participate in the institute-wide TA of the Year competition.



**Frances Bryson**  
Mechanical Engineering



**Shahrokh Shahi**  
Computational Science & Engineering



**A. Lynnae Luettich**  
Civil & Environmental Engineering



**Jack Olinde**  
Mathematics



**Tohid Shekari**  
Electrical & Computer Engineering

Georgia Tech Center for Teaching and Learning

2021 Georgia Tech  
**ONLINE HEAD  
TEACHING ASSISTANT  
OF THE YEAR**

**CONGRATULATIONS!**



**Kristel Topping**  
Biological Sciences

Georgia Tech Center for Teaching and Learning

2021 Georgia Tech  
**ONLINE  
TEACHING ASSISTANT  
OF THE YEAR**

**CONGRATULATIONS!**



**Meghan Benda**  
Chemistry & Biochemistry



**Arvind Krishna**  
Industrial & Systems Engineering



**Cristian Crisan**  
Biological Sciences



**Frederic Faulkner**  
Computer Science



**Anshul Tusnial**  
Mathematics



**Chandler Watson**  
Chemistry & Biochemistry



**Jiani Zhu**  
Scheller College of Business

Georgia Tech Center for Teaching and Learning

2021 Georgia Tech  
**GRADUATE STUDENT  
INSTRUCTOR OF THE YEAR**

**CONGRATULATIONS!**



**Elizabeth Jones**  
Chemistry & Biochemistry

Georgia Tech Center for Teaching and Learning

2021 Georgia Tech  
**GRADUATE TEACHING  
ASSISTANT OF THE YEAR**

**CONGRATULATIONS!**

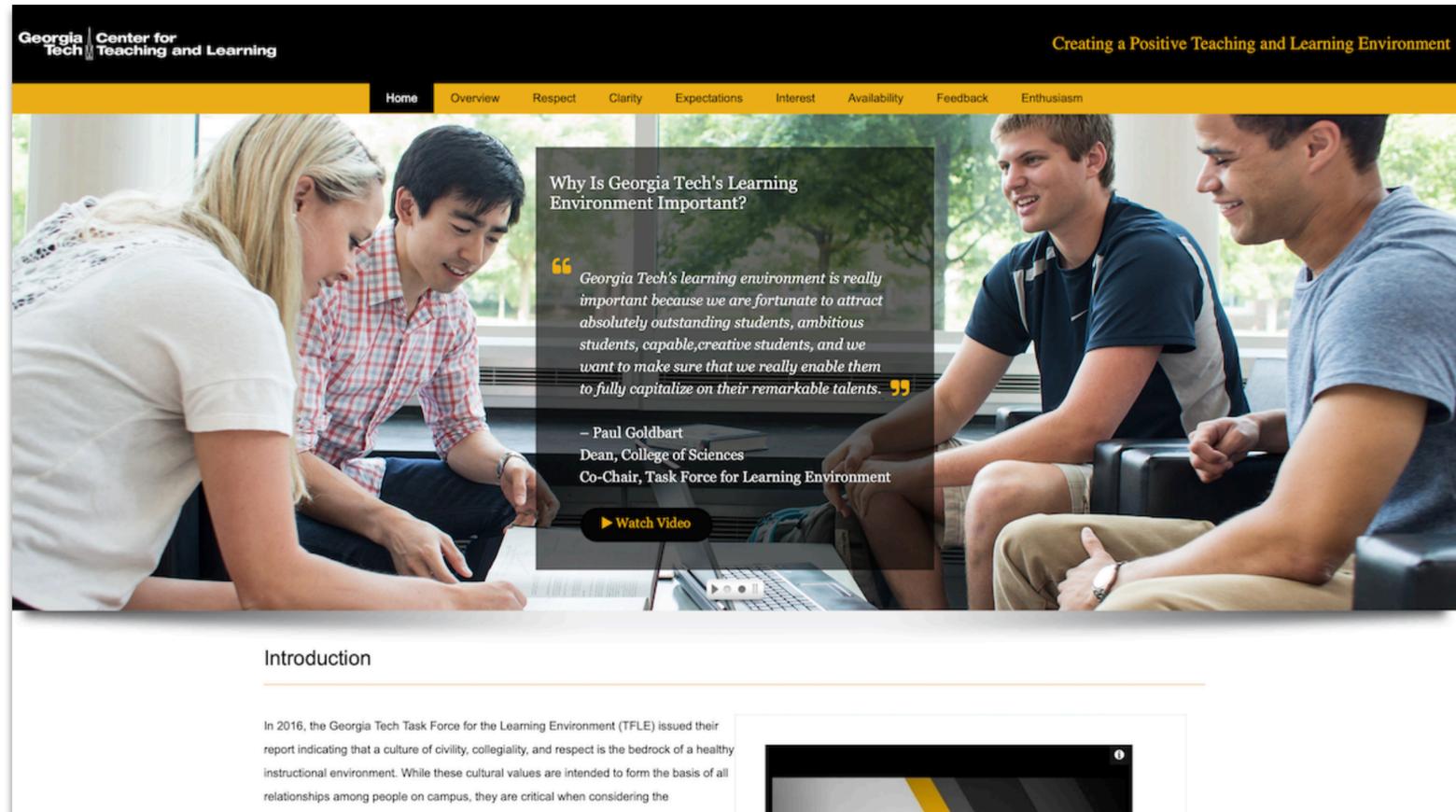


**Sophia Wiesenfeld**  
Biological Sciences

Georgia Tech Center for Teaching and Learning

2021 Georgia Tech  
**UNDERGRADUATE  
TEACHING ASSISTANT  
OF THE YEAR**

**CONGRATULATIONS!**



## Creating a Positive Teaching and Learning Environment: An Online Toolkit for Faculty

In 2016, the Georgia Tech Task Force for the Learning Environment issued their report indicating that a culture of civility, collegiality, and respect is the bedrock of a healthy instructional environment. In response to this report, CTL was tasked with developing an online toolkit to help faculty recognize how instructional strategies and interactions with students contribute to a positive learning environment. One of the goals of this online resource is for faculty members to understand how the values of civility, collegiality, and respect translate into concrete strategies and measures that are considered effective teaching. The content of the Toolkit aligns directly with the student perceptions of teaching effectiveness found in the Course Instructor Opinion Survey (CIOS).

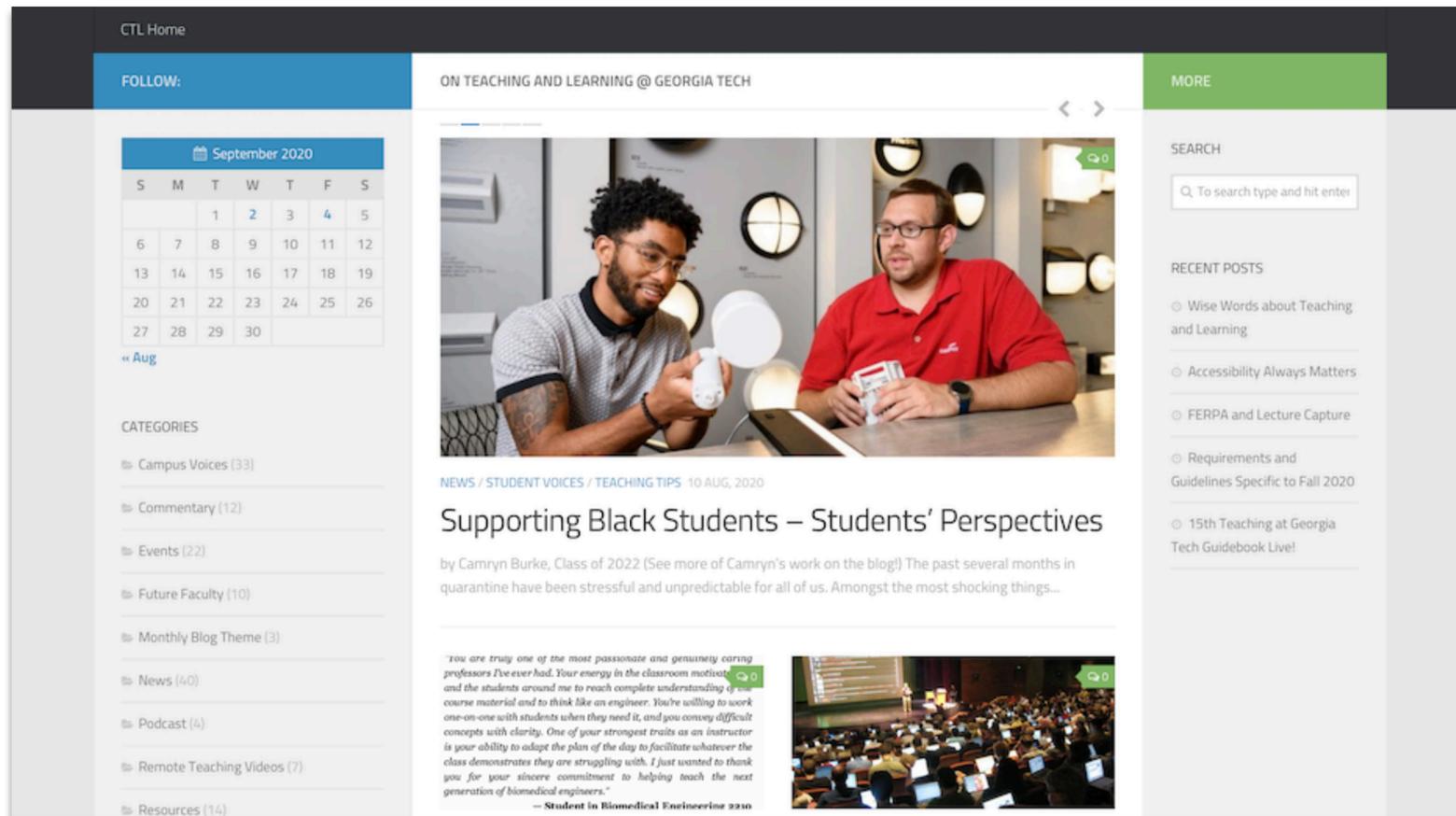
[Visit the website](#)



## TA Online Training Program

CTL offers a variety of resources to enhance the teaching effectiveness of Georgia Tech's undergraduate teaching assistants (UTAs) and graduate teaching assistants (GTAs). CTL TA Development specialists conducted six TA orientations during the academic year, four in fall term and two in the spring term. To support TAs unable to attend these in-person orientations, CTL designed and deployed a series of TA training modules accessible via Canvas, Georgia Tech's learning management system. The modules cover academic integrity, FERPA, and disability services. Each module has interactive components and built-in assessment tools. Upon successful completion of the modules, students can print a document verifying participation.

**733** Georgia Tech graduate and undergraduate teaching assistants completed the online training in FY2020-2021, a **110%** increase from the previous year.



### On Teaching and Learning @ Georgia Tech: CTL News and Resources Blog

On Teaching & Learning @ Georgia Tech, CTL's blog, features a range of articles from CTL staff and various contributors, with content such as teaching tips, inclusive teaching, reviews of workshops, and many more. Our goal with the blog in the days following the campus shutdown in the spring was to provide faculty as many resources as possible quickly. Topics covered included interviews with faculty teaching remotely, student voices about the transition, resources from CTLs at peer institutions, and general encouragement.

[Visit the blog](#)



### Teaching and Learning Buzz Podcast

Teaching and Learning Buzz, a monthly podcast from the Center for Teaching and Learning at Georgia Tech, highlights teaching and learning topics important to the Tech community. Each month, we talk to campus and visiting experts as we explore challenging questions related to teaching and learning and share practical strategies for helping our students (and colleagues) learn and thrive at Georgia Tech and beyond. The first episodes of the podcast looked at the ethical implications of grading on the curve, student academic well-being, and an interview with Dr. Susan Blum, University of Notre Dame, who visited campus to discuss students' "superpowers." Post-spring shut down, the podcast compiled interviews with faculty experience teaching online.

[Listen to CTL Podcasts](#)



At Georgia Tech, we are educators first and foremost. Our mission is to develop leaders who advance technology and improve the human condition. Students are our top priority, and no one is more vital to their success and growth than our faculty. The Institute is committed to providing you with whatever tools you need to create a diverse and inclusive learning environment where all students can thrive and excel.



**Ángel Cabrera**  
President, Georgia Institute of Technology



### Welcome Letter from Georgia Tech's Provost

Dear Colleagues:

Greetings and welcome to the newest members of our academic community. We are so glad you've joined us. To those returning for another academic year, welcome back!

Each year our faculty, unmatched in breadth, depth, and diversity of talent, strive to empower Georgia Tech students to become globally competent, civic-minded, independent learners who fear neither complex problems nor failure. Our students are our top priority, and we are proud to be their institution of choice. We innovate relentlessly in our pedagogy, research, and institutional practices to provide them with a supportive campus environment built for learning, trying, and doing. And we endeavor to equip them with everything they need to explore, discover what matters most to them, and learn how to be resilient and adaptable.

We learned a lot from the challenges of the 2020-21 academic year. Moving forward, we want to leverage those lessons to benefit our students and our entire community. Key among those lessons are the benefits of using technology to help us meet our students where they are with the academic and institutional services they need. The pandemic also highlighted the importance of nurturing the well-being of our students and our community. Faculty can play a highly influential role in helping students face the rigors of their educational journey and achieve their full potential. As their support structure in the classroom, we are in a great position to spot signs that a student may be struggling and reach out to ask if everything is okay or offer a referral to helpful resources.

Nurturing well-being is just one of the bold, ambitious goals that we set forth in the Institute's strategic plan last year. This vision for Georgia Tech's future also calls on us to amplify our impact, champion innovation, connect globally, expand access, and lead by example. I invite you to think of these goals as conversations waiting to happen. Through conversations with others, we reaffirm who we are and where we want to go. This year, let's have a continuing conversation about how we can make the shared vision laid out in our strategic plan a reality at Georgia Tech.

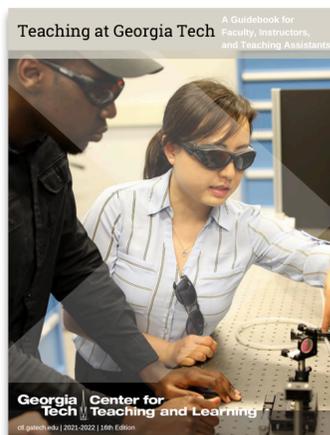
I look forward to these conversations and to what comes next. Thank you for all you do for our students and this community.

Sincerely,

Steven W. McLaughlin  
Provost and Executive Vice President for Academic Affairs



## Teaching at Georgia Tech A Guidebook for Faculty, Instructors, and Teaching Assistants



Every year, CTL produces a guidebook for instructors. Due to the pandemic, the printed version of the 15th edition was not produced this year. However, an interactive, electronic version of the Guidebook was made available to participants in New Faculty Orientation and part-time faculty at the New Faculty Welcome Event in fall. Instructors of CETL 8000, a TA development course, also use the guidebook as a resource in their classes. The online version of the guidebook is highly interactive with numerous links to additional information and relevant offices. This fully downloadable version of the guidebook also works on tablets and mobile devices.

[Access the Guidebook Online](#)



## Inclusive Teaching Strategies

A sense of belonging in relationship to underrepresented students is particularly important since research shows that women, students of color, first-generation students, and economically disadvantaged students are more likely to experience uncertainty about their belonging and potential than majority students. Thus, creating a learning environment that supports all students' need for belonging will foster a student's sense of well-being.



### Inclusive teaching strategies include

- Learning students' names; using name tents.
- Providing opportunities for students to

## Learning Environment Toolkit, 2nd Edition Promoting Student Learning and Academic Well-Being at Georgia Tech



A second edition of the Learning Environment Toolkit booklet was created during spring term 2020. The new version of the booklet contains six new pages dedicated to student academic well-being. Grounded in self-determination theory, the new section provides numerous teaching strategies and course design ideas to facilitate a student's need for autonomy, competence, and belongingness. When satisfied, these basic needs contribute to student motivation and a sense of well-being. The booklet also contains an 18-page section on student perceptions of teaching effectiveness and how those perceptions align with Tech's Course Instructor Opinion Survey (CIOS).

[Access the Toolkit Online](#)





## *CTL's Response to COVID-19*

# The Center for Teaching and Learning Responds to COVID-19\*

\* This section of the annual report covers CTL's response to COVID-19 from mid-March 2020 through June 2021. Since the pandemic has brought unprecedented circumstances for teaching and learning at Tech, CTL thought it was important to cover the entire range of our response even though it extends beyond the fiscal year. However, only data collected from 1 July 2020 to 30 June 2021 are reflected in the total numbers found on page 5 of the report.



## On Teaching and Learning @ Georgia Tech Blog



CTL's blog became an effective vehicle to create resources and share tips quickly and from multiple perspectives. Since mid-March, CTL wrote and posted 36 posts directly related to post-COVID teaching and learning challenges and four posts related to supporting Black students and using anti-racist pedagogies. Blog posts titles are below:

- Keep Teaching: Video Lecture Tips from Georgia Tech Faculty
- Teaching During—and About—a Crisis
- Making the Rapid Shift to Remote Learning
- Keep Teaching: How Do You Teach a Lab Course Remotely
- Keep Teaching: Working Remotely with International Students Part 1
- Keep Teaching: Working Remotely with International Students Part 2
- Human Elements in the (Virtual) Classroom
- Keep Teaching: Advice from Thank a(n Online) Teacher Recipients
- An Ethic of Care in a Time of Disruption
- Keep Teaching: The Importance on Faculty Community
- TA Talk: Engaging TAs in Remote Teaching and Learning
- Keep Teaching: Remote Teaching Advice Podcast Episode

- Keep Teaching: An Interview with Katherine Samford, Language Institute
- Keep Teaching Podcast: Taking Lab Courses Remote
- Keep Teaching: A Student's Perspective
- Keep Teaching: Student-Centered Remote Teaching
- Summer 2020 GT Remote Teaching Academy
- CTL Recommends: Practical Books on Remote Teaching and Active Learning
- CTL Recommends: Books for Catching up on Teaching Best Practices
- 2020 Design Your Summer Syllabus for Remote Teaching and Learning
- 2020 Effective Assessment of Student Learning – Remote Teaching Academy
- Remote Teaching: Designing Trustworthy Assignments
- How Can Course Design Help Prevent Cheating?
- Revisiting the Differences Between Remote and Online Instruction
- Transitioning to a Remote Instruction Environment
- Day-to-Day Learning Activities in Remote Instruction
- Designing Aligned Assessments
- Inviting COVID-19 into the Classroom
- Fostering a Culture of Health in Our Courses: Hyflex Course Design
- Introducing the Backwards Design Approach to Course Design
- Designing Effective Learning Objectives
- Responsive and Flexible Course Design
- Tech Moving Forward Fall 2020
- Equity and Inclusion in STEM Resources
- Stepping Up to Support Students in the Current Moment
- Design Your Syllabus for Flexible Fall Teaching Workshop Resources
- Active Learning in Flexible Courses
- Anti-Racist Pedagogy Resources

[Read the Articles](#)



## Teaching & Learning Buzz Podcasts

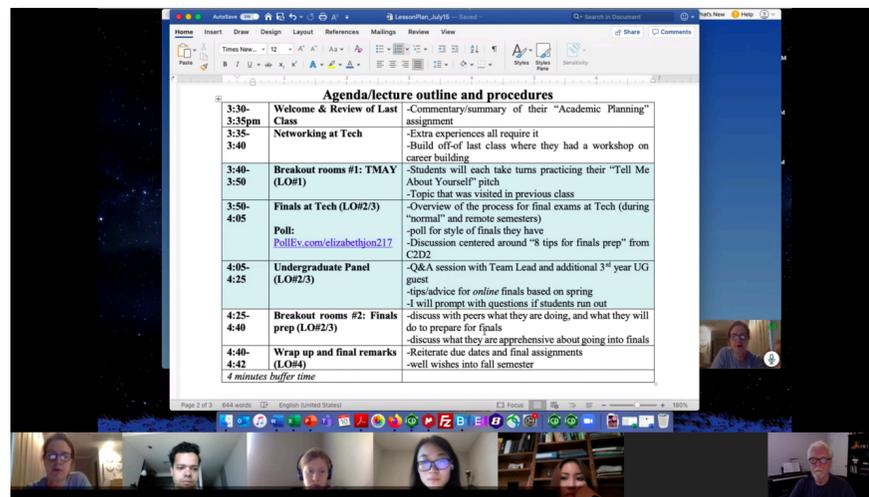


CTL established the *Buzz* podcast in fall 2019 and, as we moved into emergency remote teaching, used it as a medium for additional content and advice for the second half of the spring semester. We did so by inviting a series of experts and faculty who have taught online to contribute to four episodes and by sharing the audio versions from two of our GTRHTA sessions.

- [Keep Teaching: Making the Rapid Transition to Remote Teaching](#) (episode 4) with Dr. David Joyner, Associate Director of Student Experience from the Online Master of Science program in the College of Computing, and Dr. Vincent Spezzo Program Manager of Teaching and Learning Online in the Center for Teaching and Learning CTL.
- [Advice from Thank a\(n\) Online Teacher Recipients](#) (Episode 5) with Dr. Polo Chao, associate professor in Computational Science and Engineering; Dr. Mike Schatz, professor of physics; and Dr. Joel Sokol, professor of Industrial Engineering, CTL's Vincent Spezzo served as co-moderator.

- [Taking Lab Courses Remote](#) (episode 6) with Dr. Mike Evans, first-year chemistry lab coordinator in the Department of Chemistry; Dr. Ben Galfond lab coordinator in the School of Chemical and of Biomolecular Engineering; and Dr. Himani Sharma, junior and senior lab program coordinator in the School of Materials Science and Engineering.
- [Learning from Experience with Remote/Online/Face-to-Face Courses](#) (episode 7) with Dr. Mary Hudachek-Buswell, lecturer in the Division of Computing Instruction in the College of Computing.
- [Remote Course Engagement Best Practices](#) (bonus episode) audio version of Dr. Chaohua Ou, assistant director of learning and technology initiatives in the Center for Teaching and Learning, leading a Georgia Tech Remote and Hybrid Teaching Academy session.

## CTL Courses



Agenda/lecture outline and procedures	
3:30-3:35pm	Welcome & Review of Last Class
3:35-3:40	Networking at Tech
3:40-3:50	Breakout rooms #1: TMAV (LO#1)
3:50-4:05	Finals at Tech (LO#2/3)
4:05-4:25	Undergraduate Panel (LO#2/3)
4:25-4:40	Breakout rooms #2: Finals prep (LO#2/3)
4:40-4:42	Wrap up and final remarks (LO#4)
4 minutes buffer time	

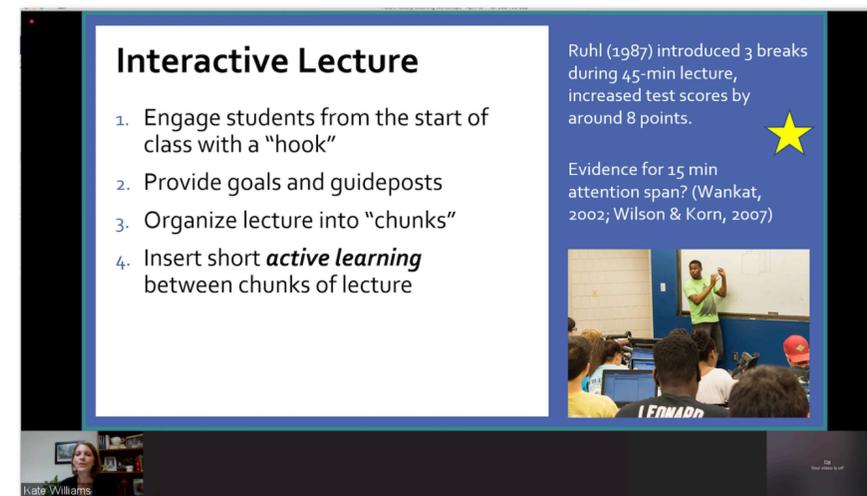
In mid-March, CTL instructors shifted their teaching to a remote learning environment and experimented with various technologies to promote active learning and student engagement. During the 2020 summer term, CTL conducted 20 classroom observations for graduate students and postdocs teaching remotely.

## Career Development Workshops



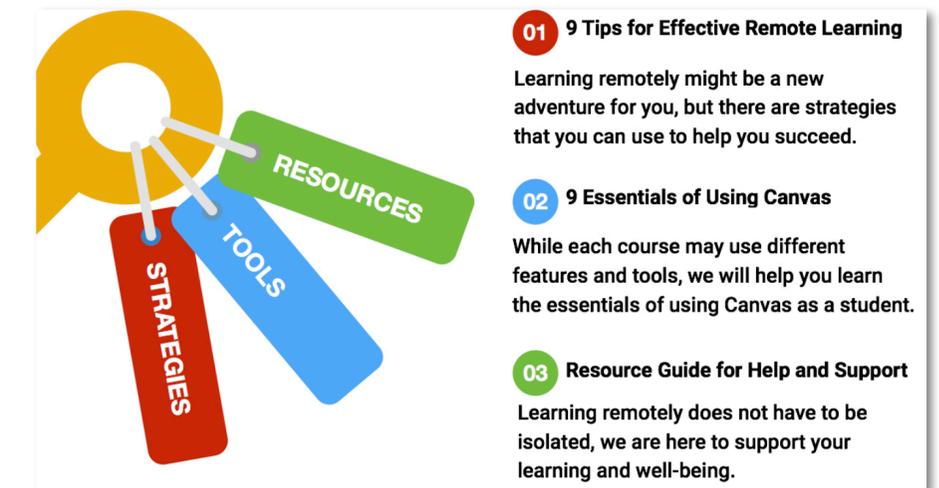
In April 2020, Dr. Kate Williams conducted a career development workshop for graduate students and postdocs about navigating the academic job market during the pandemic.

## Teaching Workshops



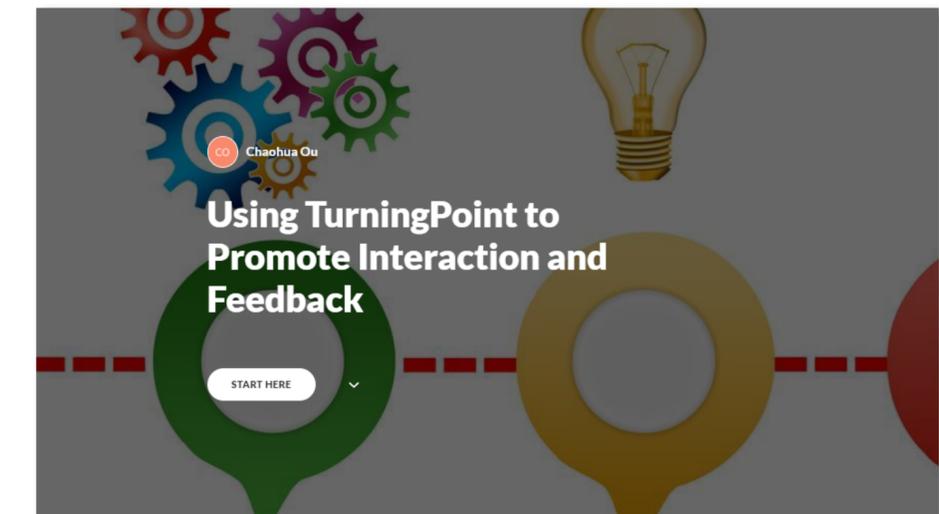
Graduate students and postdocs attended multiple teaching workshops taught remotely on evidence-based teaching and classroom assessment techniques.

## Remote Learning Student Guide



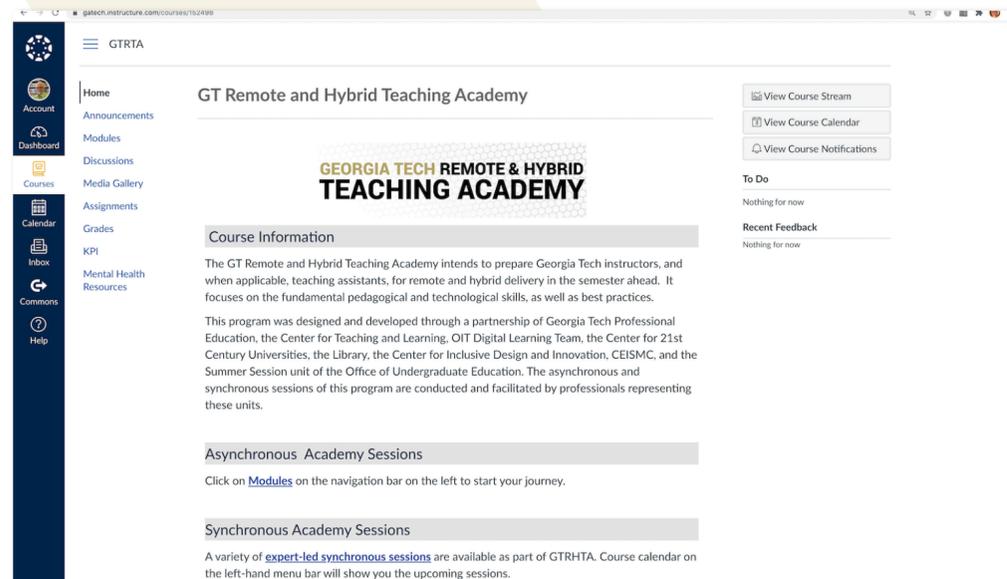
Dr. Chaohua Ou developed an [online resource guide](#) that provides students with strategies, tools, and resources to help them navigate their learning in a remote environment.

## Using TurningPoint to Promote Interaction & Feedback



Dr. Chaohua Ou created an [online guide to using TurningPoint](#) in a remote learning environment to promote student interaction and feedback.

## GT Remote & Hybrid Teaching Academy

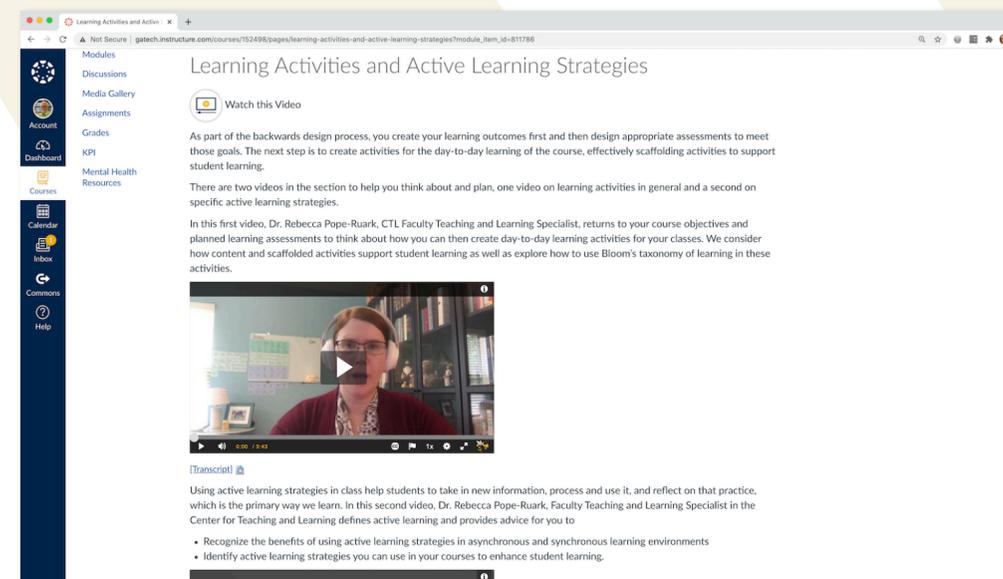


As mentioned earlier in this report, the GT Remote and Hybrid Teaching Academy (GTRHTA) was created to prepare Georgia Tech instructors, and when applicable, teaching assistants, for remote and hybrid delivery. CTL faculty contributed significantly to this campus-wide effort, which included the partners below:

- Georgia Tech Professional Education
- OIT Digital Learning Team
- Center for 21st Century Universities
- Library
- Center for Inclusive Design and Innovation
- CEISMC
- Summer Session unit of the Office of Undergraduate Education

CTL's contributions to the Teaching Academy included asynchronous content, synchronous workshops and information sessions, blog posts, podcasts, videos, and online and downloadable resources.

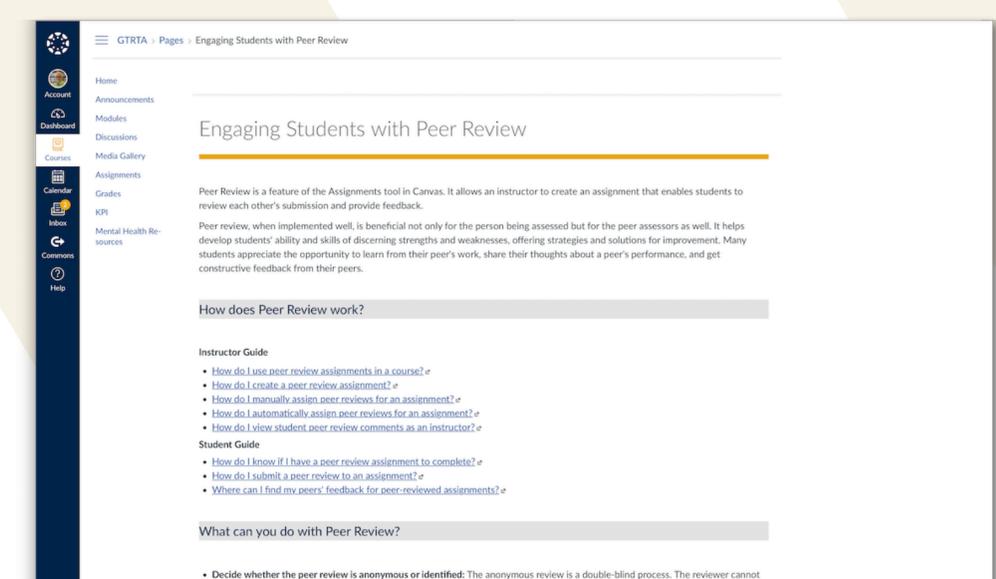
## Online Instructional Videos



CTL faculty created an array of videos that were embedded within modules on the GTRHTA Canvas website. The content of the videos focused on pedagogical issues confronted by faculty in the transition from residential learning to remote teaching and learning. Titles include

- Comparing Emergency Remote Instruction and Online Instruction
- Backwards Course Design
- Learning Objectives
- Designing Aligned Assessments
- Day-to-Day Aligned Activities
- Active Learning Strategies
- Designing Aligned Assessments (expanded edition)
- Formative vs. Summative Assessment
- Rubrics
- 9 Tips for Effective Remote Learning
- Strategies for Facilitating Online Discussions

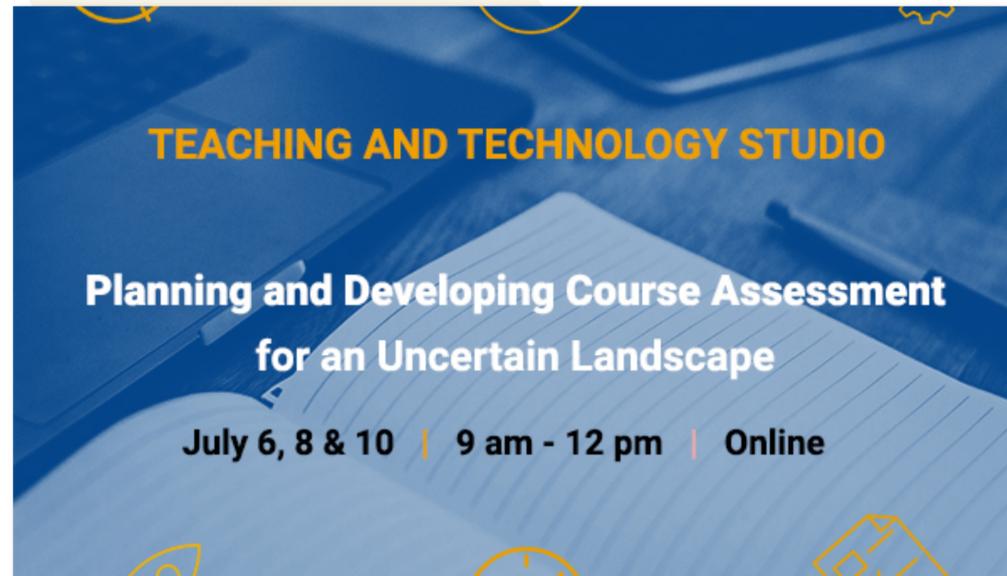
## Online Asynchronous Content



During the development of the Remote & Hybrid Teaching Academy, CTL faculty contributed to the asynchronous content within the course modules listed below.

- Course Engagement Best Practices
  - Engaging Students with Question Polling
  - Engaging Students with Online Discussions
  - Engaging Students with Peer Review
  - Engaging Students with Social Annotation
  - Engaging Students with In-Video Questions
  - Engaging Students with Presentation and Discussions
- Developing and Administering Assessment
  - Assignments
  - Gradescope
  - Kaltura In-Video Quizzes
  - Quizzes and New Quizzes
  - Respondus Exam Authoring
  - TurningPoint
  - VoiceThread

## Teaching and Technology Studio



Georgia Tech faculty faced much uncertainty during the summer of 2020 since it was unknown how courses would be delivered in the fall term. In response to this situation, CTL faculty designed a Teaching and Technology Studio focused on how instructors can design assessments that support students engaging in class in multiple ways. Participants were invited to (re)imagine assessment methods and strategies for teaching in different learning environments – remote, blended, and socially distanced in-person classes.

The Studio consisted of a mix of asynchronous learning, offline individual work time, and synchronous group sessions. By the end of the Studio, the participants had crafted a concrete assessment plan for a course, as well as strategies for efficient grading and providing effective feedback. The Studio attracted 53 attendees from all six of Tech's colleges.

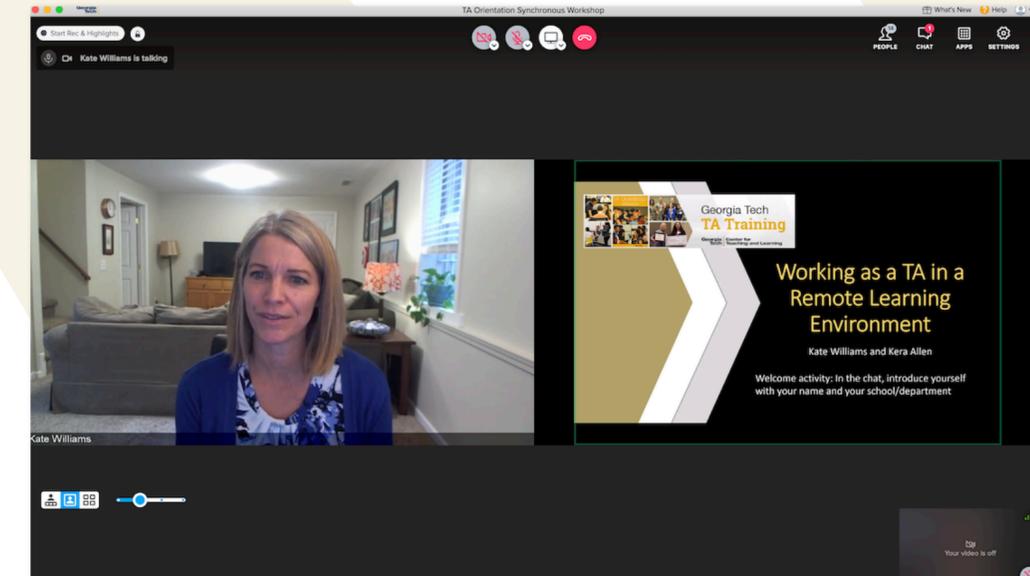
## Engaging Students in Physically Distanced Active Learning



The Covid-19 pandemic changed many things about teaching, but what remains true is that students learn more effectively when they are actively engaged in the learning process. The precautions faculty must take to prevent the spread of the virus during in-person instruction mean that faculty will need to make changes to the active learning strategies that they have previously used in their courses.

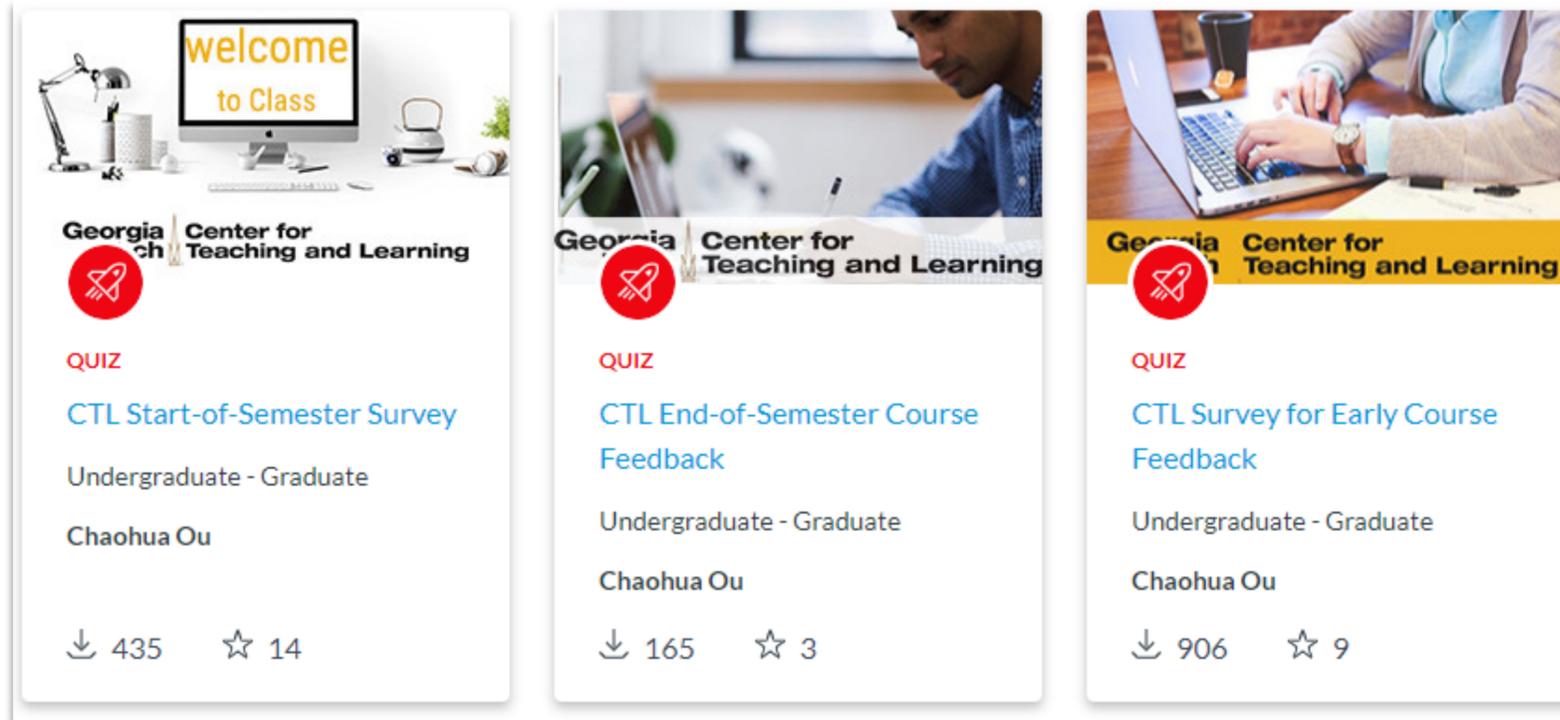
In this virtual session, participants identified strategies for overcoming the challenges of active learning while physically distancing, including using classroom technology and low tech strategies for facilitating student engagement. The virtual workshop attracted 62 attendees from all six of Tech's colleges.

## Working as a TA in a Remote Learning Environment



As a result of the pandemic, Georgia Tech decided to employ three learning environments during the fall 2020 term – online, hybrid, and socially distanced learning. In response to this decision, CTL faculty designed and delivered multiple workshops for teaching assistants participating in TA Orientation. These workshops offered TAs strategies for working in a remote or socially distanced learning environment.

**215** undergraduate and graduate students registered for the remote learning, socially distanced, and grading workshops designed and delivered by CTL faculty during fall orientation.



## Online Resources for Remote Teaching and Learning

CTL developed four resources available for instructors to directly import into their courses in Canvas:

1. **Remote Learning Student Guide:** This learning module introduces students to the strategies, tools and resources that will help and support their remote learning
2. **Start-of-Semester Survey:** The survey is intended for instructors to use before a semester starts or during the first week of class. It consists of an invitation to participate and 10 questions. The survey helps instructors know their students and identify their learning needs.



3. **Early Course Feedback Survey:** Instructors use this survey to collect mid-term student feedback between week 6 and week 8 of the semester. The survey consists of an invitation to participate and 4 questions. The survey provides feedback from the students on what has worked well in the course and what adjustments they would like the teacher to consider.
4. **End-of-Semester Survey:** This survey was used to gather feedback from students at the end of the Spring 2020 term, when in-person instruction was transitioned to remote teaching in the middle of the semester.

Instructors can find these resources in Canvas Commons and import them into their courses. Changes can be made to the surveys to adapt to specific instructional needs before they are delivered to students.

“I would recommend making this student guide available to all Freshmen regardless of taking classes online or in-person.” —Student feedback

CTL faculty developed online resources for remote teaching and learning that were downloaded and imported into **1,653** Canvas courses.

# CTL's Response to COVID-19

## Remote Learning Workshops



Carol Sullivan

Faculty in CTL designed and delivered 22 one-hour virtual workshops with the goal of assisting faculty in the transition from residential to remote learning. These workshops, some in collaboration with other partners, were widely attended across multiple offerings. Topics covered in the sessions included

- Designing the Syllabus for Remote Teaching and Learning (4x)
- Revisiting Course Expectations in the Syllabus for Fall 2020 (2x)
- Course Engagement Practices (5x)
- Effective Assessment of Student Learning (4x)
- Assessment Technologies Overview (5x)
- Administering and Grading Exams with Gradescope (2x)

Over **800** members of the Georgia Tech community attended the live sessions, while many others viewed the recorded workshops at a later time.

## Stepping Up: How Might Current Events Impact Our Teaching



Manu Platt

Teaching in troubling times always presents challenges. However, the summer of 2020 raised the level of challenge to new heights and generated important questions. What's the best way to connect with students when a deadly virus keeps everyone apart? How can we focus on course objectives when each day's news highlights death, systematic racism, social injustice, and civic unrest?

In an effort to address the questions above, the Center for Teaching and Learning and Serve-Learn-Sustain co-hosted two virtual conversations about the traumatic circumstances engulfing the nation and how they impact the teaching of course instructors. Over **105** Georgia Tech faculty and staff joined the two virtual meetings to listen and discuss how the tragic deaths of George Floyd, Ahmaud Arbery, Breonna Taylor, and Rayshard Brooks generated a global protest and how these events impact the campus and classroom. Conversation leaders and facilitators are pictured on the right side of the page.



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Biomedical Engineering



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Industrial and Systems  
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Student Diversity and  
Inclusion



Tiffany Hughes-Troutman  
Director, Center for  
Assessment, Referral, and  
Education (CARE)

## CTL Newsletter

## USG Webinar Series — Engaging Students Online

## How to be an Anti-Racist Educator

**Georgia Tech** Center for  
Teaching and Learning



Keep Teaching Remotely During  
This Time of Disruption

CTL's newsletter became an important vehicle of communication to connect the Georgia Tech community with resources to support their remote teaching. From March 18 to June 30, 2020 CTL sent out 15 newsletters. In these messages, CTL let faculty know about upcoming workshops offered by CTL and our partners, connected faculty with blog posts and other teaching and learning resources, and generally reached out with an offer of support.

Dr. Vincent Spezzo produced additional resources on Canvas for both faculty and online teaching assistants during the transition to remote teaching and learning.

- Tips for the Remote TA
- Technology for the Remote TA
- GT version of the USG Quick Guide to Remote Teaching & Learning



How can you engage your students while they are learning remotely? In this interactive session, participants discussed how to leverage technologies to create engaging learning experiences while making it manageable for you as an instructor. Facilitators focused on technologies and strategies you could use to support three elements of student engagement: communication, connection, and interaction.



Ibram X. Kendi writes in *How to Be an Anti-Racist* (2019) that “there is no neutrality in the racism struggle. The opposite of ‘racist’ isn’t ‘not racist.’ It is ‘antiracist.’ ...The only way to undo racism is to consistently identify and describe it—and then dismantle it.” Racism is reproduced in institutions throughout our society, and higher education is not exempt. Faculty have an important role to play in dismantling racism in their own classrooms. In this virtual workshop, participants first heard stories from students who have experienced racism at Georgia Tech. Participants identified concrete strategies to engage in antiracism pedagogy through their course goals, content, classroom facilitation, and assessment strategies.

**Georgia Tech**  **Center for Teaching and Learning**

## 2020 - 2021 Annual Report

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