IMPACT REPORT

Energy Equity, Environmental Justice & Community Engagement Faculty Fellows Pilot Program

October 2023 to December 2024

Program Overview

The Center for Sustainable Communities Research and Education, in close collaboration with the Sustainability cluster of IRIs (Strategic Energy Institute, Brook Byers Institute for Sustainable Systems, Renewable Bioproducts Institute) and the Social Equity & Environmental Engineering Lab, launched the Energy Equity, Environmental Justice & Community Engagement Faculty Fellows Program in October 2023. The program engaged 22 Georgia Tech faculty and two external fellows with the goal of growing collaborative expertise and building long-term relationships with each other and with community partners around energy equity, community benefits, and environmental justice. The entire program took place from October 2023 through Dec 2024; originally, the program was advertised through May 2024, but the decision was made to offer an extension to broaden learning over one calendar year. 21 fellows chose to extend to the Fall 2024 semester. During the program, SCoRE offered a variety of learning and networking opportunities, and each fellow decided what they wanted to participate in. All activities were intended to: 1) grow fellows' familiarity with the mission and programs of local sustainability partners, 2) build relationships with those partners based on shared research interests, and 3) support relationship building among the Fellows, especially across disciplines. Each fellow also worked on an individual deliverable that allowed them to reflect on or advance their own goals for integrating community-engaged research in their work, such as planning community outreach sessions, applying for a seed grant to support a new project with a partner, or writing a reflective blog post. Finally, each also worked in a small group on a group deliverable intended to strengthen the community-engaged sustainability research ecosystem at Georgia Tech. These included 1) co-authoring a reflective essay about the fellows program and integrating community engagement into research; 2) advising on the development of an online map and directory of community-engaged research partnerships at Georgia Tech; 3) applying for an internal seed grant to build partnerships around climate resilience (which was ultimately funded); and 4) co-developing a set of principles for CER with other faculty, staff, and community partners.

The Program Advances Three IRI Strategic Impact Areas:	
A. Catalyze Interdisciplinary Research Community	• **Build and strengthen a network** of interdisciplinary, sustainability-focused faculty interested in community-engaged research • **Cultivate and support new partnerships** between researchers and community-based organizations • **Support proposal development** by establishing community partnerships and providing trainings on and reviewing broader impact statements / community benefits plans
C. Educate Key Stakeholders and Prepare the Future Workforce	• Provide **professional education training / development** on centering justice, equity, and community engagement in research
E. Accelerate Technology and Knowledge Transfer	• Support **public good innovation** by cultivating partnerships with non-profit organizations

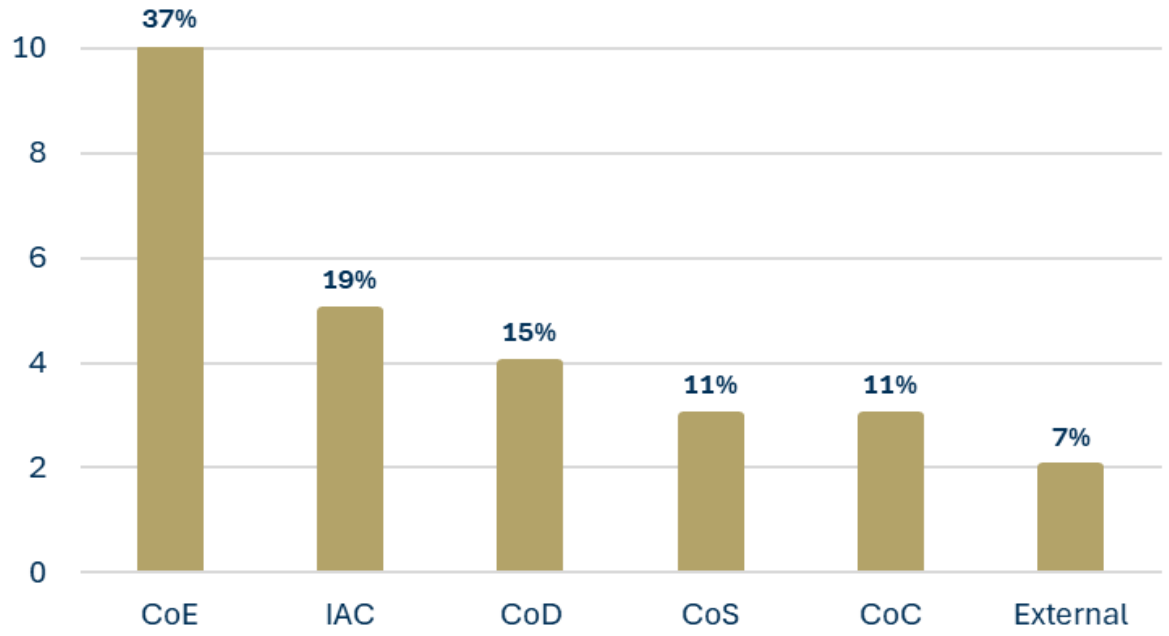
Inaugural Class of 24 Faculty Fellows by Unit			
Fellow	**Unit**	**Fellow**	**Unit**
Isaiah Bolden*	Earth and Atmospheric Sciences	Michael Nitsche*	Literature, Media, and Communication
Fani Boukouvala*	Chemical & Biomolecular Engineering	**HyunJoo Oh**	Industrial Design and Interactive Computing
Dylan Brewer	Economics	**Sofia Perez-Guzman***	Civil and Environmental Engineering
Will Bryan*	Southeast Energy Efficiency Alliance (SEEA)	Gregory Randolph*	City and Regional Planning
Yongsheng Chen*	Civil and Environmental Engineering	Elora Raymond	City and Regional Planning
Lily Cheung*	Chemical and Biomolecular Engineering	**Alexander Robel***	Earth and Atmospheric Sciences
Ashutosh Dhekne*	Computer Science	**Jessica Roberts***	Interactive Computing
Scott Duncan*	Aerospace Engineering (ASDL)	**Meisha Shofner***	Materials Science and Engineering
Lauren Garten*	Materials Science and Engineering	**Patritsia Stathatou***	RBI (soon to be ChBE faculty)
Michelle Huang*	Georgia Gwinnett College	Brigitte Stepanov*	Modern Languages
Allen Hyde*	History and Sociology	**Valerie Thomas***	Industrial and Systems Engineering/Public Policy
Mike Lehman*	Literature, Media, and Communication	Emily Weigel*	Biological Sciences
Jung-Ho Lewe*	Aerospace Engineering (ASDL)	Danielle Willkens*	Architecture

Key: **Bold**=affiliated with an IRI co-sponsor (BBISS, RBI, or SEI); *=cont. through Fall 2024 semester)

Dr. Erica Holloman-Hill (Ayika Solutions) and Fellow John Lewe (CoE) participate in the GT Sustainability Showcase Faculty Fellows Panel Discussion

CoC faculty member Ashutosh Dhekne demonstrates internet-in-a-box during a Faculty Fellows visit with Henderson School Alumni

Faculty Fellows by College



Program Activities	
Community Partner Site Visits	• ECO-Action • Community Health Aligning for Revitalization, Resilience, and Sustainability (CHARRS) • Lifecycle Building Center (ReBuildATL Coalition) • Henderson School Alumni Association and Trust (HSAAT in Jackson, GA)
Partner-Hosted Workshops	• "Atlanta 101" workshop led by Center for Civic Innovation on local government and policy-making • EPA workshop on leveraging EPA programs/funding for community partnerships • Power mapping workshop led by Alicia Scott, state director for the Energy Foundation
Internally-Hosted Workshops	• Community benefits plan article discussion • Participatory facilitation workshop led by SCoRE • Workshop on Equitable Partnership Principles led by SCoRE with two Faculty Fellows
Meetings and Symposium	• RCE Greater Atlanta Quarterly Meeting at Morehouse School of Medicine • Advancing Direct Air Capture for Community Benefit and Decarbonization Symposium with SEI
Fellows-Partners Networking	• Fall 2023 Holiday Gathering at BBISS • Spring 2024 Closing Program Gathering at Kendeda Building • Fall 2025 CER Town Hall and Holiday Gathering

Key Deliverables	
Proposals Submitted with or by Fellows *That we are aware of (there may be others)* **Indicates the proposal was awarded*	• DOE: CORE-CM (critical minerals) ($7.5M) • EPA Community Change Grant ($20M) • Sustainability Next Seed Grants 2024 (GT internal): Resilience Workshop (ATL/SC)*, Internet-in-a-Box (Jackson, GA); Sustainability Next Seed Grant 2025: Developing a Georgia Community Center into a Sustainability Hub (Jackson, GA) • Partnership for Inclusive Innovation Community Research Grant with the City of Griffin • Undergraduate Sustainability Education Innovation Grant Application (GT internal)* • NSF R2I2: Southeastern Community Hubs for Optimizing Resilience (SE-CHORUS)
Publications & Tools (in process)	• Joint reflective essay ("commentary") on preparing for community-engaged research • Community-engaged Research Principles • Digital CER networking and impact tracking platform ('Community Connect')
Presentations	• GT Sustainability Showcase • Atlanta Studies Symposium (held at Emory)
Individual Deliverables	• Reflective essays and blog posts about the fellows program and/or CER in the fellows' field • White papers about an environmental issue of interest to a local community (e.g., air pollution) • Research project proposals with a community partner and/or small grant applications • Broader impact statements for grant applications • Community outreach / engagement plans • Plans to integrate community partnership experiences in undergraduate courses • Guide for how to bring classes to off-campus community visits

Faculty Fellows visit Lifecycle Building Center

Fellows Program Feedback

Feedback was gathered over the course of three focus groups in Spring 2024 and during conversations during virtual office hours in December of 2024. Focus groups were self-selecting, so the conversation was a product of a mix of fellows from across disciplines listening to and reacting to each other's insights. Questions included: what was most and least valuable to you about this program?; what should be retained in future iterations, and what should be removed or adjusted?; what will be easiest for you to implement of what you learned in this program; what will be most difficult?; what other insights are you willing to share about your own experience or about what programmatic changes you would recommend? All but three fellows attended a focus group. Eight fellows attended one of two office hours hosted by program leads.

End-of-Semester Fellows-Partners Gathering at The Kendeda Building

Overall Program Rating: 4.2/5.0

1. *Key Theme: Learning to Listen*
   Bolden - "The opportunity to listen is what is valuable. When you talk to any faculty member, you start with goals in mind, and you work backward. But I don't think that's the approach community members are used to, or that they need. So being able to listen to their needs, understand their infrastructure [instead of] trying to insert ourselves into something that's already going on or build something from scratch."

2. *Key Theme: Reframing Research Questions*
   Oh - "[I] recently applied for a PIN community research grant – it was a type of grant I wouldn't have considered before, but being in this program, I felt more comfortable about community engagement. I . . . submitted with CEISMC and Griffin/Spalding school district, and city of Griffin, and the way we partnered was influenced by Dr. Yomi's talk, starting with the community. With my other NSF project, we came up with 80-90% of the scenario, problem, and solution, and then started looking for partnership. This time, I had ~50% picture of the solutions . . . but other 50% we filled it in after learning about what issues they are facing."

   Thomas - "I can change the framing of my research and really change its outcome - 'community aware' and 'community forward' framing of the problem, rather than technology-forward framing. Even if completely without community participation, framing is still very important. In the example of DAC, I submitted a paper on the cost of direct air capture used for making biofuel. That's a technology forward framing with zero community . . . the technology option is [always] chosen first - a whole lot of options are thrown out because they aren't attractive to the research agendas. So instead, I look at a broader array of technologies and policies [and ask different questions, such as]: who gets the subsidies? How does this look in terms of equity?"

3. *Key Theme: Training Students*
   Boukouvala - "What I find easy to incorporate is talking to my graduate students about what I'm learning. So I'm going to make it part of my lab/group meeting to talk with my grad students about how the research we do will impact communities. Because it should be part of our research in general."

4. *Key Theme: Changing Systems*
   Willkens - "It can be easy within an institutional setting to say, 'oh I'm not allowed to do that!' [But this program] figured out a way to [engage local businesses through its community catering program] and that was really nice to see. Imagine if there was a community caterer at every single one of GT's events – imagine how much more money would go back into the community."

Key Lessons and Next Steps

The pilot program offered a number of important lessons that will impact our program moving forward. Perhaps foremost, in order to equip faculty to do more and better community-engaged research (CER), Georgia Tech must cultivate a research culture that supports and recognizes the value of community-engaged projects. If it remains difficult to pay partners, negotiate indirect rates that are fair to collaborating community-based organizations (CBOs), extend time on the tenure or research clock to nurture partnerships, and coordinate across disciplinary silos to form research teams equipped to tackle community-identified problems, then CER cannot thrive at Georgia Tech beyond independent teams and isolated grants. Creating infrastructure that 1) supports partners in navigating red tape, 2) trains and rewards faculty who commit to CER projects, and 3) funds all stages of CER projects such that the spectrum of team formation to project execution is supported, are just a few of the key building blocks.

Several direct outcomes of the Fellows Program are in service to this goal. Fellows have met with program leads and IRI collaborators to discuss how to overcome hurdles to including CBOs on large federal grant applications; SCoRE staff, together with CEAR Hub staff, are exploring how to work with Sponsored Programs to try to ensure that lower indirect rates can be secured for relevant CBO-partnered proposals; and the CER Council – formed in 2024 in tandem with Fellows program activities and drawing on that momentum – is working to build and secure the necessary institutional infrastructure required to support CER. The Council - which includes SCoRE, the three sustainability IRIs that supported this program and that are championing CER (BBISS, SEI, and RBI), the Institute for People and Technology (IPaT), the Partnership for Inclusive Innovation (PIN), and the Enterprise Innovation Institute (EI^2) - is also working to accomplish other goals that fellows identified in focus group and office hour settings, such as lifting up CER stories, attracting and stewarding funding to support CBO collaborators, and addressing capacity challenges when it comes to administrative support for CER.

The next iteration of the Fellows Program will support a smaller cohort of faculty through a year of more intensive engagement with one of BBISS/SCoRE's signature projects. This coming program year will be dedicated to leveraging the foundation laid last year and funneling the energy and commitment of six faculty toward long-term partnerships that SCoRE currently stewards. This strategy of maturing faculty-partner research relationships and building capacity among partners through research collaborations is consistent with the commitment of SCoRE and its collaborators across the sustainability IRIs to foster a robust CER culture at Georgia Tech and amplify the impact of research that promises to have powerful societal and environmental benefits.