# CEE Diversity, Equity, and Inclusion (DEI) Committee Report

## December 2023

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# Report Guide and Statement on Past Work

This report focuses on the main achievements of the past year and main goals for the next year, but it does not give a comprehensive review of all activities. We direct readers to the 2022 DEI Report, where a description of all 18 initiatives can be found.

# Notable advances in 2022-2023

## Future Leaders Seminar Series

The department seeks to showcase URM-derived talent in young scientists in CEE across the country, targeting invitations to postdocs and senior graduate students. Currently, we provide guest speakers the opportunities to give in-person presentation and to interact with MIT members of all levels.  In AY 21 - 22, the department hosted 5 speakers, online and in-person combined. Women accounted for 4/5 of the total. 2/5 of the speakers were self-identified as Black or African American; 2/5 as Hispanic or Latino or Spanish Origin; 1/5 as Hispanic Black. In AY 22-23, the committee engaged the department in developing a list of suggested speakers for this series, prioritized by seniority and research area (i.e., to invite them before they are no longer postdocs).  One speaker was invited and visited the department in April 2023.  The speaker gave a seminar, engaged with graduate students, postdocs, faculty, and LGBTQ+ groups on campus.  Invites for more speakers from the collaboratively generated list is ongoing. Other on-going efforts include 1) creating an informal session such as "cookie hour" for discussion with students on issues relevant to navigating academic career, and 2) organizing peer interaction activities such as lunch talks.  We also would like to record seminar talks more systematically. Currently, the previous talks are not recorded in an organized manner and can only be retrieved in the "Event" tab of the departmental website. We propose to create a more accessible way to showcase the previous seminars (maybe under the DEI tab).

## Peer Mentorship Program

The Peer Mentorship Program aims to provide support, motivation, and guidance to new graduate students by pairing them with established graduate students. These mentors offer valuable advice on various topics, including maintaining a healthy work-life balance, adjusting to life in Boston, and navigating the dynamics between advisors and advisees. They serve as both personal and professional sources of support for their mentees. In the academic year 2022-2023, the department introduced the Peer Mentorship Program, successfully recruiting a total of 22 mentees, including 6 MEng students, and 19 mentors. The matching process took into consideration factors such as cultural background, hobbies, and research interests to ensure compatibility. Starting from the academic year 2023-2024, the department will actively encourage and has allocated a budget for paired mentor-mentee pairs to meet at least once per semester for coffee or a light meal, fostering stronger connections and further enhancing the program's benefits.

## High School Outreach

The K-12 outreach program in CEE was founded approximately 2 years ago by Profs. Michael Howland and Darcy McRose, with substantial assistance from Rohan Kundargi from the MIT Office of Government and Community Relations. The program was rolled out to the department in fall of 2022 in a departmental town hall event. The event garnered large attendance, with approximately 30 interested volunteers expressing a desire to participate in the program. Several pilot programs were subsequently hosted in the MIT Open Space.

As curricula and programming are refined and finalized, a formal relationship will be established with a venue in the greater Cambridge/Somerville area to establish a permanent forum for the program. In the interim, the Department will assist in the development of the program by increasing advertising on the CEE website and through periodic solicitations for participation by email from the Department Head.

## Postdoc Fellowship Program

The most direct way to augment representation in our community is to create sponsored mechanisms for supporting those individuals within our unit. A School of Engineering-wide postdoctoral fellowship program has been created for roughly 16 postdoctoral fellows per cohort. Cohort 1 began in AY 22-23, and cohort 2 will begin in AY 23-24. The CEE Department directly contributed funds for one postdoctoral fellow. The CEE Department is hosting 2 postdoctoral fellows in the inaugural cohort and will host 2 in the upcoming cohort. The program has extensive mentorship, community building, and professional development coaching for careers in industry, academia, and entrepreneurship.

***A note on graduate fellowships:*** Graduate fellowships have been made available. Traditionally, more of these are available than used. There is a disconnect in timing of when the fellowships are allocated (e.g., February or later) and when student-advisor pairings should initiate (e.g., September or earlier). This results in a contrived scrambling for matches, which reduces the authenticity of the relationship and often fails to manifest in a matriculation. This is an institute-wide problem. Articulation of fellowship criteria must be compliant with federal standards and reviewed by MIT.

# Priorities for improvement in 2023-2024

## CEE Ambassador Award

In 2022, the Department established the CEE Ambassador Award to fund travel and other related expenses for graduate students engaging in DEI outreach activities at

professional meetings, universities, and minority-serving institutions. The Award was announced by the Department Head by email in Fall 2022. The application consists of a short description of the event to be attended, what outreach activities are intended, an outline of expected expenses. Awards are made on a rolling basis, with the fall cycle applications due October 1, and spring cycle February 1.

The Award had one successful applicant in spring 2023. Funding was given to speak on a Women in Civil and Architectural Engineering Alumni Panel. To increase utilization of the Award, the Department will increase advertising in the upcoming year, including additional messages from the Department Head reminding graduate students of the Award, improved messaging on the CEE website, and writeups in the News section of the website.

## Student Advisory Panel
The CEE DEI Committee formed the Department Head Advisory Committee (DHAC). The purview of the Committee is broad and provides an avenue for feedback directly to the Department Head on topics relating generally to the quality of life and community for undergraduate students, graduate students, and postdocs. The Committee is also asked to meet with faculty candidates and provide confidential, non-binding feedback to the Department Head during the interview process.

In spring 2023, the DHAC was empaneled with four undergraduate students, two graduate students, and one postdoc. The agenda and meetings of the DHAC are coordinated by a representative from the DEI Committee who serves concurrently on both committees. The DHAC was involved with the consideration of 6 candidates for faculty positions within CEE. The DHAC will reconvene in Fall 2023.

## Mechanism to field prospective student queries
Applying to graduate programs can be an intimidating and confusing process, therefore with the aim of helping admissions be more equitable and inclusive, we plan to create a mechanism to field prospective student queries. This might consist of webinars, blogs, and/or social media accounts where prospective applicants can read other people's questions and ask their own.

## Voices of CEE
Through storytelling, members of the CEE community are given a platform to share their work, experiences, and personal story. CEE communications shares spotlights and profile articles on staff, postdocs, graduate students, undergraduates, and new faculty members.

From March 2021 to December 2023, CEE has published 57 spotlights and articles on Instagram of which 32 are female and 24 URM. Spotlight of a male graduate student (1,321 Impr) and profile article of female postdoc (1,357 Impr) received the highest impressions among all community member voices on Instagram in 2023.

## Data

We have improved our data collection workflow. Briefly, data can only be collected on already matriculated students. Data is only collected on US persons. The department seeks to collect data on its entire composition. We recommend annual logging of this data in the spring on the departments DEI Dropbox. We note here that our department is small, and demographic composition information may be identifiable down to the individual. As such, we choose not to make the information public.

# Brief updates on all Initiatives from AY 20-21, 21-22, and 22-23

1. **Establish a DEI Committee**
   Established. See Appendix.

2. **Create a student and postdoc DEI Fellowship**
   See above.

3. **Build a Stronger Pipeline through MSRP**
   MSRP student numbers in the summer of 2023 were four in CEE. Substantial effort has been made to encourage faculty to express interest on the MSRP website and this has been successful. MSRP continues to strive to allocate positions across the institute.

4. **Establish a School of Engineering-wide "Future Leaders" Program**
   There is little to no interest in this currently, as departments wish to host individual series with improved disciplinary focus.

5. **Establish a Future Leaders Symposium**
   See above.

6. **Create an Admissions Mentorship Program**
   The creation of an Admissions Mentorship Program is complicated by the large number of prospective graduate applicants and the legality of prioritizing based on

URM status. Thus, we recommend strategies to reach a broad audience, especially those that are compatible with how young people seek information today (e.g., YouTube videos on "ProTips" for grad applicants, or a recorded in-person Q&A event for local undergraduates).

7. **Other Admissions Changes**
   See [DEI 2022 Report](#).

8. **Form A Student Advisory Panel**
   See above.

9. **Continue to Explore Options to Hire a DEI Officer (DO**)
   The Institute and School of Engineering have hired a series of DEI officer-types. None are for an individual department, but they are serving important roles.

10. **Support a Peer Mentorship Program**
    See above.

11. **Establish a Travel Fund to Reach URM Audiences**
    See above.

12. **Communications Efforts to Improve Recruitment and Retention**
    See above "Voices if CEE." In June of 2023, communications launched a Pride month spotlight to give a voice to our LGBTQIA+ community. We also published commencement vignettes of the graduating class on Instagram, grateful posts for the Thanksgiving break, and a "rapid fire Q&A" of staff members in CEE. We hope to profile and add more spotlights on students (especially undergraduates), faculty, and lab/research groups to our efforts of highlighting the uniqueness of the department. We are also adding into our monthly CEE newsletter an easy way for members of the community to send us updates and "share their story" by providing an email link at the end of each newsletter.

13. **Establish Avenues for Accountability and Recognition**
    See [DEI 2022 Report](#).

14. **Improve Engagement with High Schools**
    See above.

15. **Transparency, Accountability, and Feedback Mechanisms**

See [DEI 2022 Report](#). Of note, the Annual Listening Session was poorly attended and seems a poor use of time in our current community. (It was very useful in 2020). In its place, we have an online portal for reporting, ideas, and queries, as well as the Student Advisory Panel. The Student Advisory Panel is encouraged to annually survey and/or invite the student community to convey sentiments regarding DEI topics. This is a particularly important to gauge feelings of inclusion in the department.

16. **Include Bias Topics in the Current Professional Development Course**
This was done in 2021 and 2022. The course instructor and DEI guest lecturer both perceived that the session was not having the desired effect. The topic was "Navigating Bias in Publishing," and there were two main problems: (i) most of the group had not yet published and did not understand the stages of the publication process where bias manifests and how to exert influence over that process, and (ii) some of the audience perceived that this content was "not for them" (i.e., that it was only for URMs). The content can/should be improved to be more inclusive and make it clear how non-URM persons are a critical part of the solution space.

17. **Encourage and Support Research and Teaching Avenues Related to Environmental Justice and Sustainability, and Collaborations with Native American Communities.**
There has not been a lot of progress on this initiative because it requires a grass roots, de novo effort from an interested faculty person. We might consider raising funds for a fellowship focused on indigenous science and partner with EAPS and beyond (e.g., Amazonian efforts working with indigenous people).

18. **Establish Education and Professional Development Opportunities for Staff**
See above.

19. **UCEM Participation**
The UCEM program was restructure in AY 22-23. CEE is still contributing. The return on investment is not clear during this transition period and should be re-evaluated.

# Appendix 1

## DEI Committee Charge
**MIT CEE DEI Committee**
Established: July 1, 2021

**Charge**

The charge of the MIT CEE DEI Committee is to improve the culture and representation of underrepresented persons within the department, including racial and ethnic minorities, women, LBGTQA+ persons, and disabled individuals. It is recommended that the United States national statistics on the proportional representation of these groups is sought as a target goal for representation. Inclusivity measures should persist irrespective of these metrics.

## DEI Committee Composition and Structure

The MIT CEE DEI Committee should include at least 2 faculty, 2 staff, 1 postdoctoral representative, 1 graduate representative, and 1 undergraduate representative. One faculty member will serve as director of the group. The group will report to the CEE Department Head.

**Recommended responsibilities**

- Conduct annual evaluation and presentation of demographics to the Department Head and CEE Faculty (early to mid-Fall). Reflect on progress and challenges from the past 1, 5, and 10 years. Use the School of Engineering and U.S. Statistics as benchmarks.
- Coordinate and host annual town hall to communicate commitment and listen to concerns of the CEE community.
- Coordinate an annual DEI training opportunity that is hosted by professionals. This should precede the accepted student's weekend (circa February).
- Hold semesterly meetings with the Department Head on DEI initiatives and progress.
- Make recommendations for community engagement, particularly with the Department Communications Director and with trainees (undergrad, graduate, and postdoctoral) seeking to reach out to local area high schools.
- Serve as the admissions and organizing committee for a URM Rising Stars in Civil and Environmental Engineering program and/or appoint another set of individuals to manage this important initiative.
- Encourage and track participation with the MSRP or other undergraduate engagement programs.

Reflect on current departmental policies for faculty hiring, research staff and postdoc hiring, graduate admissions, and tenure evaluations, and create recommendations for DEI-related improvements and best practices.

## Authors of this report

**2022-2023**

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| John Ochsendorf | Faculty |
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## Historical record of participants

**2021-2022**

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| John Ochsendorf | Faculty |
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