

**APS Committee on Education Annual Report
2023**

Committee
Education

Committee Charge

The membership of the Committee on Education consists of the Chair, Past-Chair and Chair-Elect from the Forum on Education and nine (9) persons selected by the Committee on Committees and appointed by the President-Elect to staggered three-year terms. The President-Elect appoints the Chair from among the members. The Committee is responsible for activities in the area of physics education designated to it by the Council. It reports periodically to the President and the Council on physics education. It may suggest and supervise studies and programs to improve the cooperation between the educational community and other parts of the physics community.

2023 Committee Members

COE Chair: **Lawrence Woolf**
General Atomics Aeronautical Systems,
Inc.

Member: **Eddie Red**
Morehouse College

Member: **Neal Abraham**
Mount Holyoke College

Member: **Charles Henderson**
Western Michigan University

Member: **Daniel (Dan) Harris**
Brown University

COE Vice Chair: **Gay Stewart**
West Virginia University

Member: **Maajida Murdock**
Morgan State University

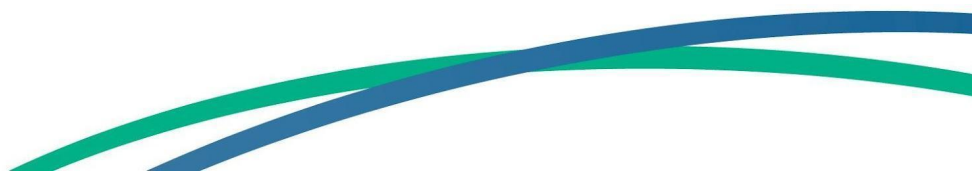
FEd Chair-Elect: **Daniel Claes**
University of Nebraska - Lincoln

Member: **Anderson Sunda-Meya**
Xavier University of Louisiana

FEd Chair: **Susan Blessing**
Florida State University

Member: **Kasey Wagoner**
North Carolina State University

FEd Past Chair; COE Past Chair:
Eric Brewe
Drexel University



SUMMARY OF MEETINGS AND ACTIVITIES IN 2023

The committee met twice online (January 19, 2023 - Winter Meeting and October 20, 2023 - Fall Meeting) and once in person (April 14, 2023 - Spring Meeting - before the APS April meeting in Minneapolis, MN): Subcommittees met and conducted their work virtually between meetings.

Effective Practices for Physics Programs (EP3): On January 1, 2023, COE became responsible for oversight of the EP3 Editorial Board (for the EP3 Guide at <https://ep3guide.org>). An election was held to replace the first two board members whose terms expired at the end of 2023. The COE liaisons to EP3 reviewed the original 5 recommendations (of 13 applications) for candidates for the EP3 Editorial Board and suggested 2 additional candidates that were then included as final candidates. A voting methodology was conceived and approved by the COE that consisted of all COE members voting for 3 of the candidates, with the first place selection worth 3 points, the second place 2 points, and third place worth 1 point. Those 7 candidates were voted on by the entire COE and those that received the top 2 point totals were elected to be new 4-year members of the EP3 Editorial Board. Melissa Eblen-Zayas and Padmaja Guggilla are the new members of the EP3 Board with terms of 2024-2027. An EP3 editorial board folder was added to the COE dashboard, with documentation related to EP3 responsibilities of COE. During 2023, clarification was made regarding these responsibilities, as follows: The COE Chair or COE Liaison to the EP3 Board can approve minor changes to EP3 Editorial Board Bylaws. Major changes to sections need to be brought to the COE following EP3 Board approval. Other governing documents (e.g., Processes and Procedures) are owned by the EP3 Editorial Board.

Education Policy Committee (EPC): EPC continues to serve as the major conduit of information from Governmental Affairs (GA) to COE and back. The committee focus for 2023 concerned Noyce scholarships, workforce development as a government priority, the DoE requirement that all responses to funding must address their Promoting Inclusive and Equitable Research (PIER) Plan, the NSF mentoring document for graduate students, quantum education for K-12, and funds from the CHIPS act.

2023 EPC membership is as follows:

COE members: Maajida Murdock (Chair's designee from COE) - Morgan State University, Kasey Wagoner - North Carolina State University, Charles Henderson - University of Western Michigan

GPER member: Leslie Atkins - Boise State University

FEed member: Scott Franklin (EPC Chair)- Rochester Institute of Technology,

Other members: Wendy Adams - Colorado School of Mines, Michael Marder - University of Texas, Noah Finkelstein - University of Colorado

APS Staff: Nico Hernández Charpak (official APS liaison), Michael Wittmann (in his role as APS COE liaison)

For 2024, the EPC chair will have to be a COE member.



Priorities Subcommittee

Every year, a subcommittee reviews one of the 4 priorities of COE. This year focused on Priority #3, which was revised to:

To promote the intentional mentoring of physicists as part of their education and professional development, with the goal of supporting, developing, and retaining physicists, broadly defined.

We accomplish this by:

- advocating for structures to provide high quality mentoring at all stages of physics education and careers;
- promoting mentoring communities that provide affirmation and educational/professional support for individuals from backgrounds traditionally underrepresented in physics; and
- supporting mentors with strategies for effective mentoring and templates for important conversations with their mentees.
 - Active committee work includes: EP3, EDI Training Fellowship, 2024 Graduate Education Conference
 - Active and potential partnerships for this work: COM, CSWP, CCPD, FECS
 - Related initiatives and projects: APS Chapters, APS Bridge, Inclusive Graduate Education Network (IGEN), National Mentoring Community (NMC), Industry Mentoring for Physicists (IMPact), Career Mentoring Fellows

Next year COE will focus on Priority #4 with Kasey Wagoner leading the review by the Priorities Subcommittee.

Other Activities

- As of November 2023, Gay Stewart will become chair for 2024 and Larry Woolf will become Past Chair. However, if the APS Committees Task Force draft recommendation of a Vice Chair/Chair/Past Chair line that begins in the second year of committee membership is adopted for COE, then Larry Woolf will remain chair for 2024 (and also take on the Past Chair role) and Gay Stewart will be Vice Chair for 2024. Woolf's and Stewart's terms would then increase to 4 years on COE.
- Revised and more consistent language was used in the Improving Undergraduate Education Award solicitation and decision-making process.
- Due to a variety of issues, the Graduate Education Conference needed to be pushed from 2023 to 2024.
- COE members provided comments to POPA on the draft document on teaching evaluation that was originally developed by the COE-led Teaching Evaluation Task Force. The statement is still being considered and must go through the

Physics Policy Committee (PPC), APS Council, APS Board, and APS Membership comment/approval process.

- A number of topics related to the Quantum workforce were discussed, including how COE can support the 2025 International Year of Quantum Science and Technology; the Committee on Informing the Public is also involved as is the International Year of Quantum Executive Committee. COE also endorsed the creation of a Quantum Research, Education, and Workforce (QREW) Center. COE discussed how to keep quantum education in physics departments and to have the public think physics when quantum is mentioned.
- Supported activities related to awards and grants:
 - Selected recipients of Award for Improving Undergraduate Physics Education,
 - Reviewed & selected recipient of APS Prize for a Faculty Member for Research in an Undergraduate Institution, and
 - Participated in selection of awardees for Braslau Travel awards.
- Discussed how the definition of the physics major affects messaging and presentation of physics graduation rates and enrollment statistics. A subcommittee was formed to help define the physics major in particular with regard to Classification of Instructional Programs (CIP) codes..
- Discussed enrollment issues and the enrollment cliff in regards to population changes and how to support physics departments that are facing declining enrollments and are under threat.
- Various new topics were brought for consideration by COE, including:
 - Impact of AI/ Large Language Models;
 - Curriculum reform/extensions of Phys21, how to create a better physics major – a subcommittee is being formed to discuss this;
 - Real world applications in HS and introductory courses; and
 - Can we make graduate education more relevant for industrial or other careers?

