Recommendation for Promoting Equitable Mentoring in the Department of Earth and Planetary Sciences

From the Anti-Racism Action Committee to Chair Michael Oskin Department Earth and Planetary Sciences, University of California, Davis January 20, 2021

Improved Mentoring and Accountability: Developing an anti-racist mentoring culture in EPS is a critical step towards improving the recruitment, retention, well-being and success of BIPOC in our department. ARAC recommends the department improve mentoring of Black, Indigenous, and other People of Color (BIPOC) in EPS by: (1) adopting anti-racist mentoring guidelines and approaches, (2) implementing professional development opportunities for mentors focused on inclusive and equitable mentorship, and (3) providing transparency in and accountability of mentors in mentoring outcomes.

Definitions:

Anti-racist mentoring considers the influence of race on the opportunities available to mentees, challenges both individual and structural biases that perpetuate racism, and centralizes issues and concerns of racially minoritized groups (Blakeney, 2005). Anti-racist actions that center on Black individuals will result in improvements for all *underrepresented minoritized individuals*. In the context of this document, "*mentees*" include undergraduate students, graduate students, postdoctoral scholars, and lab technicians/junior specialists.

Purpose:

Mentoring is an important way to make meaningful changes in the lives of young scientists. Ideally, the relationship between a mentor and a mentee should be mutually beneficial--and based on a foundation of mutual trust and respect. In the case of BIPOC mentees, successful mentorship includes additional advocacy and support in order to counteract the harmful effects of institutional and interpersonal racism experienced by students of color pursuing STEM degrees and/or careers in academia. Here, the ARAC aims to improve mentoring of underrepresented minoritized students in EPS by proposing three recommendations (listed below). The "Background and Implementation"

section contains context and suggestions for carrying out each recommendation. The outcomes will make mentoring more equitable for all mentees and improve collaborations, professional relationships, and trust among EPS members as a whole.

(1) Anti-racist mentoring approaches

a) Adopt EPS-specific mentoring guidelines, based around existing best-practice guide(s)

b) Facilitate BIPOC network-building within EPS and on campus to provide meaningful representation and camaraderie for EPS mentees

c) Prioritize the recruitment of BIPOC faculty and staff to increase the diversity of mentors within EPS

(2) Professional development opportunities focused on equitable mentorship

a) Create discussion spaces for faculty mentors by holding regular (quarterly) meetings where faculty read resources on equitable mentoring, discuss those readings, and share ideas.

b) Host skill-building opportunities and workshops for mentors on biases,
microaggressions, and racially biased outcomes for typical mentoring behaviors.
Include at least one interactive opportunity per year.

(3) Transparency and accountability of mentors

a) Provide prospective mentees with basic information on prospective mentors' prior mentoring experience.

b) Collect data on mentoring outcomes from mentees within EPS that can be used to improve mentoring and provide prospective mentees more robust information on mentoring in the future.

Timeline for Progress:

The ARAC recommends that these changes be implemented by Fall 2021. A detailed timeline is provided in the implementation sections below.

Audience:

These changes are the responsibility of the faculty who serve as mentors and the Earth and Planetary Sciences (formerly Geology) Graduate Program. All mentees, particularly

BIPOC mentees, will benefit from the proposed changes. Time is the largest resource required for implementing and maintaining the proposed changes.

Background and Implementation:

(1) Anti-racist mentoring approaches

Discrimination against and marginalization of BIPOC are rampant in academia and in STEM in particular (Chaudhary and Berhe, 2020). BIPOC students and postdocs experience harmful policies, comments, and actions in academic circles that are often "unintentional", with many arising from "weak policies that unintentionally harm BIPOC [Gorski and Erakat, 2019] or contribute to an erosion of trust among people of different racial or ethnic backgrounds" (Chaudhary and Berhe, 2020). One important step toward reducing this harm is to develop anti-racist guidelines for mentoring, which can help circumvent many inequities that emerge from "unintentional" racism. Many microaggressions, problematic actions, and inequitable situations can be prevented or more quickly identified and addressed if anti-racist mentoring guidelines are in place.

An anti-racist approach to mentoring must also include a commitment to increasing representation and/or access to BIPOC mentors (Patton, 2016). In a 2012 study of 304 Black men with college degrees in the US, the vast majority of study participants shared that they were "the only Black male student in all [of their] classes and [they had] never taken a college course from a Black professor" (Harper and Davis, 2012). At the grade school level, there is a strong link between the presence of Black teachers and the presence of educational opportunities for Black students (see review in Stewart et al., 1989). Price et al. (2010) found that Black students are more likely to persist in a STEM major if they take a STEM course taught by a Black instructor, and Fairlie et al. (2014) find that underrepresented students are more likely to enroll in a course *and* have higher grades when the instructor is also from an underrepresented minority group. The success of BIPOC students is connected to their representation at the staff and faculty levels for numerous reasons, including:

1. BIPOC staff and faculty members serve as role models for students, providing mentorship and guidance (see review in Stewart et al., 1989).

2. BIPOC staff and faculty provide more supportive feedback to BIPOC students than White staff and faculty (see review in Stewart et al., 1989).

3. Having <u>visibly</u> diverse (i.e. Black-presenting, brown-presenting, non-White) faculty reduces implicit biases regarding the ability, inferiority, or incompetence of Black and brown people within that community (Vuletich and Payne, 2019).

4. BIPOC students often feel discomfort in their relationships with White faculty (Patton, 2016; Negroni-Rodríguez et al., 2006).

The discomfort BIPOC mentees feel with White mentors is revealed in numerous ethnographic studies, which show that they often experience an inability to have meaningful, personal, or genuine relationships with their White mentors. For example, interviews of Black women in graduate school reveal that White mentors are often seen as "gatekeepers", "not trustworthy", and "unwilling to understand [their mentee's] perspectives as African American women" (Patton, 2016). Similarly, Latinx mentees report lower trust of non-Latinx mentors than they do of Latinx mentors (Negroni-Rodríguez et al., 2006). Having White mentors that value diversity is helpful and necessary, and well-intentioned and knowledgeable White mentors can provide support and guidance to Black and Lantinx mentees. However, having mentors that truly represent and identify with BIPOC mentees greatly enhances their persistence and success (Price et al., 2010; Fairlie et al., 2014).

Implementation Details:

Developing and adopting **EPS-specific anti-racist mentoring guidelines** will provide a framework for anti-racist and equitable mentoring in our department as well as serve as a baseline for the way in which mentees are treated. Guidelines should be sufficiently flexible to allow different styles of mentoring that fit the diversity of mentor and mentee personalities and needs. However, they also must set standards for acceptable mentoring conduct to protect mentees from inappropriate behavior. These standards should include a specific focus on reducing racial biases, preventing microaggressions, and promoting inclusivity. Adopting and making public anti-racist mentoring diversity and inclusivity within our community.

Similarly, EPS must be committed to **increasing access to BIPOC, particularly Black mentors**, both by hiring BIPOC faculty members in the department and through creating networks of BIPOC mentors across campus and in professional organizations. The following are specific recommendations for implementation:

a) Adopt EPS-specific mentoring guidelines, based around existing best-practice guide(s) such as <u>Mentoring BIPOC in a University Setting</u> or <u>Ten</u>

Simple Rules for Building an Anti-Racist Lab. Place these resources prominently on the EPS website for department members and community members to reference. Review and evaluate the EPS-specific mentoring guidelines once a year. The review and evaluation should be done by a committee that includes representation from the EPS (Geology) Graduate Program advisors, at least one additional faculty member, undergraduate student, graduate student, postdoc, and junior specialist or lab technician.

b) Facilitate BIPOC network-building within EPS and on campus to provide meaningful representation and camaraderie for EPS BIPOC mentees. Access to a diverse network - within or outside of a department - is an important source of support for BIPOC students (AIP, 2020). Staff, faculty, and students of all levels should collaborate to generate a network of mentors outside of EPS that represents broader racial diversity. In addition, BIPOC-focused resources provided by professional organizations should be included. The network should consist of a list of potential mentors, their positions and expertise, and their contact information. On campus, these mentors should include BIPOC staff scientists, professors, post-docs, technicians, administrators, etc. in other departments and offices across campus. Mentors from other universities and organizations should also be included where appropriate. All potential mentors should be asked permission before being added to the network of mentors. This network should be advertised to BIPOC members of EPS, and should be consulted when mentees would benefit from a BIPOC mentor or confidant.

c) Prioritize the recruitment of BIPOC faculty and staff to increase the diversity of mentors within EPS using the best practices for promoting equity in hiring as outlined in the Strength Through Equity and Diversity (STEAD) program. Also pursue hiring BIPOC faculty through special hiring programs like Targets of Excellence and the Presidential Postdoctoral Fellowship Program. Increasing the number of BIPOC faculty, particularly Black faculty, is essential for promoting the wellbeing of BIPOC mentees because research demonstrates the powerful connection between representation and success of underrepresented students (e.g. Patton, 2016).

(2) Professional development opportunities focused on equitable mentoring

Quality mentoring requires effort, practice, and study (see <u>UCD Graduate Studies</u> <u>Mentor Resources</u>). As described above, BIPOC mentees benefit from specific mentoring practices that are not necessarily learned by mentors whose experience is in predominantly White communities, and results from mentoring programs for BIPOC graduate students and postdocs demonstrate the value of applying best practices (e.g., Louie and Wilson-Ahlstrom, 2018). Specifically, quality mentoring is promoted by commitments and sustained efforts from each mentor, a supportive culture in the department, and institutional resources (Louie and Wilson-Ahlstrom, 2018).

Implementation Details:

To help develop individual mentor skills and foster a departmental culture conducive to high-quality mentoring for BIPOC mentees, EPS should provide mentor development opportunities on an ongoing basis to center anti-racist mentoring as a genuine value of this department. These opportunities should include workshops and discussion spaces focused on mentoring targeted to specific groups, e.g. spaces for faculty, spaces for staff, and spaces for graduate students and postdocs, whose perspectives and mentor-mentee relationships vary. In addition, they should include department-wide discussions, workshops, and trainings that promote the exchange of ideas across mentor-mentee hierarchies.

a) Create discussion spaces for faculty mentors by holding regular (quarterly) meetings where faculty read resources on equitable mentoring, discuss those readings, and share ideas. Example discussion topics: EPS-specific equitable mentoring guidelines, mentor mapping (Montgomery, 2017), the mentor mirror activity (Garrison Tull, 2015), UC Davis' Mentoring Toolkit, the metrics for improving mentoring relationships from Pfund et al. (2016), and DEI-themed readings from the social science literature. The Department Chair and/or Graduate Chair should be responsible for setting up mentoring discussion spaces as part of a required faculty meeting.

b) Host regular (quarterly) skill-building opportunities and workshops for other groups or all department members on biases, microaggressions, and racially biased outcomes for typical mentoring behaviors and department cultures. Include at least one interactive opportunity per year. Skill-building opportunities can be formal workshops offered by UC Davis offices, informal sessions featuring guest speakers with expertise in equitable mentoring, or recorded sessions followed by discussions. See potential guest speakers in the "Where to Start" section below.

(3) Transparency and accountability of mentors

Mentors strongly influence mentees' experiences, particularly BIPOC mentees (Brunsma et al., 2017). Prospective mentees need to be able to make wise choices when entering into a mentoring relationship with a specific advisor. Thus, it is essential for prospective mentees to have access to accurate information and guidance on how to interpret it. Accurate information on the mentoring history of a potential advisor is particularly important for BIPOC mentees because of the additional challenges they face. Behavior that is harmful for BIPOC mentees includes behavior that is harmful for White mentees (e.g., bullying, neglect, etc.) in addition to racist, biased, prejudiced, or microaggressive behaviors (Louie and Wilson-Ahlstrom, 2018). BIPOC mentees must contend with all of the general difficulties of graduate school, postdoctoral or undergraduate work (e.g., long hours, complicated experiments, teaching responsibilities, family life, etc.) in addition to instances of racism. Racism and other issues that are common in academia include: experiencing microaggressions from professors, being mistaken for the janitor while in your office, not knowing any other BIPOC in your field personally, dedicating long hours to DEI work beyond your own academic obligations, and being accused of stealing as you are trying to enter your own home or workplace (see Black in the lvory for examples; see Louie and Wilson-Ahlstrom, 2018 for the accumulated effects).

One way to minimize or prevent additional strain on BIPOC mentees is to provide them with the information required to choose a safe, supportive environment and mentor. Obtaining relevant information to make such a choice is difficult for prospective mentees. Documentation of good or poor mentorship is almost universally lacking, with word-of-mouth being the dominant source of information. "Whisper networks" about bad mentors only reach those within the network, leaving the least connected and most vulnerable prospective mentees with the least information to make an informed choice. Unfortunately, there appear to be very few studies on how admitted students choose graduate programs, let alone specific advisors, and we found no models for how to provide prospective students with relevant advising information.

In addition, there are currently few processes for collecting information useful for prospective mentees. Mentees pass through many "checkpoints" where they and their progress are evaluated by their advisors; these are structured into the academic process. In contrast, there are no structured opportunities for mentees to provide feedback to or evaluate their mentors. Establishing a process of feedback from mentees to mentors is critical to both having appropriate information to provide to prospective mentees and for improving the quality of mentorship for those who choose to join the

EPS community. An appropriate feedback process can become a critical component of building mutually trustworthy, productive, and effective mentoring relationships within EPS.

Implementation Details:

To provide mentees with the information they need to make wise choices, the ARAC recommends a two-part solution: a) Provide prospective mentees with basic information on prospective mentors' prior mentoring experience; and b) Collect data on mentoring outcomes from mentees within EPS that can be used to improve mentoring and provide prospective mentees more robust information on mentoring in the future. In addition, EPS should foster a culture where all of those in positions of power (e.g. the Chair, Vice-Chairs, Faculty Advisors, relevant staff, etc.) are committed to listening respectfully, being transparent, and responding to feedback with appropriate actionable changes.

a) The ARAC recommends that EPS collect and provide statistics on mentoring to prospective and incoming mentees. Useful statistics include the number of students admitted vs. number of students graduated, time to degree, number of postdocs mentored, first or current job for graduated students and postdocs, mentoring training, etc. In addition, mentors can ask former mentees to be a reference for them to prospective mentees. This information can be provided as a spreadsheet posted on the EPS website. It should also be provided to prospective students and postdocs as well as in offers to employees such as junior specialists and laboratory personnel. The mentoring information should be updated yearly.

An example spreadsheet is shown below for graduate students. The final spreadsheet should include postdoctoral scholars, undergraduates, and junior specialists as well as other mentor relationships. Context for the final table will be provided to help prospective mentees interpret the information.

Faculty Advisor Name	Years as EPS Faculty Member	Total # of Graduate Students Advised (MS, PhD)	Total # of Graduate Students Graduated (MS, PhD)	Outcomes for previous mentees	Affiliations/ Activities related to Mentoring	Former Mentee References Note: these contacts have agreed to provide candid information, so please feel free to reach out to them
Dr. First Example	10	5, 3	3, 2	-Full-time position at USGS -Chemist at LLNL	AWG, African American Faculty & Staff Association	gradstudent@ucdavis.edu (graduate student) undergradstudent2@ucdavis.edu (undergraduate student)

Dr. Second Example	1	0, 1	0		N/A (new faculty) UC Davis UndocuAlly	student@ucla.edu (graduate student)
Dr. Third Example	25	0, 7	3	-Peace Corps volunteer	GSA UC Davis Understanding Diversity Certificate Series	student@gsa.edu (graduate student)

b) The ARAC recommends the EPS department provide structured opportunities for mentees to provide feedback about the mentoring they are receiving from both their main advisor and by EPS as a whole on an annual basis. These opportunities should include:

1) Yearly one-on-one meetings for:

- A graduate advisor and each graduate student
- The Chair and each postdoctoral scholar, junior specialist, and lab technician

These meetings should specifically obtain feedback on mentoring, guided by a rubric that helps evaluate the mentee's feelings of support, respect, trust, attention, equitability and inclusion, among other mentoring-relevant topics. The graduate advisors and Chair will retain confidential records of these meetings. The graduate advisor or Chair will discuss with the mentee what feedback to provide to the mentor and will provide that feedback as appropriate.

2) An annual call should be issued for undergraduates to discuss their mentee experiences with the Vice-Chair for Undergraduate Education. The Vice-Chair should meet with each undergraduate who wishes to, obtain feedback using a rubric as described above, and retain confidential records of these meetings.

3) A list of other faculty, neutral parties and ombuds people who will consult with mentees on issues that they do not wish to discuss with the graduate advisors or Chair. These other parties will be provided guidelines on how to bring issues to the attention of the graduate advisors or Chair as appropriate.

4) An anonymous feedback process. This process can be used to highlight problems, but by its anonymous nature, will not likely provide reasonable resolutions to them.

5) Exit interviews or surveys should be given to all mentees leaving EPS. These data will be added to the confidential records of the annual one-on-one meetings.

Implementation Timeline:

The following is the recommended timeline with the recognition that it is ambitious.

Winter Quarter 2021:

- Initiate discussions of anti-racism mentoring approaches and draft EPS-specific mentoring guidelines (1a, 1b).
- Integrate ideas on recruiting BIPOC faculty into position requests. (1c)
- Initiate professional development opportunities by holding the first discussion space meeting (2a), and host at least one skill-building opportunity or workshop for mentors (2b).

• Draft specific plans for processes that increase transparency in mentoring and accountability for mentoring outcomes (3a, 3b).

Spring Quarter 2021:

- Obtain feedback from mentees in the department on draft EPS-specific mentoring guidelines, plans to increase transparency in mentoring, and the mentoring quality feedback process. Integrate feedback into draft proposals.
- Develop the BIPOC mentor-mentee network
- Hold a discussion space meeting and a skill-building opportunity.

Fall Quarter 2021:

- Adopt and implement revised EPS-specific mentoring guidelines, transparency process, and accountability process.
- Deploy the BIPOC mentor-mentee network
- Hold a discussion space meeting and a skill-building opportunity.

Ongoing:

- Hold a discussion space meeting and a skill-building opportunity each quarter
- Review and evaluate the EPS-specific mentoring guidelines, transparency process, and accountability process once each year.

Examples:

Examples of BIPOC-focused mentoring programs are abundant. Some universities and departments at other institutions have elected to implement a formal, institution-wide mentoring program to ensure that graduate and/or undergraduate students of color receive meaningful, high-quality mentoring to promote their success in higher education (Brown et al., 1999). For instance, Ohio State University has a three-tiered system for Latino students called the LASER Mentoring Program. In this system, each undergraduate student has a graduate mentor of a similar ethnic background, who has a faculty mentor of the same ethnic background. This program aims to increase the pool of applicants of color and expand the "pipeline", while enriching and honoring the experiences of Latino students and faculty already in the academic "pipeline" (Aldama, 2014; Brown et al., 1999). Some departments have their own non-institutional mentoring programs that aim to "increase the number of graduate students of color in graduate and professional programs" (Brown et al., 1999).

Many universities and departments have implemented mentoring guidelines, and UCD's Graduate Studies is working on doing so as well (see mentoring guides, including one from UCD's Graduate Council at https://grad.ucdavis.edu/resources/mentoring/mentor-resources).

We are unaware of models for increasing the transparency and accountability of mentors, particularly for graduate students.

Evaluation:

Evaluation of the effectiveness of mentoring changes will be part of a Department-wide evaluation of climate that is being developed to track the effectiveness of all anti-racism actions taken by the department. This climate evaluation is expected to be planned by summer 2021 and initiated in fall 2021.

Affordances and Limitations:

The changes proposed here will benefit mentees of all levels (undergraduate students, current graduate students, prospective graduate students, postdoctoral scholars, junior specialists, and lab technicians) of all backgrounds, but students of color, including Black and Indigenous students, have the potential to benefit the most from these changes.

Time and dedication are the largest resources required. The proposed changes depend on the Department Chair, the Graduate/Undergraduate Program Coordinator, the Graduate Advisors, and the EPS faculty. Most tasks will be organizational in nature and other tasks will require drafting new documentation. We anticipate potential challenges or delays when consensus is required (i.e. agreeing on department-wide anti-racist mentoring guidelines or agreeing on a format for a mentor transparency document). Changes or suggestions that do not affect or diminish the outcome are welcome if they result in achieving consensus and the resultant acceptance of a helpful change.

If the proposed mentoring changes are made, we anticipate that "strength in mentoring" will become a genuine asset of EPS, just as we are known for our excellence in research. EPS will benefit by producing high-quality, well-supported diverse scientists who will be much more likely to persist in science and academia.

Recommended Professional Development Opportunities:

Initial literature recommendations for faculty discussions: Brunsma et al. (2017), Gildersleeve et al. (2001), Carroll and Barnes (2015), Whittaker and Montgomery (2014), and Mondisa (2015).

Potential guest speakers from within UC Davis include Elizabeth Sturdy (Director of Advising and Mentoring), Dr. Natalia Caporale (Professor of Neurobiology and expert on equity and diversity in science education), and Dr. Devin Horton (Graduate Diversity Officer for STEM disciplines) for the 2020-2021 academic year.

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