

# Snowmass2021 Letter of Interest : Climate of the Field

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## Thematic Areas:

- CommF1: Applications & Industry
- CommF2: Career Pipeline & Development
- CommF3: Diversity & Inclusion
- CommF4: Physics Education
- CommF5: Public Education & Outreach
- CommF6: Public Policy & Government Engagement

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**Abstract:** This is a group-written contribution pertaining to how financial barriers can hinder doing particle physics and how the results from this group will be communicated to the funding agencies.

## Elements of Interest :

- How to build inclusive communities in your institute/collaboration Lack of developing DEI awareness throughout career → Need an educated pipeline
- What is an effective “committee”?
- Rectifying effects of power dynamics
- Establishing code of conduct - what we need and why/how
- What training should we provide/require in the community? For our leadership?
- Microaggressions - “I didn’t know I am biased”

## General Description :

An inclusive climate exists when every community member feels safe, welcome, and has the ability to thrive. Such an environment is essential for the success of any institution or collaboration. However, a pervasive issue within the physics community exists whereby many institutions or community groups are hostile for women, under-represented minorities, and other marginalized communities. This manifests in a variety of ways, including (but not limited to) microaggressions, implicit biases, harassment, and discrimination. This must be addressed and must change.

Improving the climate requires a multi-faceted approach that addresses both formal aspects surrounding climate as well as the broader cultural sentiments of the community. Creating, distributing, and enforcing codes of conduct is something that has not been pursued wholeheartedly within the particle physics community, but has in other topical communities such as astrophysics<sup>1</sup>. They have been enacted to varying degrees by individual institutions but are seen by many individuals as being documents of token-respect implemented in an umbrella way to shield the institution. Moreover, because our research is largely done in a cross-institutional manner, the enforcement of codes of conduct has been unclear, particularly given the ambiguous legal relationship of many collaborations to their collaborators . Regardless, establishing norms and expectations for collegial behaviors as well as ways to seek accountability through codified documents is essential to protect the members of the community and provide a foundation for cultural change within it.

Educating and training the community to bring awareness about the EDI issues is also essential for changing the culture. Again, this is something that is addressed to varying degrees by individual institutions but is not broadly accessible throughout the community. Oftentimes, requests or suggestions of training are met with the notion that “that will cost a lot” which brings a practical consideration that must be addressed constructively. Additionally, institutional training (specifically training on bias) done without care or the advice of experts has been shown to have little impact on either implicit or explicit bias<sup>2,3</sup>; therefore such policies should be advised by DEI researchers who have expertise in interventions. Furthermore, training alone should not be represented as institutional change<sup>4</sup> or commitment to DEI. More formally, it is increasingly common that an institution will have in place a standing “EDI Committee” which largely signals to the members of that community as well as the outside world that there is a commitment to diversity and justice. Unfortunately, the precise role that such committees play is often ill-defined and accompanied by little to no practical power. For such committees to be effective in affecting meaningful changes requires more careful organization and planning, structures of accountability, institutional power, and vociferous support

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<sup>1</sup>American Astronomical Society Code of Ethics: <https://aas.org/policies/ethics>

<sup>2</sup>Forscher, P. S., Lai, C. K., Axt, J. R., Ebersole, C. R., Herman, M., Devine, P. G., Nosek, B. A. (2019). A meta-analysis of procedures to change implicit measures. *Journal of Personality and Social Psychology*, 117(3), 522–559. <https://doi.org/10.1037/pspa0000160>

<sup>3</sup>Hagiwara N, Kron FW, Scerbo MW, Watson GS. A call for grounding implicit bias training in clinical and translational frameworks. *Lancet*. 2020;395(10234):1457-1460. [https://dx.doi.org/10.1016%2FS0140-6736\(20\)30846-1](https://dx.doi.org/10.1016%2FS0140-6736(20)30846-1)

<sup>4</sup>Pritlove, Cheryl, et al. “The good, the bad, and the ugly of implicit bias.” *The Lancet* 393.10171 (2019): 502-504. [https://doi.org/10.1016/S0140-6736\(18\)32267-0](https://doi.org/10.1016/S0140-6736(18)32267-0)

from community/collaboration leadership.

Finally, the culture of our community cannot be assessed without acknowledging the existing hierarchical structure and power dynamics in academia that all too often allow the detrimental behaviors to permeate without recourse. In many systems, graduate students and postdocs report only to their advisor who solely controls their funding and <sup>5</sup> have instituted mentorship or co-advisors for graduate students and/or postdocs that offer additional support throughout the full length of the program. The effectiveness of these programs can be assessed through questions gauging how included students/postdocs feel, what their support structures look like, if their needs are being met, and if they feel like they could report a concern with their advisor to their department/institution without it negatively impacting their careers. Including such questions in a climate survey could result in best practices for institutions to maintain mentorship and retention of graduate students and postdocs while providing a method to circumvent destructive power dynamics.

The goal of this Letter of Intent is to assess the current climate in particle physics as experienced by members of the marginalized groups in our community. We also plan to develop best practices for building an inclusive community by addressing the aforementioned and other related issues. These best practices will be guided by experts (sociologists, psychologists, educators) and research in the field of diversity and inclusion, and will be informed by existing literature.

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<sup>5</sup>Drexel University in Philadelphia, PA is one such example for graduate students. Physics graduate students officially report to a six-member Thesis Advisory Committee, chosen by the student, once a year after their qualifying exams to report progress and receive feedback on their current research plan. This committee is usually, but not required to be, the same committee who reviews their final dissertation. This is the policy of the department, and not institution-wide.