

Snowmass2021 Letter of Interest : Building the Pipeline

Kétévi A. Assamagan¹, Carla Bonifazi³, Johan S. Bonilla², Mu-Chun Chen⁴, Cameron Geddes⁵,
Tiffany R. Lewis⁶, and Sam Meehan⁷

¹Brookhaven National Laboratory

²University of California, Davis

³Universidade Federal do Rio de Janeiro

⁴University of California, Irvine

⁵LBL

⁶USRA

⁷CERN

Thematic Areas:

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

Contact Information:

Samuel Meehan: samuel.meehan@cern.ch

Abstract: This is a group-written contribution pertaining to how to augment the career pipeline to be more equitable.

Elements of Interest :

- Recruiting and retaining individuals from marginalized groups (e.g. cluster recruitment)
- What it means to “be a physicist”. Combatting imposter syndrome.
- How DEI activities should be folded into hiring/tenure process

General Description :

Structural and cultural issues exist in the institutions and mechanisms by which people advance in their education and careers. These issues negatively impact certain groups of people (e.g. women) that means their likelihood to stay within the field, independent of their actual interest and/or ability is less as compared to other groups (e.g. men). And even when an individual stays within the field, it is entirely possible that they are made to feel like an “outsider” and suffer from imposter syndrome that negatively impacts their ability to succeed and be recognized for their contributions. These effects mean that ultimately the set of individuals who lead our field are more homogeneous than those who are initially interested in pursuing research in our field. This is both an unjust selection bias which can lead to knock-on and negative impacts throughout society due to the perceived expertise that leaders in our field are viewed as having, but can have negative internal impacts due to the limited perspectives contributing to the guiding of our science.

Furthermore, it should be understood that current practices in speaker/leadership-selection, networking, and hiring disproportionately benefit researchers whose demographics are already well-represented (e.g. middle-to-high class, cis-gendered, heterosexual, white men). These decisions, despite our perception of them being objective and unbiased, always involve a social aspect; current practice is to hire candidates we know well, or are recommended by someone whom we know. In a field dominated by a single demographic, this practice benefits that demographic and leaves little room for change.

The most common experience of URM students is that they are paired with a mentor/advisor who does not identify/empathize/understand the specific obstacles they experience being URM; when problems arise it is often the case that the mentor does not fully comprehend the issue and attributes underperformance with previous preparation, work ethic, and/or lack of “talent”. More specifically, a new student who is not well-represented in the field will have a tougher time finding an adequate mentor to help them navigate the various obstacles in their physics career. Since this student cannot identify well with their mentor, that mentor will not have a full understanding of the student’s efforts. This can lead to the mentor being less likely to advocate for them when transitioning to their next career stage. For example, there is evidence for gendered language in letters of recommendation influencing the perceived quality of the candidate. Women who have done well are often described as nice, organized, and otherwise properly lady-like secretaries. Meanwhile, men with the same record are often described as highly intelligent, impactful, and destined to revolutionize the field. Even for hiring committees that aim to avoid bias, letters are an integral part of the evaluation of candidates. There is software through which gendered language can be detected and should be recommended to letter writers as a resource. To help correct this problem, new mentors/advisors (faculty/staff) must be hired that can identify with the social experiences of the URM student demographics.

This LoI proposes to study and document the ways in which the career pipelines that exist within our field are failing to be equitable and retain/promote diversity at higher levels. Furthermore, it will explore ways in which participation of DEI-related activities can be folded into the process of professional advancement.