

Research Excellence in Modern Society

Designing Equitable Environments for a Diversifying Field

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Pronouns: They/Them

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Durham University DEI Seminar



Who Am I? Why Am I Here?

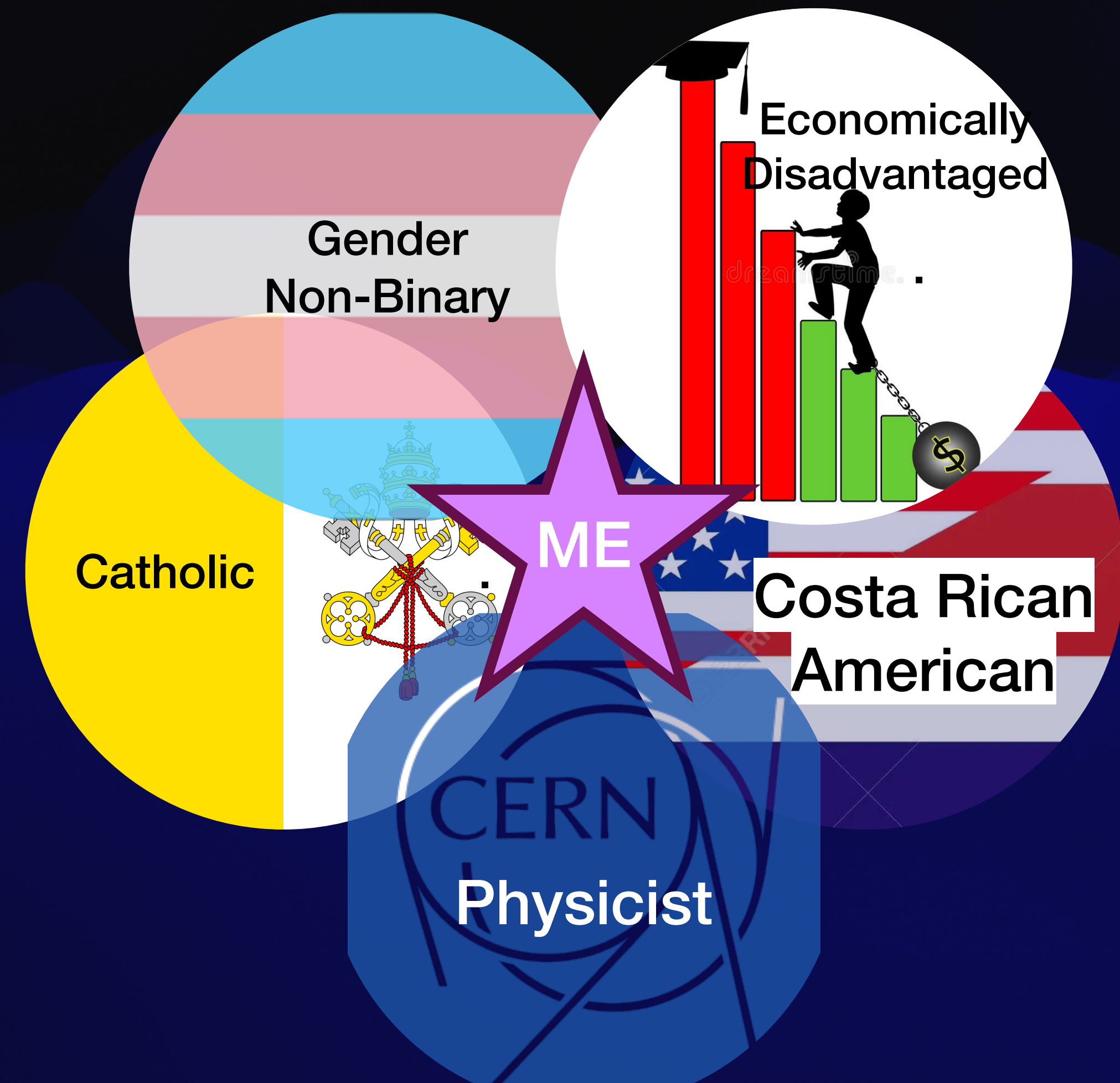
Expert by Experience

- Multiple intersecting identities, underrepresented in HEP
- Extensive DEI-work throughout academic career
- LGBTQ CERN, Chair
- Snowmass CEF3, convener

Passionate by Impatience

- Severely lacking representation in HEP
- Physics careers move faster than institutional change

Intersectionality

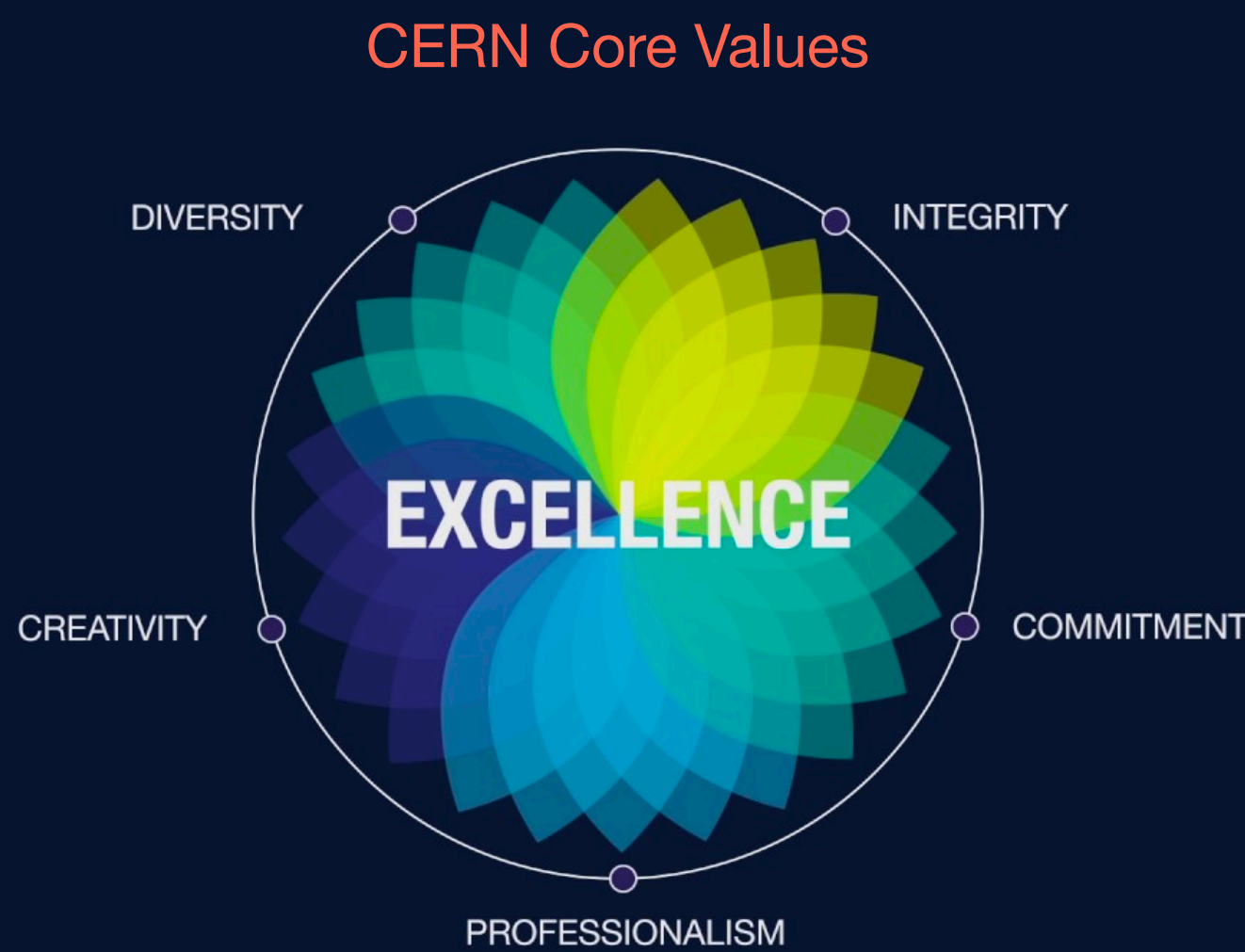


DEI ≡ Excellence

Quality science is a result of:

- Cooperation
- Creativity
- **Innovation**
- Perseverance
- Perspective

The Diversity–Innovation
Paradox in Science
[Hofstra et al](#)



Modernization of Science

...turns out Physics \in Society

- Globalization of society \Rightarrow Diversifying field \Rightarrow Widening gap of experience
 - > In class, labs/offices
 - > In libraries, coffee shop, markets
 - > University students/staff bring decades of life experiences
- High Energy Physics needs global buy-in
 - > Evidenced through international labs/collaborations
 - > Funding agencies drive 'styles' of science
- Crux: Physicists (humans)
 - > Compounding effects of globalization
 - > It is our responsibility to adapt for the benefit of all

3 Key Questions

Big Problem to Tackle
Our field is not sufficiently exposed to DEI-related work and priorities

Exposure →

What is DEI?

Big Problem to Tackle
Well known most DEI efforts are undertaken by few

Allyship →

Why do we need DEI?

Big Problem to Tackle
Short-sighted prioritization and evaluation is harmful

Perspective →

What can **DEI** do for **me**?
| **DEI**

Key Question 1

What is DEI?

**It is more than the ratio
of binary gender in
institutional statistics**

Does the collective community of physics look like the global/local population?

What is Diversity?

Binary Male/Female + Gender-Diverse
(Non-Binary, a-gender, intersex, ...)

Support for neuro-diversity, accessibility, and other diversity dimensions needs to be a priority!

— Coexistence of different perspectives, experiences, and identities



Often associated with gender and ethnoracial identities, but there are many more!

— Composition and dynamics manifest relative to community (e.g. global vs local, HEP vs other fields, institutes, etc)



Physics is often among least diverse of STEM fields

— Supporting underrepresented minorities means re-evaluating policies/structures for improvements



Hiring is neither the first or last step.

Equality is the ideal, but in the real-world there are institutional barriers that force us to take the path of equity

Let's Talk Equity

Step 0: Status Quo

- Centuries of inequality, colonialism, etc
- The system was made to support the demographics we still see today in HEP

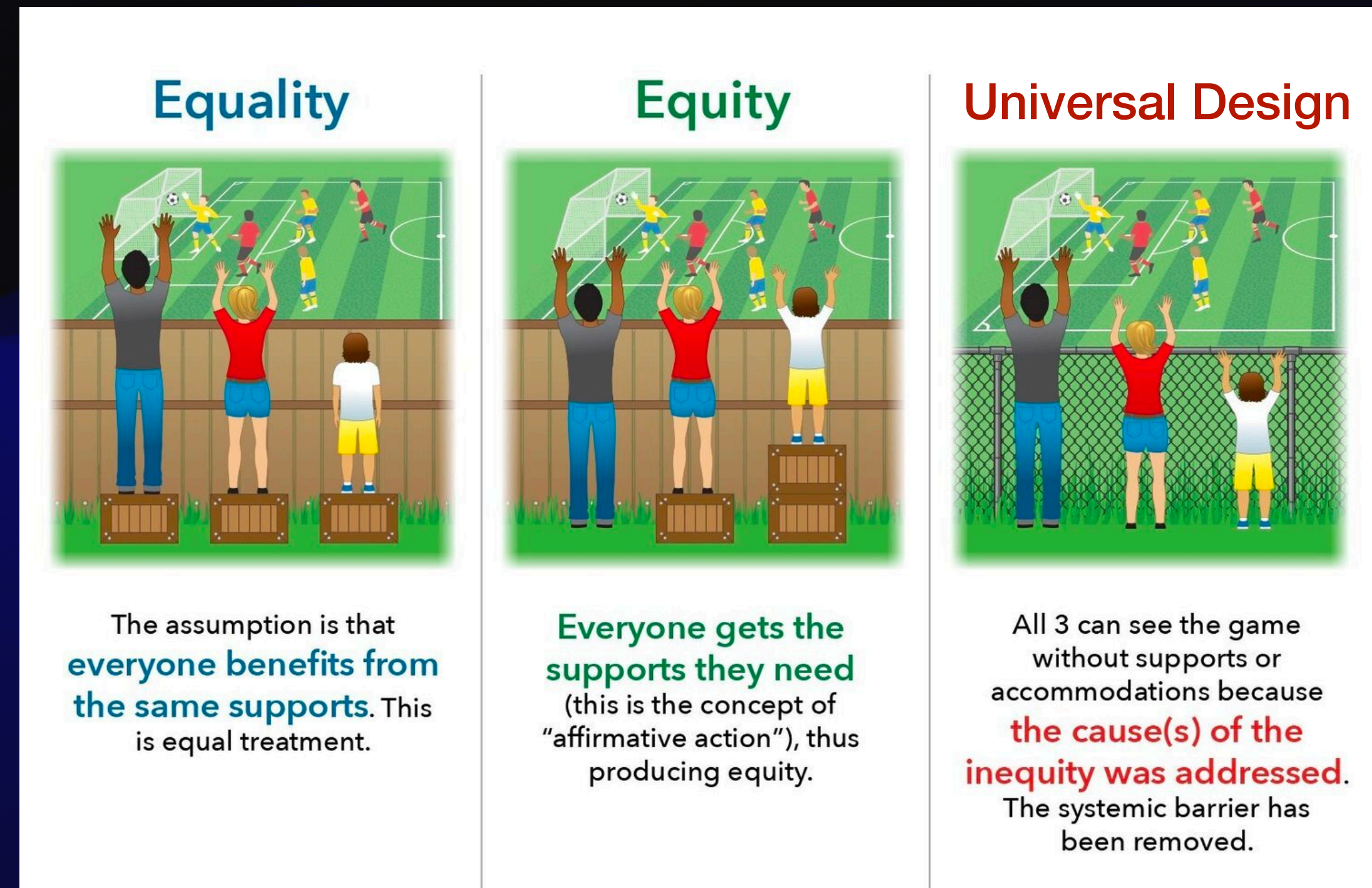
Step 1: Equality

- Every individual is assumed to start at the same level and can produce the same amount with a given resource
- **Class disparities propagate inequity through the façade of equality**

Step 2: Equity

- Ensuring equal opportunity relative to experience and background
- Respond to the world we have inherited

Absolutely necessary to recognize injustices, inequality of journeys, etc



Edited from Original Source
mobilizegreen.org

↑
We Are Here

Inclusion

Providing a welcoming space to any individual includes **facilitating exposure, guidance, and adjusting priorities**

Inclusion is NOT a majority vote, it is amplifying the voices of affected folks

Inclusivity is Dynamic

Must be humble,
open to further inclusion

Inclusivity Takes Active Effort

Voices not in the room are not heard

Time and Place for Inclusion Styles

Exclusive

Formal:
Women in Physics

Informal: Friday Night
Burgers and Beers

Inclusive

Formal:
Diversity Office

Informal: Saturday
Afternoon Dept. BBQ

Pronouns (Exposure)

What are they and
Why are they important

Name is **THE** primary form of
identification/recognition

- Pronouns are an extension of names
- Fundamental form of respect
- **VERY** personal, can be sensitive
topic for transitioning individuals

Language is dynamic!

- Use existing tools for identification
- Create tools when none exist
- **Vocabulary should evolve with society**

Attainable Wish:
Respecting names+pronouns should
be explicit in Codes of Conduct

Relatively Common	 English they	 Swedish hen	
Gaining Traction	 French ille/iel	 German sier/xier	
	 Russian они (oni)	 Spanish elle	
It's Complicated	 Italian	 Portuguese	
Only One Pronoun	 Indonesian dia	 Turkish o	 Finnish Hän

Babel.com

Key Question 2

Why do we need DEI?

**Every single person has
a right to be respected**

Increasing Globalization
Varied flavors of oppression,
why would physics be immune?

**Simply put, the status quo has
not been working optimally**

Critical Question: What do we want out of DEI?

What is the real goal?

- Diversifying model of what a physicist is
- Humanizing an antiquated sterile model
- Cultural change, prevent assimilation

Physics is what physicists do,
human beings do physics

What *about* gender/ethnicity/etc do we need in physics?

- Not just numbers/quotas, or physical presence
- Provide different models of what physicist are
- Gendering means humanizing the culture

Question for post-seminar:
What YOU want out of diversity?

What is quality science?

Inequity and injustice costs human and financial capital

- Private sector recognizes job stress costs \$300B/120k excess deaths per year,
- When will academia catch up with reality?

Do we practice what we preach?

- DEI statements becoming common, but priority remains secondary
- Mentorship and leadership is a crucial skill of physics research

We need to reprioritize and do better

In Search of Excellence and Equity in Physics
[arXiv:2203.10393 \[physics.soc-ph\]](https://arxiv.org/abs/2203.10393)

CERN Core Values



Dying for a Paycheck (Book)
Jeffrey Pfeffer (2018)

In Search of Excellence and Equity in Physics

[arXiv:2203.10393 \[physics.soc-ph\]](https://arxiv.org/abs/2203.10393)

Meritocracy: Recognition/Accolades solely based on research productivity

- Ideal: Can work well **IF** opportunities equal and unbiased selections
- Reality: intentional and unconscious biases prevent diversification

Experiences of underrepresented minorities (URM) lead to innovation

- URMs draw new relations between ideas and concepts, but their novel contributions are discounted and less likely to earn them academic positions
- Cross-departmental research, analyzing ~1.2M US PhDs between 1977-2015

Inequity and injustice costs human and financial capital

- Private sector recognizes job stress costs \$300B/120k excess deaths per year,
- When will academia catch up with reality?

EXTENSIVE resources and research cited in CP → **We need to reprioritize and do better**

The Diversity-Innovation
Paradox in Science
Hofstra et al

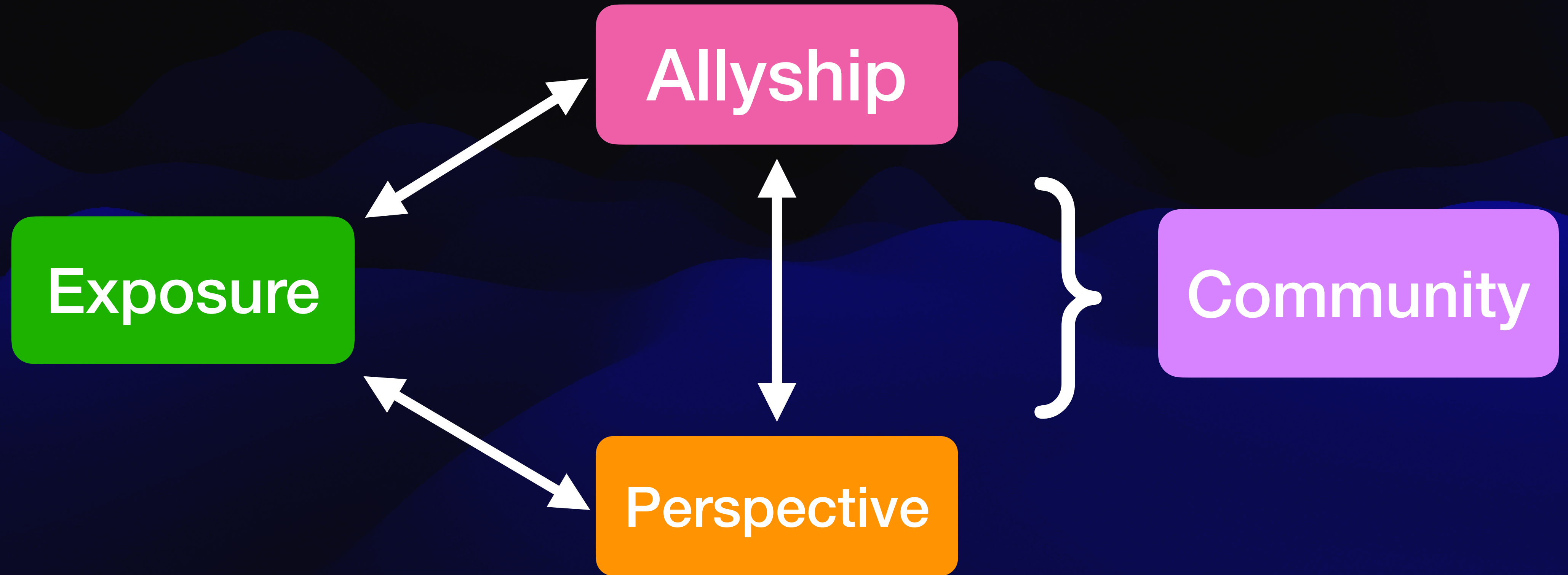
Dying for a Paycheck (Book)
Jeffrey Pfeffer (2018)

Key Question 3

What can I do for DEI?

**Reduce DEI-Focused Work
and Cognitive Load on URM**

Education is the Path to Allyship

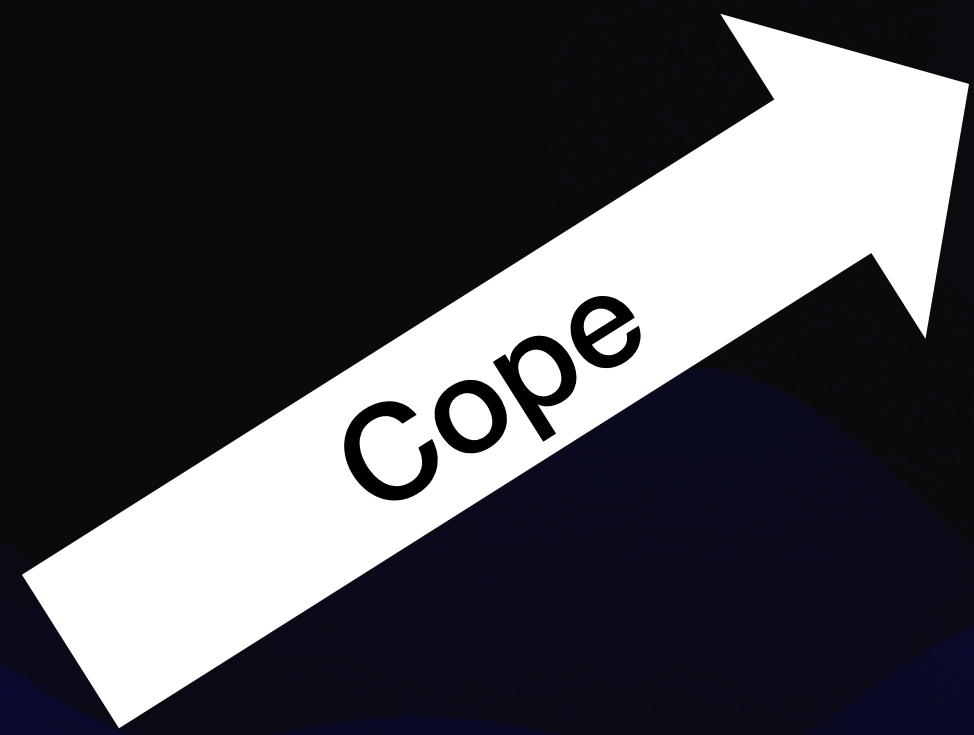


Be humble, be compassionate

Support colleagues by validating and having a *human* connection

Can be experienced by ANY individual, however VERY common among URMs

Take on new task

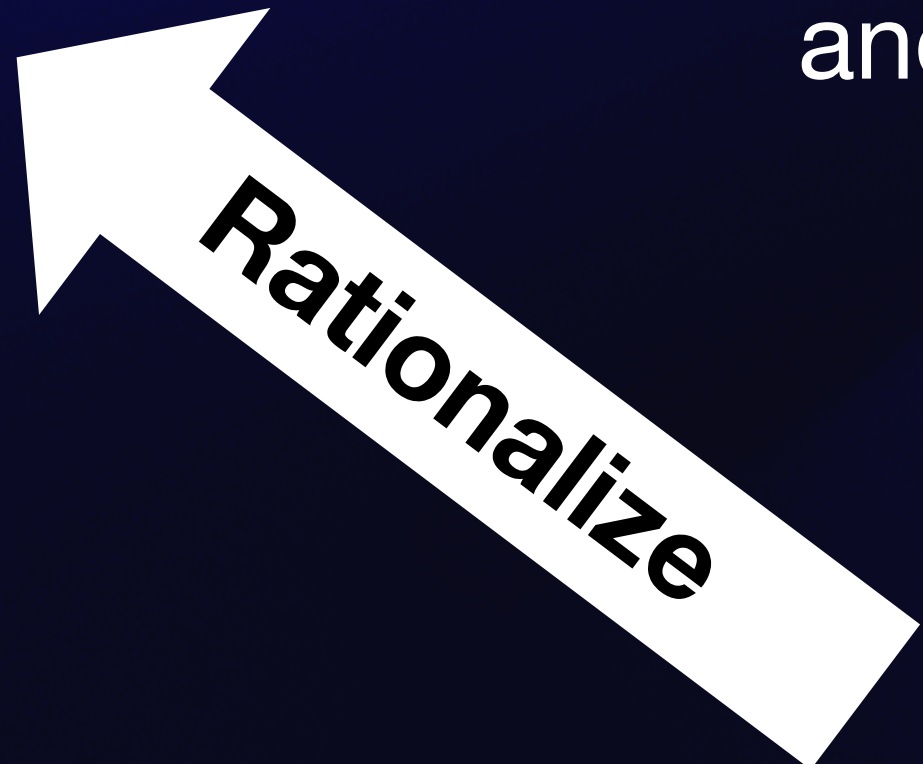


Imposter Syndrome

Self-Doubt

Procrastinate
Over-prepare

Cycles of self-doubt, depression, anxiety, and guilt that persists despite education, experience, or accomplishments



Accolades

Educate Yourself

Give Up Privilege

Now What?

Combat By-Stander
Effect

Educate A Colleague

Frontiers of Snowmass 2021(22)

Energy Frontier
(EF)

Instrumentation Frontier
(IF)

Theory Frontier
(TF)

Community Frontier
(CEF)

Neutrino Frontier
(NF)

Cosmic Frontier
(CF)

Computational Frontier
(CompF)

Accelerator Science
and Technology
(AF)

Underground Facilities
and Infrastructure
(UF)

Rare Processes
and Precision
(RF)

CEF3
Diversity
&
Inclusion

CEF2
Career Pipeline
&
Development

CEF1
Applications
&
Industry

CEF4
Physics Education

Community Engagement Frontier

CEF7
Environmental
&
Societal Impacts

CEF5
Public Education
&
Outreach

CEF6
Public Policy
&
Government Engagement

Added Summer 2021

Identifying and Addressing Mechanisms of Oppression in HEPA

HOW TO READ THE SNOWMASS WHITE PAPERS

on

Power Dynamics in Physics

Informal Socialization in Physics Training

and

Policing and Gatekeeping in STEM

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[arXiv:2203.11523](https://arxiv.org/abs/2203.11523) [physics.soc-ph]

[arXiv:2203.11513](https://arxiv.org/abs/2203.11513) [physics.soc-ph]

[arXiv:2203.11518](https://arxiv.org/abs/2203.11518) [physics.soc-ph]

[arXiv:2203.11508](https://arxiv.org/abs/2203.11508) [physics.soc-ph]

EXECUTIVE SUMMARY

The purpose of this white paper is to lay out the impacts of policing and gatekeeping in STEM, illustrated with lived experiences of scientists of color who are achieving despite the daunting challenges they face.

Policing

People around the world were impacted by the extrajudicial murders of Ahmaud Arbery, Breonna Taylor, and George Floyd. The effect on black people, including black scientists, was profound. In this paper, we described direct experiences black scientists have had with policing, as well as the trauma black scientists experience each time a murder like this is reported. This suffering is compounded when colleagues and peers seem oblivious and unaffected, leaving black scientists further isolated in an already unwelcoming environment.

Gatekeeping

In practice, gatekeeping comprises a set of behaviors, practices, and traditions, backed up by individual and organizational power to guard the boundaries of the discipline. Unfortunately, many people who bear the brunt of systemic oppression, receive multiple messages that they do NOT belong. For some, these accumulate to push them firmly outside of the boundaries, and they leave.

Even when gatekeeping fails to achieve its ultimate goal, smaller encounters exact time and emotional labor from the targets of oppression, reducing the time and energy they have available for their scientific work. Further, biases that impact how scientists efforts are judged have led to exclusions from opportunities and funding, which lead to further losses.

Comfort and Safety

We invite readers to wrestle with the difference between feeling unsafe and actually being unsafe. Using the experiences of real people, we describe productive enactments of this tension, and reveal the benefits of accepting this struggle as ongoing and endless.

Take-Aways

The paper concludes with an account of how even a well-intentioned, self-described social activist can cause harm, contrasted against someone working daily to create an inclusive environment for everyone to work and learn.

Other DEI CPs of Snowmass

Climate of the Field: Snowmass 2021

Erin V Hansen¹, Erica Smith², Deborah Bard³, Matthew Bellis⁴, Jessica Esquivel⁵, Tiffany R. Lewis^{6,7}, Cameron Geddes⁸, Cindy Joe⁵, Alex G. Kim⁸, Asmita Patel⁸, and Vitaly Pronskikh⁵

Abstract

How are formal policies put in place to create an inclusive, equitable, safe environment? How do these differ between different communities of practice (institutions, labs, collaborations, working groups)? What policies towards a more equitable community are working? For those that aren't working, what external support is needed in order to make them more effective?

We present a discussion of the current climate of the field in high energy particle physics and astrophysics (HEPA), as well as current efforts toward making the community a more diverse, inclusive, and equitable environment. We also present issues facing both institutions and HEPA collaborations, with a set of interviews with a selection of HEPA collaboration DEI leaders.

We encourage the HEPA community and the institutions & agencies that support it to think critically about the prioritization of *people* in HEPA over the coming decade, and what resources and policies need to be in place in order to protect and elevate minoritized populations within the HEPA community.

STRATEGIES IN EDUCATION, OUTREACH, AND INCLUSION TO ENHANCE THE US WORKFORCE IN ACCELERATOR SCIENCE AND ENGINEERING*

M. Bai (SLAC), W.A. Barletta (MIT), D.L. Bruhwiler (RadiaSoft LLC), S. Chattopadhyay (FNAL/NIU), Y. Hao (MSU/BNL), S. Holder (SLAC), J. Holzbauer (FNAL), Z. Huang (SLAC), K. Harkay (ANL), Y.-K. Kim (UChicago & CBB), X. Lu (NIU/ANL), S.M. Lund (MSU/USPAS), N. Neveu (SLAC), P. Ostroumov, (MSU), J. R. Patterson (Cornell/CBB), P. Piot (NIU/ANL/CBB), T. Satogata (JLab), A. Seryi (JLAB/ODU), A.K. Soha (FNAL), S. Winchester (USPAS/FNAL)

Abstract

We summarize the community-based consensus for improvements concerning education, public outreach, and inclusion in Accelerator Science and Engineering that will enhance the workforce in the USA. The improvements identified reflect the product of discussions held within the 2021-2022 Snowmass community planning process by topical group AF1: *Beam Physics and Accelerator Education* within the *Accelerator Frontier*. Although the Snowmass process centers on high-energy physics, this document outlines required improvements for the entire U.S. accelerator science and engineering enterprise because education of those entering and in the field, outreach to the public, and inclusion are inextricably linked.

Accessibility in High Energy Physics: Lessons from the Snowmass Process

K.A. Assamagan¹, C. Bonifazi², J.S. Bonilla³, P.A. Breur⁴, M.-C. Chen⁵, A. Roepe-Gier⁶, Y.H. Lin^{*7}, S. Meehan⁸, M.E. Monzani^{9,10,11}, E. Novitski¹², and G. Stark¹³

ABSTRACT

Accessibility to participation in the high energy physics community can be impeded by many barriers. These barriers must be acknowledged and addressed to make access more equitable in the future. An accessibility survey, the Snowmass Summer Study attendance survey, and an improved accessibility survey were sent to the Snowmass2021 community. This paper will summarize and present the barriers that prevent people from participating in the Snowmass2021 process, recommendations for the various barriers, and discussions of resources and funding needed to enact these recommendations, based on the results of all three surveys, along with community members' personal experiences.

Lifestyle and personal wellness in particle physics research activities

Tiffany R. Lewis^{1,2}, Sara M. Simon³, Carla Bonifazi^{4,5}, Savannah Thais⁶, Johan Sebastian Bonilla Castro⁷, and Kétévi A. Assamagan⁸

ABSTRACT

Finding a balance between professional responsibilities and personal priorities is a great challenge of contemporary life and particularly within the HEPAC community. Failure to achieve a proper balance often leads to different degrees of mental and physical issues and affects work performance. In this paper, we discuss some of the main causes that lead to the imbalance between work and personal life in our academic field. We present some recommendations in order to establish mechanisms to create a healthier and more equitable work environment, for the different members of our community at the different levels of their careers.

In Search of Excellence and Equity in Physics

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Why should the U.S. care about high energy physics in Africa and Latin America?

Kétévi A. Assamagan^{a,*}, Carla Bonifazi^b, Johan Sebastian Bonilla Castro^c, Claire David^d, Claudio Dib^e, Lucílio Dos Santos Matias^f, Samuel Meehan^g, Gopolang Mohlabeng^h, Azwinndini Murongaⁱ

Abstract

Research, education and training in high energy physics (HEP) often draw international collaborations even when priorities and long term visions are defined regionally or nationally. Yet in many developing regions, HEP activities are limited in both human capacity and expertise, as well as in resource mobilisation. In this paper, the benefits – to the U.S. HEP program – of engagements with developing countries are identified and studied through specific examples of Africa and Latin America; conversely, the impact of HEP education and research for developing countries are also pointed out. In the context of the U.S. strategic planning for high energy physics, the authors list recommendations on investments that will benefit both developed and developing nations.

Building a Culture of Equitable Access and Success for Marginalized Members in Today's Particle Physics Community

Olivia M. Bitter^{1,2}, Mu-Chun Chen³, Ami Choi⁴, Jessica Esquivel¹, Kathryn Jepsen⁵, Tiffany R. Lewis^{6,7}, Yuanyuan Zhang⁸, Azwinndini Muronga⁹, Lucianne Walkowicz¹⁰, and Kétévi A. Assamagan¹¹

Over the past decade, the particle physics community has devised programs to support diversity along multiple axes and the way that we think about measuring and implementing inclusion initiatives has evolved. DEIA in physics consists of a broad set of aspects, and here we focus on the experience of marginalized communities, i.e. demographic groups that are underrepresented in particle physics for reasons unrelated to their intelligence, scientific abilities, or potential to make significant contributions to science. We make specific recommendations to establish a benchmark plan for the next Snowmass that includes a decade spent on implementation of funding outreach, encouraging open networking, and removing inappropriate hurdles to career progression, in order to build a more equitable culture within high-energy physics. Of particular importance in evaluating the degree of exclusion and future improvements is to prioritize the confidential collection of demographic data in all forms of grant proposals, facility staffing (including early career, contractors and support roles), and collaboration membership. It is not possible to gauge progress for inclusion without measurement of it. We strongly recommend the establishment of a cross-institutional ethics panel that is trained and empowered by mutual legal agreements with institutions and collaborations to track professional misconduct as defined in agreed upon standards of conduct, and where appropriate recommend censure from specific professional activities or leadership roles. Scientists who identify with one or more marginalized communities report greater incidents of misconduct against their presence or person and

LHCb: Example of Global Science Initiative

Global Science...or is it...

- Geographic diversity falls along economic lines
- Often membership/M&O fees agnostic to economic capacity
- Must remove systemic barriers to provide space for inclusion

Latest LHCb Collaborator:
Costa Rica

- Match-making process crucial for success
- Required creation of new support mechanisms w/ CERN

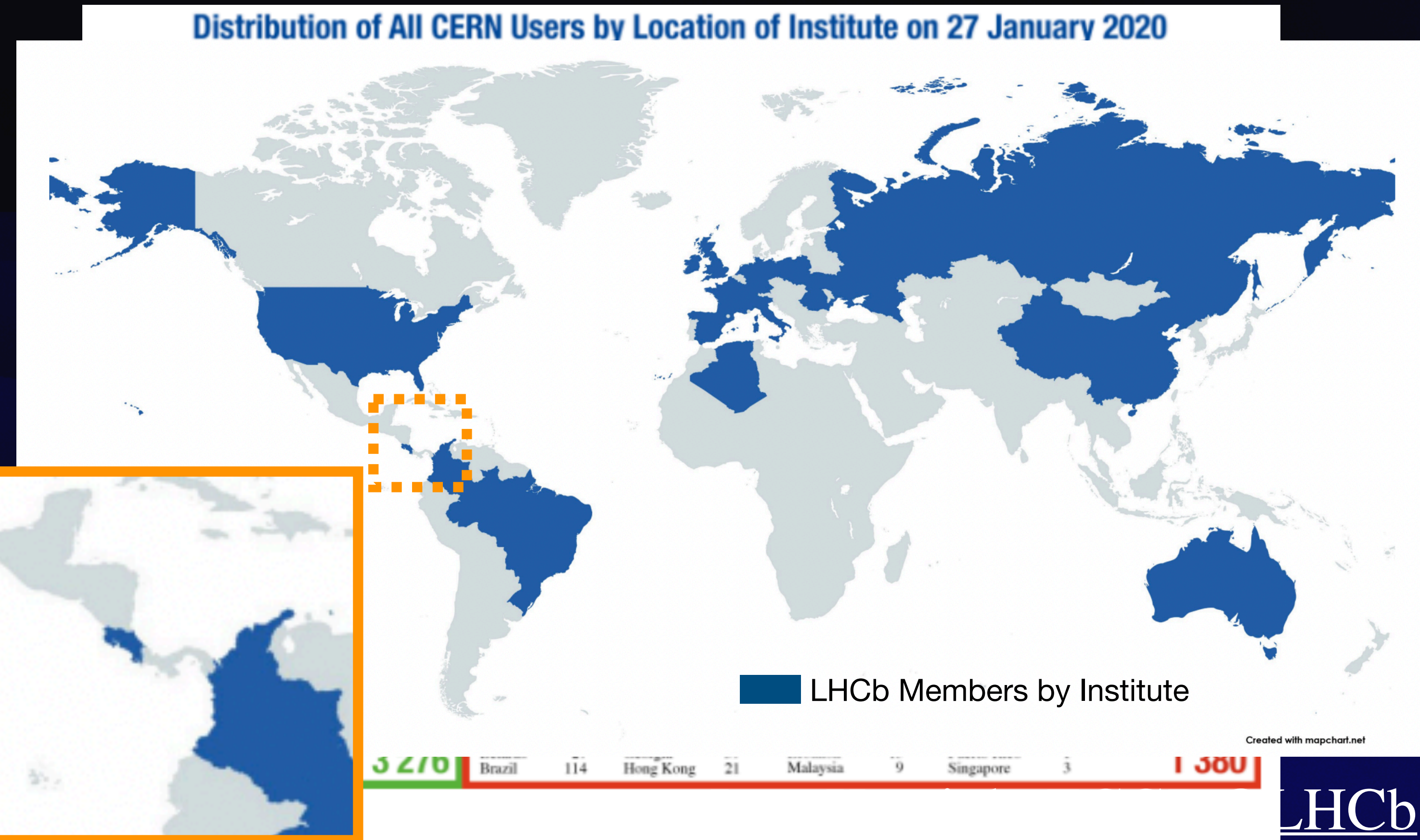


Figure 1: Distribution of CERN [10] users by location of their institutes. Users are not necessarily originating from the country of the university or laboratory they are affiliated with. Less than 5% of CERN users are associated with a developing nation.

Key Questions for You

- Where are we now?
 - What's the climate of our field with respect to DEI?
 - See Snowmass Survey and Climate of the Field Contributed (White) Papers
- What does our field need?
 - **Exposure/Education** in DEI vocabulary and concepts
 - **Tools, policy, and expectations** to provide a safe environment for all
 - **Recognize+Address institutional barriers** in department, institutes, society
 - **Changes of perspective/priorities** at an individual and collective level
- What can we do about it?
 - Past: **Validate** colleagues' experiences, personal and inherited
 - Present: Listen, support/champion, and **be humble**
 - Future: **Actively Prioritize** DEI skills and deficiencies

Recommendations in each CP, Topical Group and Frontier reports

“I’ll leave you with this take-home:

‘Diverse perspectives yield the best science’ is a true statement, but it’s one that commodifies the lived experience of marginalized people by reducing them to their contributions to productivity.

It’s a capitalistic framework that shirks the basic truth that cultivating a field where the norm is respecting the humanity and validity of all people is the right thing to do for no reason other than it is right. If this is not enough of a justification for you, you are the problem.”

#BlackInAstro Experiences: KeShawn Ivory
([Link to Article](#))

Thank You

A Note on Language

English is lingua franca for science, policy, communications, etc.

- Simplifies publication and dissemination
- Generates privilege and inequities
- Often used as tool for gate-keeping

Working in a global HEP community requires effort to ensure inclusivity

- Support non-native English speakers in process of adopting a new language
- Grammatical concepts (gender neutral terms) may not exist in others languages

Better Practices

Use non-exclusionary gender-neutral language

~~He/She~~ → They

Speaking other languages often due of diverse team but can be exclusionary

Be compassionate, give reasonable benefit of doubt

What is Snowmass?

Happens once every 7-8 years

Prioritization Process for US HEPA

1982: Summer Study on Elementary Particle Physics and Future Facilities

- 19-day prioritization workshop in Snowmass, CO, USA
- 150 participants from US+Europe
- Provided recommendations to US funding agencies ([link to 1982 proceedings](#))

Strategy Forums Around the World

- European Strategy for Particle Physics — **Since 2012**
- Latin American Strategy Forum for Research and Innovation — **Since 2019**
- African Strategy for Fundamental and Applied Physics — **Since 2020**

Snowmass 2021(22) → >1000 contributors around the globe, >500 CPs

- Timeline extended by COVID — see scientific program ([link](#))
- In-person summer study conference: July 17-27, 2022 in Seattle, WA, USA
- **New: Community Engagement Frontier**

Burden of Responsibility

- Cognitive and Emotional Burden to identify and fix problems
- Burden to educate and discipline
- Epistemic Injustice (attributed to Miranda Fricker)
 - > Hermeneutical Injustice: Failure to verbalize without right terms
 - > Testimonial Injustice: Disparity in trust/belief of experiences

Climate of the Field

[arXiv:2204.03713](https://arxiv.org/abs/2204.03713) [physics.soc-ph]

Issues Addressed:

- What formal policies exist in our field?
- What is the effectiveness of current policies?
- What can be done to improve policy effectiveness?

Systems of Oppression Thrive Today in HEPA

- MANY reports on varying scopes/scales
- Code of Conduct helps, but culture needs change

Information Sharing for Community Education

- Anecdotes and Experiences
- Develop professional relationships w/ DEI and social science experts (and compensate!)

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Marginalized Communities in HEPA

[arXiv:2206.01849 \[physics.soc-ph\]](https://arxiv.org/abs/2206.01849)

5 Major Areas Needing to be Addressed:

- **Acquire a better understanding of the status quo**, both quantitatively and qualitatively, to assess the effectiveness of existing programs and to develop best practices
- Develop effective and inclusive ways to **engage marginalized communities**
- **Create infrastructure** to better support members of marginalized communities, on an academic, financial and personal level
- **Create an environment conducive to equitable access and success** by establishing community expectations, fostering inclusion in social interactions, and holding individuals and institutions accountable
- **Establish a mechanism to monitor progress in the area of DEIA**, including the implementation of the recommendations enumerated in this paper and others during the Snowmass 2021 process.

Marginalized Communities in HEPA

[arXiv:2206.01849 \[physics.soc-ph\]](https://arxiv.org/abs/2206.01849)

General Recommendations

- 1) Improve experiences of members of marginalized communities, engage these communities, collect feedback, assess the effectiveness of existing programs, and develop best practices
- 2) Sustain engagement with marginalized communities, and train members of the particle physics community for productive engagement
- 3) Create infrastructure to improve academic, financial, and personal support for members of marginalized communities
- 4) Create environment conducive to success and the retention of members of marginalized communities, establish community expectations, foster inclusion, and ensure individual and institutional adherence
- 5) Establish a mechanism to monitor progress in the area of DEIA, including the implementation of recommendations from the Snowmass 2021 process.

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Accessibility in HEP: Lessons from the Snowmass Process

[arXiv:2203.08748 \[physics.ed-ph\]](https://arxiv.org/abs/2203.08748)

Overarching Theme:

- The physics community must **actively protect** people's fundamental right to participate in physics regardless of disability, identity, or background

Accessibility Survey for Snowmass Participants:

- Shows **majority** of respondents reporting experiencing financial, caretaker responsibilities, mental health, physical, auditory, and visual barriers of varying degrees for either themselves (5%) and/or others around them (50%)

Key Question: **Who is responsible to address accessibility issues?**

- Lack of planning can make accessible meetings prohibitively expensive
- Leads to issues failing to be addressed, burden falls on affected individuals

Recommendations for Financial, Family, Mental Health, Physical and Auditory Disabilities

- Conferences should strongly consider making their entrance fees sliding-scale or waivable for under-resourced and early-career scientists. Also provide and advertise travels grants early.
- **Accessible practices can help many more people than individuals with disabilities**

Lifestyle and Personal Wellness

[arXiv:2203.08748](https://arxiv.org/abs/2203.08748) [physics.ed-ph]



Premise:

- Highly competitive environment of physics introduces **unsustainable** levels of stress, often **forcing a choice between a basic human need and work**

Observations:

- Physics culture creates self-selective culture and demographic of **sterile individualism**
- Failure to fit into the status-quo academic model is **wrongfully attributed to individuals' 'incompatibility'** with physics culture
- Needs of the individual are often suppressed for the sake of products
- Evaluation metrics often fail to incorporate life changes/obligations
- **Resource-starved perspective** characteristic of early-career experiences exacerbate inequity and drive away scientists of underrepresented backgrounds
- COVID introduced unprecedented stress and stratifies disparities of URM

Strategies in Education, Outreach, and Inclusion to Enhance the US Workforce in Accelerator Science and Engineering

[arXiv:2203.08919 \[physics.acc-ph\]](https://arxiv.org/abs/2203.08919)

Premise:

- Improvements concerning education, public outreach, and inclusion in Accelerator Science and Engineering will enhance the workforce
- **Early-career scientists and engineers are the future of scientific workforce**, to ensure quality science we must provide the training they need

Example Mechanisms to Educate/Train: US Particle Accelerator School

- Two 2-week sessions winter/summer, ~300-350 participants, 20-26 courses
- COVID forced virtual education programs, highlighted **need to evolve techniques**
- Recommends prioritization of trainees' **communication/learning methods**, e.g. increased social media presence
- Highlights need for **active recruiting for URM**

Particle Physics in Africa and Latin America

[arXiv:2203.10060 \[physics.soc-ph\]](https://arxiv.org/abs/2203.10060)

Global Science...or is it...

- Geographic diversity falls along economic lines
- Must remove systemic barriers to provide space for inclusion
- ‘Trickle down’ opportunities are not as effective as we hope.

Case Study: Costa Rica @ LHCb

- Which comes first, research program or research staff/faculty?
- Imperative to provide support and entrance mechanism to develop physics programs

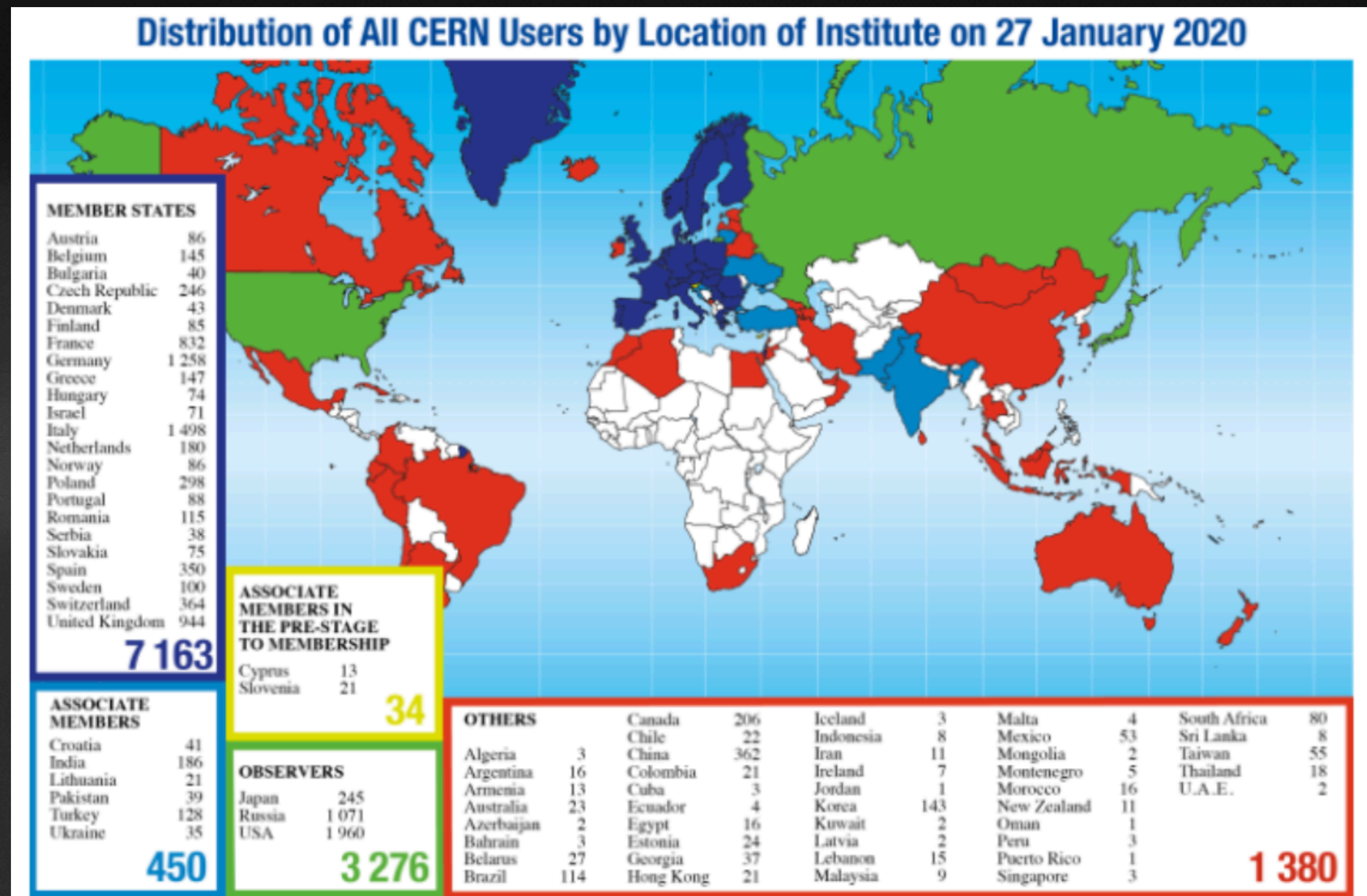


Figure 1: Distribution of CERN [10] users by location of their institutes. Users are not necessarily originating from the country of the university or laboratory they are affiliated with. Less than 5% of CERN users are associated with a developing nation.

Common Recommendations

To US HEPA Community and Funding Agencies

- HEPA communities must employ the use of **robust strategic planning procedures**, including a full re-envisioning of science workplace norms and culture.
- HEPA communities must implement new modes of **community organizing and decision-making** that promote agency and leadership from all stakeholders within the scientific community.
- HEPA communities must **engage in partnerships** with scholars, professionals, and other experts in several disciplines, including but not limited to anti-racism, critical race theory, and social science.