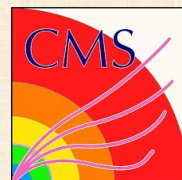




Report on Diversity, Inclusion and Outreach activities at LHC

***Brajesh Choudhary
University of Delhi & CMS
On behalf of the LHC Experiments***

9th Edition of LHC Physics Conference





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What is Diversity?



Diversity is to foster a working environment in experiment where all members of the collaboration can thrive and bring in their talents, irrespective of their age, career status, employment situation, institutional affiliation, geographical location, nationality or citizenship, gender identity, ethnicity, spiritual or religious beliefs, family situation, sexual orientation, and physical abilities or challenges.



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What is Inclusion?

Inclusion refers to an environment in which all members of the collaboration feel welcome, have a sense of belonging and value within the collaboration, and are able to contribute optimally.

- ✓ *Diversity alone does not guarantee inclusion*
- ✓ *A lack of inclusion can hinder efforts to retain and improve diversity*

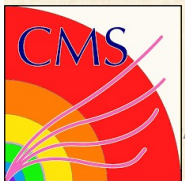


What is Equity?



To have diversity and inclusion, one must have equity.

Equity refers to creating conditions to achieve fair participation in the experiment, so that an individual's full potential can be used and their work valued and rewarded.



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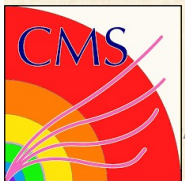


What is Outreach?



Outreach is an effort to bring services and/or information to people wherever they live or spend time. It also implies the process through which an organization builds relationship with future stake holders or those who can benefit from such outreach.





*Part of the definition taken
from Cambridge Dictionary.*



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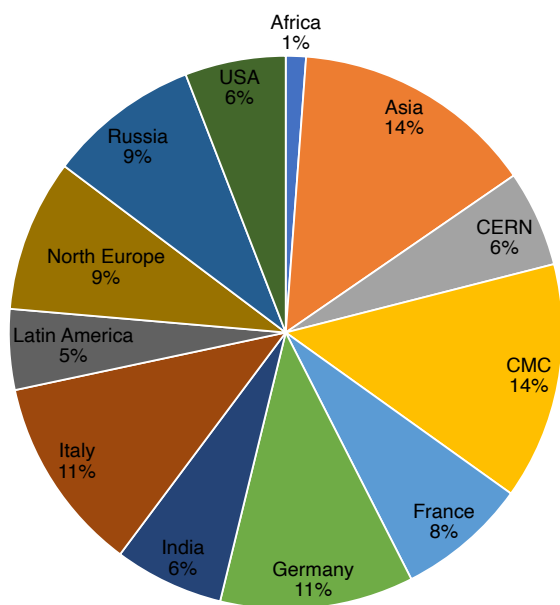
<i>Experiments</i>	 ALICE			
<i>Countries Involved</i>	39	40	54	19
<i>Institutions Involved</i>	172	180	242	88
<i>Number of Collaborators</i>	1968	5900	5416	1482
<i>Gender Ratio</i>	~21%	~21%	~20%	~19%



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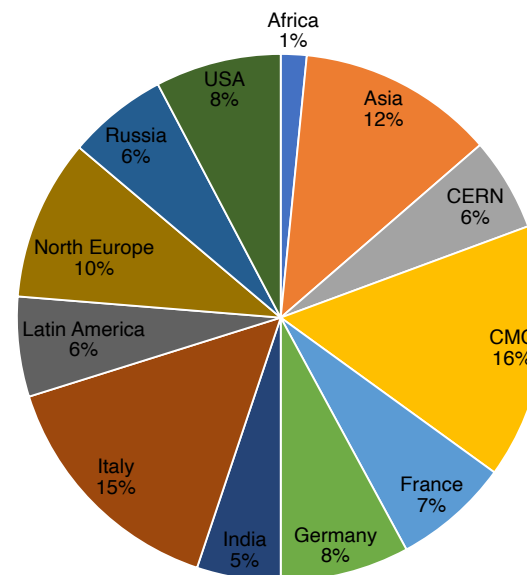
Some Representative Figures - ALICE

ALICE members by region



ALI-PREL-491390

Fraction of ALICE members with responsibility roles by region



ALI-PREL-491400

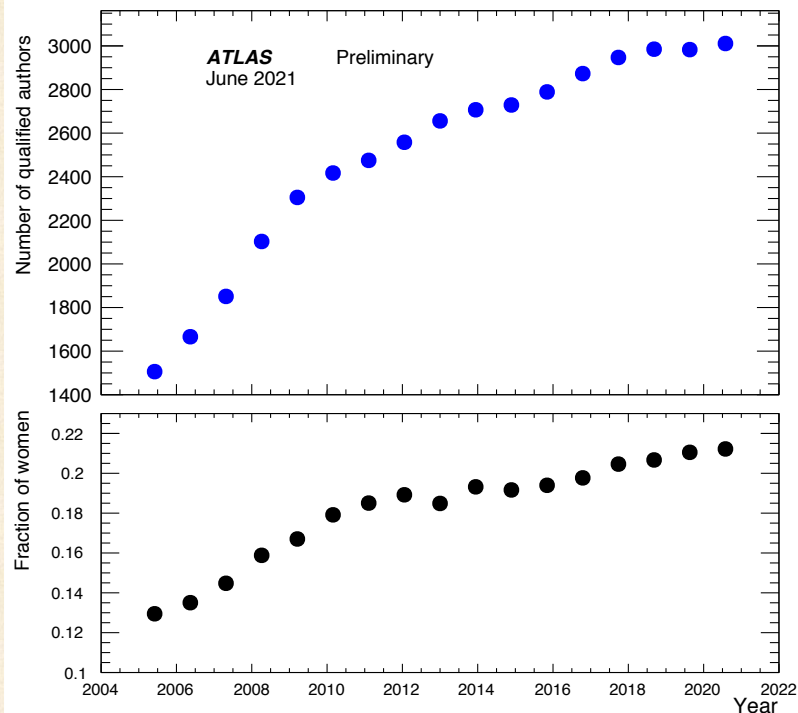
Largely fair geographical distribution

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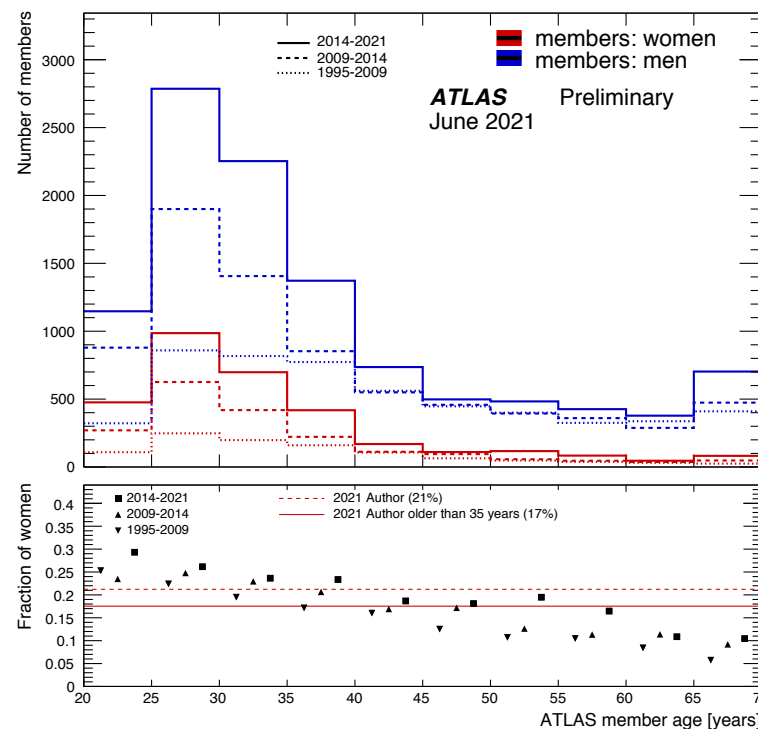
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***Provided by the
ALICE Collaboration.***

Some Representative Figures - ATLAS



Over 15 year - fraction of women increased from ~13% to ~21-22%. Impressive gain but we can always do better



**Provided by
the ATLAS
Collaboration**

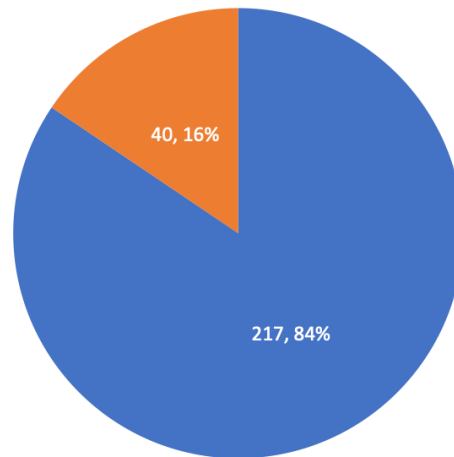
As age advances fraction of women decreases especially at tenure level. But over last 20 yrs, fraction of senior women has increased



Some Representative Figures – CMS

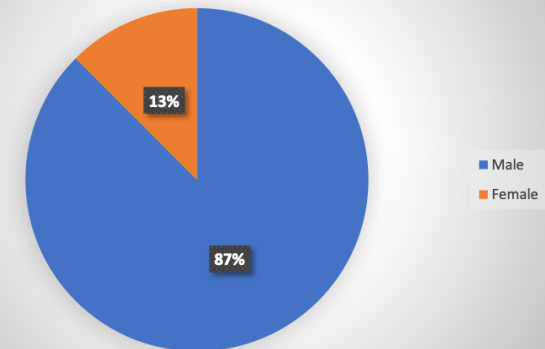
PAG/POG positions (2007-2020)

PAG/POG Gender 2007-2020

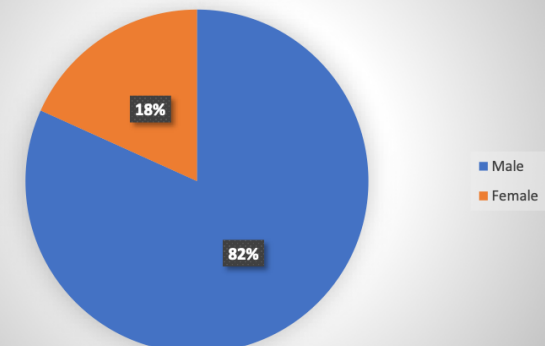


Current Women Fraction ~20%
Current managerial position held by women ~20%

POG Gender 2007-2020



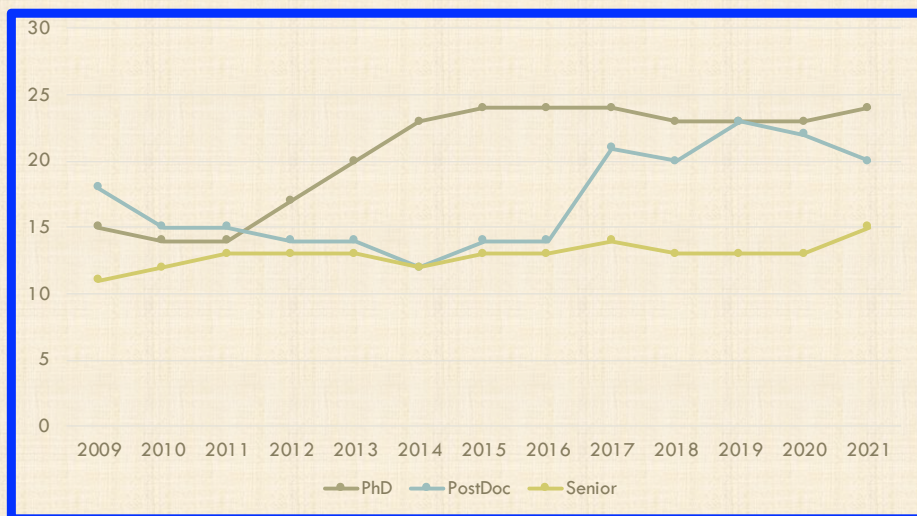
PAG Gender 2007-2020



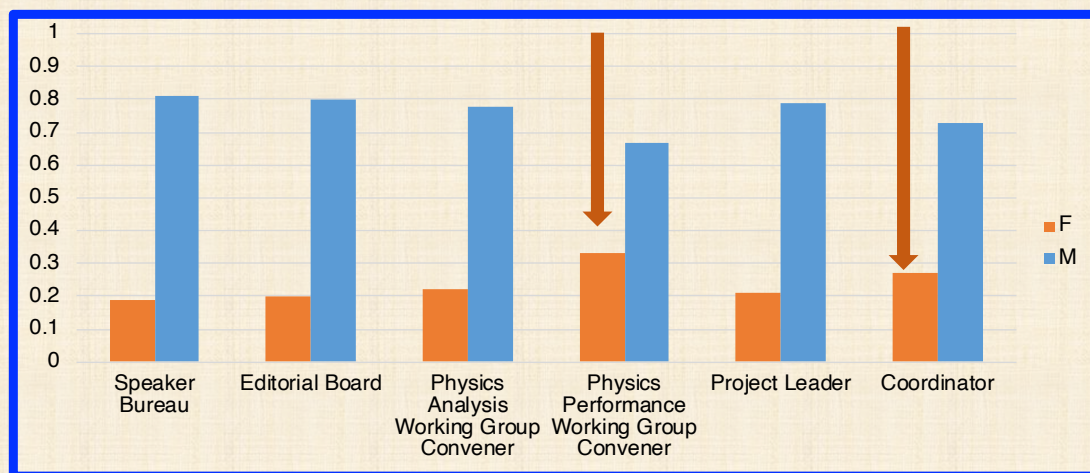


Some Representative Figures – LHCb

Percent



Year



Fraction of Women in Different Roles

Overall well balanced distribution but 30% women as Physics Conveners and Coordinators.

Over time number of female Ph.D. students have gone up from ~15% to ~25%, Postdocs numbers are also increasing. **Positive trend.**

Provided by the LHCb Collaboration.



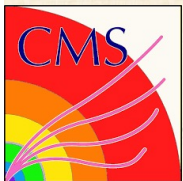
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Mandate of the Various Diversity Related Offices

- ✓ advise management and individuals on diversity related matters*
- ✓ propose actions to promote diversity and create awareness*
- ✓ monitor and record statistical information related to diversity*
- ✓ actively listen to Collaboration members' concerns*
- ✓ report regularly to the Collaboration about status and progress of diversity related issues*
- ✓ collaborate with relevant bodies outside CMS such as the CERN*

Diversity Office if required



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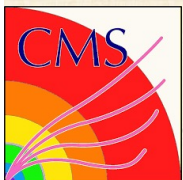


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Diversity and ECGD Offices Activities



- *Outreach*
- *Code of Conduct*
- *Anti-harassment Policy*
- *Search Committees & Appointments*
- *Inclusive Teamwork Training – through professionals*
- *Coffee with Colleagues*
- *Data Collection, Mood of the collaboration, Discussion during collaboration meeting (~100 attendance)*
- *CERN Diversity Roundtable – participation from all 4 experiments*
- *Welcoming New Members, etc.*



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CERN Code of Conduct Applies to Everyone



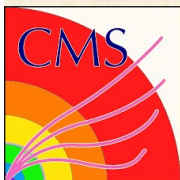
CMS Code of Conduct

Approved by the CMS Collaboration Board 12-April 2019

The CMS collaboration consists of members with varied national origin, ethnic background, race, gender identity, sexual orientation, gender, age, physical ability, and religion. As a community, we are committed to being positive and inclusive in all regards.

We follow the [CERN Code of Conduct](#). Members of CMS must maintain a professional environment in an atmosphere of tolerance and mutual respect and abstain from all forms of harassment, abuse, intimidation, bullying, and mistreatment of any kind. This includes, but is not limited to, intimidation, sexual or crude jokes or comments, offensive images, and unwelcome physical conduct. Members must keep in mind that behavior and language deemed acceptable to one person may not be to another.

We commit to helping our community adhere to this code of conduct and speak up when we see possible violations of it. We strive to treat those outside of CMS as we would members of our own community. In the event that the letter or the spirit of this code has been violated, appropriate action will be taken, up to and including procedures specified in Annex A3.2 of the CMS Constitution.



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**Similar Code of Conduct exists
in other Experiments too**

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Posters in CMS meeting rooms



**KNOW THE
CODE OF CONDUCT**



[HTTP://CERN.CH/GO/D9BT](http://cern.ch/go/D9BT)

IT'S EVERYONE'S RESPONSIBILITY TO:

- 

Maintain a professional environment in an atmosphere of tolerance and mutual respect.
- 

Abstain from all forms of harassment, abuse, intimidation, bullying and mistreatment of any kind.
- 

This includes intimidation, sexual or crude jokes or comments, offensive images, and unwelcome physical conduct.
- 

Keep in mind that behaviour and language deemed acceptable to one person may not be to another.
- 

Help our community adhere to the code of conduct and speak up when you see possible violations.





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Anonymous Message Box



- **Anonymity is very important in communicating issues which are confidential in nature and may bother a person.**
- *Experiments encourage collaborators to report any instances of inappropriate behavior - e.g. harassment, bullying, or deviation from the code of conduct.*
- *The incidents could also relate to meetings or interactions outside CERN, such as at workshops or conferences when presenting on behalf of the experiment.*
- *This message box can also be used to make suggestions for any future action items for the Diversity office.*
- **All information are treated confidentially.**
- *These messages can be used to gauge the environment of the collaboration and to identify any persistent common issues.*





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CERN Ombudsperson

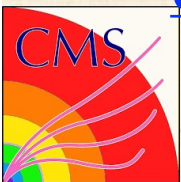


- CERN Ombudsperson: <http://ombuds.web.cern.ch>

- CERN Ombudsperson has several roles:

- To provide impartial advice and guidance
- To help resolve interpersonal disputes
- To listen, share and examine preoccupations problems
- To guide people at CERN in applying the

[CERN Code of Conduct](#)



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CERN Anti-Harassment Policies

- CERN has an Anti-Harassment Policy – experiments must follow it.
- <https://hr.web.cern.ch/anti-harassment>
- https://indico.cern.ch/event/982952/contributions/4217437/attachments/2192892/3706681/LC_Harassment_Prez%20%20CMS%20DO%20%2818%20Feb%202020%29.pdf

III. Inappropriate behaviour? Misconduct? Harassment? CERN's Response Channels

Handling your concern in full confidentiality	Contact Information Building-floor-office location	Listening	Mediation	Advice &/or Guidance	Receipt of formal complaint; Investigation; Disciplinary action
Ombud's Office	ombuds@cern.ch 500-1-04	✓	✓	✓	
Social Affairs Service	social.affairs@cern.ch 33-1-38	✓		✓	
Medical Service	medical.service@cern.ch 57-1	✓		✓	
HR Adviser (Staff) or HR Coordinator (Fellows, Trainees, Students)	cern.ch/hr/hr-key-contacts 5-1 & 5-2	✓	✓	✓	
Staff Association	staff.association@cern.ch 64-R-010	✓		✓	
Your Department Head, or Head, Human Resources	(name)@cern.ch, or hr-dept.head@cern.ch	✓		✓	✓
Harassment Investigation Panel (HIP)	HIP Chairperson HIP.Chair@cern.ch			✓	✓



■ All members of personnel (incl. Users)

■ Staff, Fellows, Trainees, Students*

*Students: TECH, ADMIN, DOCT, Short-Term Internship programmes coordinated by CERN HR

III. Formal resolution: "HIP"

Alleged victim:

- Written complaint
- Witnesses
- Does not face alleged harasser
- Interim protective measure, if needed



Alleged harasser:

- Right to be heard
- Know the case against
- Right to reply
- Presumption of innocence

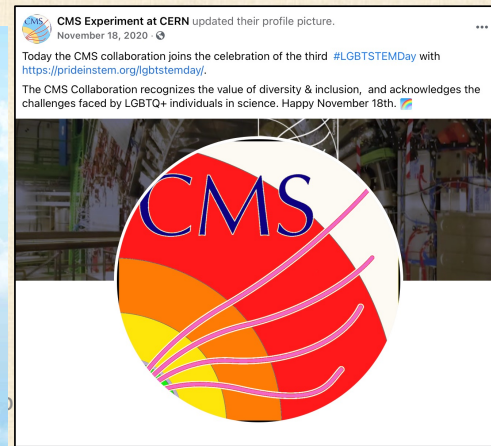
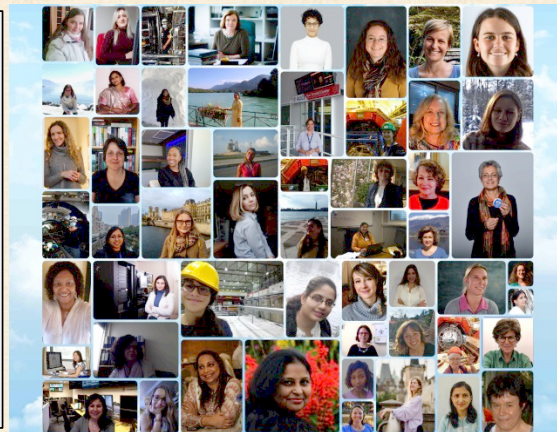
All parties

- Sufficiently resourced investigation
- Confidential
- May be assisted
- Impartial assessment
- Timely hearing and resolution



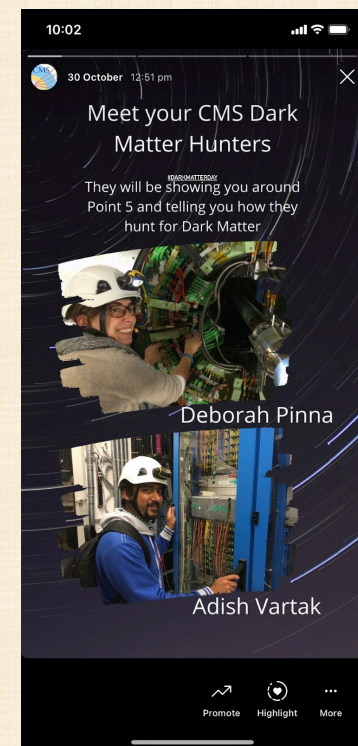
Outreach – Example from the LHC Experiments

- ✓ *International Day of Women and Girls in Science (11 Feb)*
- ✓ *International Women's Day (8 March)*
- ✓ *LGBTQ+STEM Day (18 November)*
- ✓ *Holiday Card, etc.*



Outreach – Example from the LHC Experiments

- ✓ *Welcome to Newcomers – couple times in a year*
- ✓ *YouTube video about physics results*
- ✓ *Physics Celebration*
- ✓ *Life between Art and Science*



Outreach – Example from the LHC Experiments

- ✓ *My journey to explore the universe*
- ✓ *Workshop for High School Students*
- ✓ *Masterclass – especially for girls – 25 sessions, 7 videoconferences – reached 1000 students*
- ✓ *YouTube Facebook events from Experimental Cavern - ALICE*
- ✓ *Social Media – FB, Twitter, Instagram*
- ✓ *Virtual Visits*
- ✓ *Etc.*

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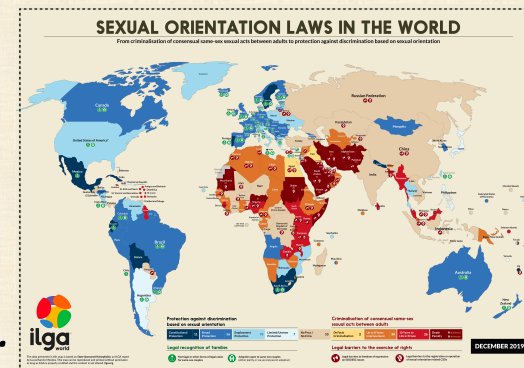
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LGBTQ+ Inclusivity in High Energy Physics



CERN recognized informal network seeking to provide a welcoming space for lesbian, gay, bisexual, trans, intersex, asexual, genderqueer and other LGBTQ individuals at CERN*

- ✓ *Why LGBTQ+ at CERN – Discrimination drives LGBTQ+ scientists to quit.*
- ✓ *2010 - LGBTQ+ created in CERN*
- ✓ *2012 – First CERN disciplinary action due to homophobia*
- ✓ *2014 – Recognition as “Informal” network under CERN Diversity Office*
- ✓ *2015 – CERN DG’s Rolf Heuer (‘15) and Fabiola Gianotti (‘16) condemn act of defacement of the LGBT community’s posters*
- ✓ *2015 – CERN gives residence permit in Switzerland for same-sex partners in its 5-yearly review*
- ✓ *2019 – EIRO forum DG statement marking LGBT STEM Day on 5 July*



**LGBTQ
CERN**

**Without colors,
there's no
strong interaction.**



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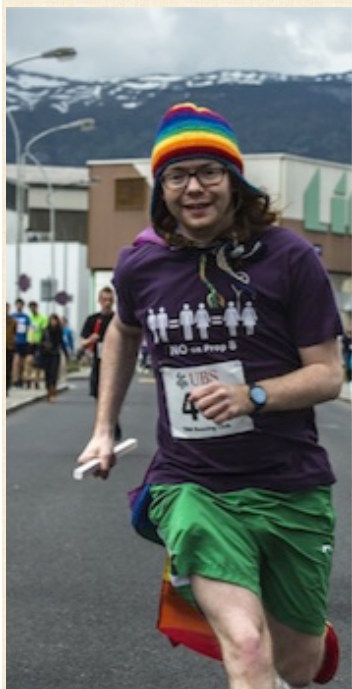
From Clara Nellist -CERN





ALICE

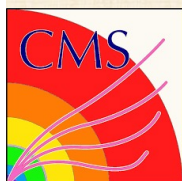
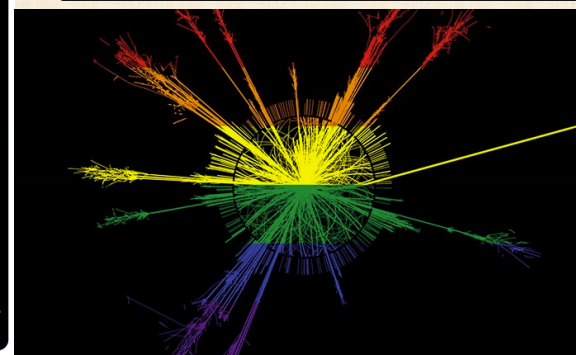
LGBTQ+ Inclusivity in High Energy Physics



From Clara Nellist -CERN



LGBTQ CERN @LGBTQCERN · Jul 5, 2019
For #LGBTQSTEMDay, we'd like to introduce you to just some of our LGBTQ colleagues working at @CERN!



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CMS Task Force on Diversity and Inclusion (TFDI)- Charge

The Task Force is charged with developing a proposal to institutionalize within CMS, appropriately adapted, mechanisms known to increase diversity and inclusion in appointments. Diversity includes, but is not limited to, geographical and gender diversity. The proposal will be presented to the Collaboration Board in a regular meeting of the CB or, if this is not possible, in a Special Meeting of the CB convened for that purpose. Subject to approval by the CB, the CB Chair will implement the proposal consistent with the CMS Constitution and practices so that significant reforms are in place in time for the 2021 season of appointments. In view of the complexity of the problems to be addressed, it is recognized that other reforms may be necessary, or reforms may need to be revised, later. If constitutional changes are needed in order to implement the proposal, the Task Force will propose such changes.



CMS TFDI – Charge

The Task Force is empowered to proceed as it sees fit, including temporarily drawing upon other CMS members for help with specific tasks. However, it is expected that the work of the Task Force will include:

- 1. Examining the appointment practices with CMS and proposing mechanisms for widening participation in CMS governance and oversight. While all levels and areas of management should be considered, including L3, the initial focus will be the appointments of Deputy Spokespersons, the Group Coordinators (L1), and the Sub-Group Conveners (L2) of Physics Analysis Groups (PAGs) and Physics Object Groups (POGs).*
- 2. Collecting, and assessing, two categories of data: historical CMS appointments data relevant to the issue of diversity and inclusion and data, on the same, drawn from the collaboration, for example, through surveys, or Town halls, and suitable anonymized examples of where CMS has succeeded in furthering diversity and inclusion and where it has failed.*
- 3. Documenting the status quo of diversity and inclusion in CMS, informed by the data collected and assessed, with an initial focus on the CMS management. The document will be made available to all CMS members.*



CMS TFDI – Charge Continues

4. Reviewing the current processes of nominations, selections, and appointments and propose changes if needed.
5. Collecting best practices for minimizing systemic bias in appointments and adapting them to CMS. The Task Force may analyze the options which they or others in the collaboration suggest, assess which ones are best suited to solve the problems identified, assess which ones should be implemented first and which should be implemented later.
6. Proposing an oversight mechanism to monitor adherence to reforms and to monitor outcomes, while respecting whatever data collection restrictions may be required by host country statutes.
7. Defining how success will be assessed. What will the CMS appointments look like after reforms have become institutionalized? How will we ensure that the reformed appointments processes remain transparent? How will we recognize backsliding, and how will this be corrected and by whom?



CMS TFDI – Timeline

- ✓ *The Task Force consisted of 18 members – 9 Men and 9 Women*
- ✓ *Proportional Representation from Geographical regions*
- ✓ *Collaboration Board (CB) and Spokesperson Team as ex-officio members*
- ✓ *Task Force approved in CB meeting on 25th September 2020*
- ✓ *Task Force divided into 5 working groups.*
- ✓ *From October 2020 till May 2021, the TFDI met about 25 times*
- ✓ *A 47 page report released to the collaboration on 2nd June 2021*
- ✓ *TFDI report presented to the collaboration on 3rd June 2021*
- ✓ *TFDI report to be presented to the Collaboration Board on 25 June 2021*



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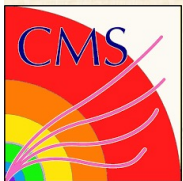


Conclusions and Summary

- ✓ *The cause of Diversity, Inclusion and Outreach to stakeholders is being championed by all four large LHC experiments.*
- ✓ *All four experiments are geographically, culturally and socially diverse.*
- ✓ *Women constitute about 20% of scientific work force in all major experiments.*
- ✓ *Number of women Ph.D. and Postdocs is increasing with time, but at faculty or senior scientist level number of women is less than expected.*
- ✓ *Less number of women in top management and senior technical positions.*
- ✓ *Women participation as fraction of men has improved at all levels over last two decades.*
- ✓ *There is a strong element of outreach in all the four experiments.*
- ✓ **We still have a long way to go for EQUAL Opportunity and Participation but we are moving in the right direction.**

Parallel talks (9th June 2021):

- **LHC and Outreach: Violaine Bellee, Zurich – 13:45**
- **LHC and Diversity: Adriana Telesca, CERN – 14:01**



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Thank you