The Early Career Gender and Diversity Office at the LHCb experiment

Marina Artuso, Syracuse University
The LHCb experiment

First hadron collider experiment dedicated to the study of c and b decays
The LHCb collaboration in the world

- Diverse: 1380 members from 79 institutes in 18 countries (as of June 2019)

- 46 nationalities (as of 2013)
- Different cultures
How the ECGD office started

• A first internal study in 2013:
  A study of the gender of LHCb scientists in the period 1999-2013

  V.V. Gligorov¹.
  ¹CERN, Geneva, Switzerland

Abstract:
A study of the gender of LHCb scientists from 1999 to 2013 is presented. Women are found to account for 10.7 ± 2.2% of LHCb scientists in 1999 (26 out of 241 scientists), and 15.0 ± 1.3% of 2013 (107 out of 724 scientists), where the number of women is treated as a binomial efficiency and the uncertainty is computed accordingly. A small upward trend in the proportion of women appears to exist over this time period. The fraction of LHCb scientists which are women is found to have little sensitivity to the country of employment or scientist nationality, and no significant correlation is found between scientist gender and the proportion of time spent at CERN. On the other hand, women are found to be significantly underrepresented at the highest management levels, and the fraction of female LHCb users between the ages of 30 and 40 (mostly early stage postdocs) is roughly a factor two lower than the fraction of female LHCb users between the ages of 15 and 29 (mostly PhD students), indicating a problem with the retention of female scientists beyond their doctoral studies. The overall fraction of women on LHCb is significantly lower than on ATLAS. It is hoped that this study can serve as a constructive contribution to a conversation within LHCb about gender issues in high energy physics and possible proactive measures which could improve the current gender balance on the experiment.

• Management appoints an “Equality and Diversity Taskforce”: explore possible ways towards improving the situation

• Following Taskforce recommendations: Collaboration board (CB) ratifies the creation of ECGD Office in Sep 2014

1. We shall appoint two ECGD Officers, one man and one woman, with the following mandate:
   i. to advise the management on ECGD matters;
   ii. to be available for listening to and advising colleagues, in a confidential manner, who feel that they are the victims of harassment, discrimination, or other inappropriate behaviour;
   iii. to collate regular statistics and other relevant information related to gender and, where appropriate, other ECGD matters, so that the collaboration’s progress in this area can be monitored (see 3.);
   iv. to assist the management in scheduling regular open meetings where ECGD matters can be discussed (see 4.).
The ECGD office in the LHCb constitution

3.4 The Early Career and Gender Diversity Office
The Early Career and Gender Diversity (ECGD) office oversees the well being and working environment of all LHCb members.

The LHCb Management proposes two ECGD Officers to serve for a period of 2 years.
The appointment of the ECGD Officers is ratified by the CB.
One ECGD Officer is invited to attend the CB as a non-voting member.
The ECGD Officers advise the Management and act as LHCb contacts for all matters related to ECGD.

The ECGD Officers collate regular statistics and other relevant information to monitor progress related to gender and other protected characteristics, such as age, disability, family circumstances, sex, race and religion.

The ECGD Officers are available to listening to and advising colleagues, in a confidential manner, who feel they are subject to harassment, discrimination or other inappropriate behaviour as given in the Code of Conduct.

The ECGD Officers assist the Management in scheduling regular open meetings where ECGD matters can be discussed.

The ECGD officers have an official role in the governing board of the LHCb collaboration
ECGD officers monitor outcomes of various initiatives and collect statistics data
ECGD officers provide a safe space to address harassment, discrimination or other problems
LHCb Early Career, Gender and Diversity Office

News & web pickings
(last updated 8 July 2019)

19 Nov 2019
LHC Career Networking Event at CERN; agenda is in preparation, the format is going to be similar to that of the 2018 edition.

10 Jul 2019
ECGD talk by Vitalii Lisovskyi at EPS-HEP in Ghent.

6 Jul 2019
CERN’s Women in Technology (WIT) have their own Instagram channel, wit.at.cern.

5 Jul 2019
LGBTSTEM day, the International Day of LGBT in Research.

What are we here for?
To quote from the LHCb constitution,

The Early Career and Gender Diversity (ECGD) office oversees the well being and working environment of all LHCb members.

We are here for all issues related to gender and diversity and to the needs of our colleagues at an early career stage. In particular, we deal with issues related to any type of indirect or direct discrimination, be it on grounds of gender, sexual orientation, ethnicity, disability, creed, cultural background or other factors. Please contact us if you have experienced or witnessed any type of discrimination or harassment or any inappropriate behaviour in conflict with the LHCb Code of Conduct. We guarantee absolute confidentiality.

We organize plenary meetings at every LHCb collaboration week and we advertise news and activities related to ECGD issues through this web page and through emails to the collaboration. Please help us help you by letting us know of your concerns and by pointing us to relevant news, events and resources.

Contact
For general messages:
You can reach the ECGD office by email to lhcb.ecgd@cern.ch.

For all confidential matters:
Please contact us at our personal emails.

Links
ECGD:
LHCb mentoring programme
ECGD meetings
ECGD presentations
Using the news & web pickings since the last LHCb week as an illustration

Professional development

“bottom up” organization, initiatives proposed by individuals in the community

Promotion of equal opportunities irrespective of gender
ECGD: THE SCOPE II

10 Jul 2019
ECGD talk by Vitalii Lisovskyi at EPS-HEP in Ghent.

6 Jul 2019
CERN’s Women in Technology (WIT) have their own Instagram channel, wit.at.cern.

5 Jul 2019
LGBTSTEM day, the International Day of LGBT+ People in Science, Technology, Engineering, and Maths; LHCb and ECGD are supporters.

4 Jul 2019
Talk at CERN by Ben Britton, "No sexuality please, we’re scientists".

⇐Share information about our activities
⇐Connect with other organizations having similar goals
⇐Promote awareness of the importance of inclusion of all gender identities in our scientific community
⇐Connection between science and the reality of everyday society and the human actors which call themselves scientists.
Informal physics seminars to provide a more inclusive forum to examine topics relevant to the physics analysis work of young (and old) scientists [The StarterTalks]

Training sessions on the software tools [available online, partially coordinated with other collaborations]

Career advancement workshop, helping in planning the next steps [industry or academia]

Individual mentoring
The big idea: newcomers may feel intimidated to ask questions in normal seminars.

So back to the blackboard!

Series of seminars meant as true learning opportunities.

May evolve into physics-kit.
The LHCb Starterkit & Impactkit

- We are trained as physicists
- Newcomers overwhelmed by amount of software they have to learn
  - Tutorials often broken
  - Students modify inherited scripts, often very outdated

  **Solution: LHCb Starterkit**
  [https://lhcb.github.io/starterkit/](https://lhcb.github.io/starterkit/)

- **Volunteers** prepare detailed, up-to-date tutorials
  - Always accessible online
- One week of hands-on introductory courses (Nov-Dec) every year
  - Collaborate with other experiments: in 2018, with ALICE and SHiP
  - Advanced courses in Apr-May
- Social event: important for networking
Activities geared towards planning for the next step

- Career counseling
  - Towards work in academia
  - Mentoring transition to industry

- Tools
  - Talks, career workshop, networking events (in collaboration with other LHC institutions)
  - Mentoring
LHCb has a mentoring program, to help put early career physicists in touch with more experienced colleagues (complementary to the guidance they get from their supervisor or group leader)

A list is maintained and they are reachable by email, in person, or through the ECGD team.

Flexible program tailored to the needs of the mentees

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8/1/19 Marina Artuso DPF 2019
Gender and diversity

- Raise awareness about known issues
- Monitor progress on inclusion with periodic surveys and statistical analysis (e.g. management roles by gender)
ECGD and LHCb week

- At each collaboration meeting a plenary session with a duration of 1.5/2 hours has been organized by the ECGD group since December 2014.
- The meetings are planned by volunteers in the group.
- The meetings are well attended (by management too).

Examples of topics covered at recent plenary sessions:

- **18 Jun 2019**
  Main topic: Early Career initiatives in LHCb.

- **5 Mar 2019**
  Main topic: ECFA survey on the recognition of individual achievements in large collaborations.

- **6 Dec 2018**
  Main topic: Gender and diversity in LHCb - what should we learn for the upgrade?

- **6 Sep 2018**
  Main topic: importance of social events at workplace.

- **14 Jun 2018**
  Main topic: mental health in the research and academia community.

- **8 Mar 2018**
  Main topic: gender balance.

- **7 Dec 2017**
  Main topic: meetings - how to make them better?

- **21 Sep 2017**
  Main topic: statistics and notes on 2016 ECGD survey.
ECGD now: the weekly

• A part of the weekly LHCb newsletter
• Important to raise awareness

NEWS FROM THE EARLY CAREER GENDER AND DIVERSITY OFFICE

Many thanks to Barbara Sciascia for pointing us to this interesting article in Symmetry Magazine, <https://www.symmetrymagazine.org/article/from-physics-to-data-science>, in which "Four physicists share their journeys through academia into industry and offer words of wisdom for those considering making a similar move."

Two academic training lectures, on "Self-Control, Decision Fatigue, and Energy Depletion" <https://indico.cern.ch/event/752042/> and "Thinking about the Future" <https://indico.cern.ch/event/752043/> are going to take place at CERN on June 13/14. For those not at CERN, a video recording is promised to appear on the Indico pages a few days after.
Thanks a lot to Giovanni for making us aware of these lectures.

As a reminder, June 14 is also the day of the "Greve feministe" in Switzerland. The programme for Geneva is online: <https://www.14juingeneve.ch/>. You can still sign the "Academic Manifesto" at <http://www.feminist-academic-manifesto.org/>.

We have moved our web page <http://lhcb.web.cern.ch/lhcb/ECGD_Office/ECGD-intro.html> to the new version and you can find the mentioned links there as well. Please let us know of relevant news and events in your region, we'll be happy to advertise them here and through the webpage.
Conclusions

- The early career and gender diversity office is playing a significant role in the LHCb community promoting a more inclusive and welcoming climate for scientists at any stage of their career and with very diverse background and gender identity though
  - a multifaceted program encompassing a variety of networking and personal and professional development initiatives
  - providing a safe space to address issues of discrimination or harassment in a confidential manner
  - Striving to develop a friendly working environment (no enforcing power)
  - Raising awareness on climate issues through statistical analysis and periodic surveys
With many thanks to the current and past ECGD officers for their effort towards an ever growing program!