

Report from the LHC Experiments' Young Scientist Fora

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The LHC Early Career Scientist Fora (LHC ECSF) comprises the ALICE Junior Representatives, ATLAS Early Career Scientist Board (ATLAS ECSB), the CMS Young Scientists Committee (CMS YSC) and the LHCb Early Career, Gender and Diversity Office (LHCb ECGD). It aims to represent and meet the professional needs of early career researchers working on the four main LHC experiments. Its members act as contact persons for early career researchers in order to address issues affecting the early career researcher community, organise events and initiatives, and provide representation in experimental Collaboration or Management Boards. This conference proceeding provides an update about the ECSF's activities and upcoming plans.

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1. Introduction

The LHC Early Career Scientist Fora (LHC ECSF) comprises the ALICE Junior Representatives, ATLAS Early Career Scientist Board (ATLAS ECSB), the CMS Young Scientists Committee (CMS YSC) and the LHCb Early Career, Gender and Diversity Office (LHCb ECGD). The ALICE Junior Representatives was formed in 2013 and consists of 3 elected members, each with 2-year-long terms. They represent 765 members of the ALICE Collaboration who are within five years of PhD completion. The ATLAS ECSB was formed in 2017 and comprises 7 elected members, each with 2-year-long terms, in addition to a team of volunteers. They represent ATLAS members within 10 years of PhD completion. The CMS Young Scientists Committee (CMS YSC) was formed in 2013 and consists of a chair team of 3 elected members, and a team of volunteers. Members of the YSC chair team have terms of 1 year, which can be extended to 2 years. The YSC represents CMS members who do not have a permanent job contract; the exact number is difficult to ascertain due to career level not being specified in the CMS database, but it is at least 3000 CMS members. Finally, the LHC Early Career Gender and Diversity Office (LHC ECGD) was formed in 2014. It consists of 2 elected members and their terms are 1 year, which can be extended to 2 years. The LHC ECGD represents approximately 800 early career researchers in the LHCb Collaboration, where an early career researcher is considered to be all students and postdocs, although self definition is allowed (for example, for members of technical staff). This conference proceeding summarises the various activities conducted by the ECSF: fora-wide initiatives for which all forums collaborate together (Section 2). and forum-specific initiatives that are specific to each experiment (Section 3). A short summary is provided in Section 4.

2. Fora-wide initiatives

The LHC ECSF initiatives organised across the ECSF as a whole are: the LHC ECSF CERN Newcomers' Tours [1], the LHC Job Matching Event (JMEv) [2], the LHC Soft Skills Workshops [3], the Mentoring@CERN programme [4], the Mental Health Workshops [5] and surveys.

2.1 LHC ECSF CERN Newcomers' Tours

The LHC ECSF CERN Newcomers' Tours began in March 2022, originally as a CMS Young Scientists Committee initiative. It was later extended to be a fora-wide initiative in April 2023. It is mainly aimed at new arrivals to the CERN site, but it is open to anyone working at CERN. It enables for attendees to be taken on a walking tour of the CERN Meyrin site to help them to become more familiar with the areas needed on a day-to-day basis (e.g. where the experimental secretariats' office are, where collaboration-wide general meetings are held, how to take out a CERN bike, etc...). Tours are offered continuously every month, and tour slots are scheduled based on the availabilities of the registrants and the tour guides. The tours do not cover areas covered by the visits service. The tours are offered by members of the ECSF either on a newcomer's first day or as close to it as possible. The tours can either be one-on-one or in groups, and aims to help provide a friendly welcome to make their arrival less daunting. Some of the attendees later joined the ECSF after being taken on a tour.

2.2 LHC Job Matching Event

The JMEv was established in 2020 and was originally a CMS Young Scientists Committee-only event. It expanded to become a fora-wide initiative in 2023. It provides the platform for job seekers and recruiters, both currently working on an LHC experiment, to meet in one-hour-long moderated sessions. An individual session begins with 3-minute-long presentations by the job seekers in attendance, covering their career history and any relevant experience. There are typically a maximum of 8 job seekers assigned to each session. The remainder of the session time is designated for Q&A between the job seekers and recruiter, either about the job vacancy, research group or technical questions. The moderator ensures the job seekers do not run over time when presenting and that the recruiter balances the number of questions they ask to each candidate. The event also includes talks by motivational speakers, who have either a permanent or tenure-track position in high energy physics (HEP). For the first time, a motivational speaker from the CERN Alumni Network [6] was included in the JMEv Spring 2024.

2.3 LHC Soft Skills Workshops

The LHC Soft Skills Workshops each focus on soft skills; transferable skills associated with communicating and working with others. There have been nine LHC Soft Skills Workshops since 2020: "Job Hunting in HEP" [7]; "On Networking, Pro-activity and Enlarging our Circles of Influence" [8]; "Effective Teamwork in Large Collaborations" [9]; "What I wish I knew when I was a PhD student/postdoc" [10]; "Personal statement and research proposal writing" [11]; "Interview skills for academia" [12]; "Science communication" [13]; "CV-writing for academia and industry" [14] and "Making the best of working from home" [15]. They have mostly followed a panel discussion format with eight panellists (two from each of the four main LHC experiments), followed by Q&A. Some of the workshops were recorded, with the recordings available on the CMS YSC YouTube channel [16].

2.4 Mentoring@CERN

The pilot round of the Mentoring@CERN programme began in April 2024 following a merge of two existing mentoring programmes at CERN: the Women in Technology [17] and the LHC Early Career Mentoring [18] programmes. Anyone with a CERN affiliation can register to become a mentor or mentee, with no age or career level limits imposed. An information session was held in April 2024 to provide the opportunity for prospective mentors and mentees to gain more information about the programme and to ask their questions before registering. The pilot round started in June 2024 and will last for nine months. A total of 93 mentor-mentee pairings was made, which surpassed the combined total of the two programmes from 2023 (48 for the Women in Technology and 35 for LHC Early Career Mentoring programmes).

2.5 Mental Health Workshops

The ECSF has organised mental health workshops [5], in collaboration with psychologist Sarah Speziali, with the aim of increasing awareness about mental health topics. One workshop took place in May 2021 and the other in February 2023. The workshops covered understanding the differences between good and poor mental health, recognising the impact of mental health on people's social

lives and work environments, and learning how to be proactive when dealing with stress, anxiety, and depression.

2.6 Surveys

Surveys have been conducted in the LHC ECSF, led by the ALICE Junior Representatives and the CMS Young Scientists Committee. The ALICE Junior Representatives led a mental health check-in survey in 2023. 408 responses were recorded between May and June 2023. Preliminary results were presented at LHCP in 2023 [19]. The results are currently being analysed with a publication expected in 2024.

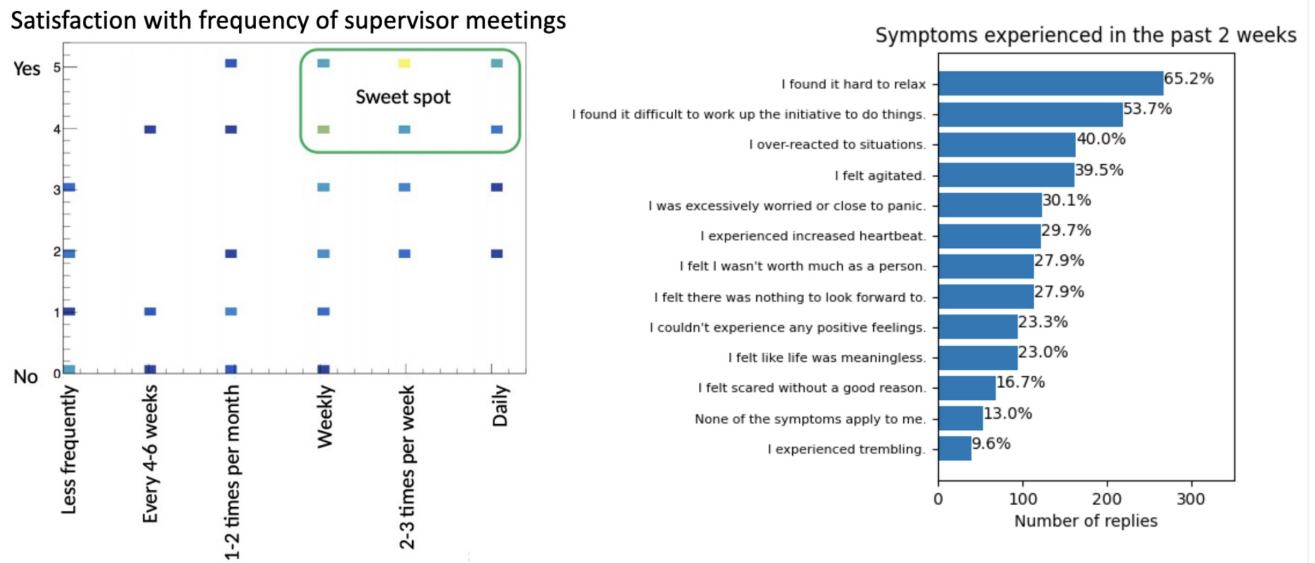


Figure 1: Left: A trend from the CMS PhD student satisfaction survey 2021. Right: Symptoms reported in the mental health check in survey 2023.

The CMS Young Scientists Committee has conducted four surveys since 2021: a satisfaction survey for CMS PhD students (2021), a survey on childcare that aimed to investigate if childcare facilities would improve attendance of CMS weeks (2021), a survey for the supervisors of CMS PhD students (2021) and a survey to investigate the awareness untenured CMS members have about CMS Collaboration Board matters (2024). Papers with overviews of the findings are in preparation.

3. Forum-specific initiatives

The ALICE Junior Representatives organise the ALICE Junior Ambassadors initiative, where the ambassadors act as national contact persons for ALICE early career researchers in the countries that they represent. The ambassadors also raise country-specific issues to the ALICE Junior Representatives. The Junior Representatives also organise ALICE Junior Days during ALICE Weeks. The Junior Days comprise a full afternoon of physics talks and open discussion, including with invited guests. The Junior Days end with a dinner funded by ALICE management, either in

Restaurant 1 at CERN or somewhere in Geneva. Finally, the Junior Representatives also maintain the Run 3 analysis resource website [20], which serves as an entry point for those conducting ALICE analyses.

The ATLAS ECSB organise an 'ATLAS Meet and Eat' event twice per year, a social networking event between pairs of junior and senior members of the ATLAS collaboration. The event is held in hybrid format. The ECSB members also organise three ATLAS Induction Days per year. Each are a full day event comprising talks and software/analysis tool tutorials, and a visit to see the ATLAS control room. The ECSB members also organise informal office hours with ATLAS Physics Coordination. Additionally, they hold Town Halls with ATLAS Management and Physics Coordination twice a year, consisting of pre-submitted and live questions. Finally, the ECSB volunteers initiative enables for early career researchers to contribute to the organisation of ECSB activities, with participation certificates awarded to volunteers.

The CMS YSC offer 'About the YSC' sessions [21] on an *ad-hoc* basis, which provide the opportunity for prospective volunteers to learn more about the YSC and the role it plays within the CMS Collaboration Board before they may choose to join the committee as members. The sessions can be either on Zoom or in person, with at least one member of the YSC chair team in attendance. The YSC also organises Coffee with Senior Scientists Events [22], in collaboration with the CMS Career Committee. Three have been held so far, in June 2023, February 2024 and April 2024. They provide untenured CMS members with the opportunity to ask any questions directly to senior CMS scientists. In January 2024, the YSC organised hour-long hybrid meetings with the spokesperson election candidates to provide the opportunity for untenured CMS members to question the candidates. Since 2020, the YSC has also offered social events. These were fully virtual during COVID-19 lockdowns and later became fully in person. Additionally, the YSC has a social media team comprising four people who manage the committee's Facebook [23], X (formerly Twitter) [24], Instagram [25] and YouTube [26] accounts, posting about YSC initiatives and retweeting anything of interest to the untenured CMS community, such as job opportunities. The YSC also present at the CMS Induction Course, which is organised by the CMS Engagement Office twice a year. Finally, the YSC has organised a YSC Regional Representatives initiative since Autumn 2023, where the representatives act as national contact persons for untenured CMS members in the country they represent. There are multiple representatives per country. They also help to keep the committee informed about the number of CMS institutes in their countries as well as research areas covered. They keep the committee informed about any upcoming events, workshops or conferences in their countries and keep untenured members informed about YSC initiatives.

The LHCb ECGD Office runs interactive plenary sessions on a variety of topics [27]. They also support the Laura Bassi initiative [28], which aims to tackle the under-representation of women in HEP, and the LHCb starterkit [29], which comprises programming workshops and LHCb software tutorials. The ECGD Office also organised leadership/diversity training for working group convenors in January 2021; the initiative planned to be repeated every two years. Finally, they maintain a weekly newsletter [30] and the ECGD webpage [27].

4. Summary

The LHC Early Career Scientist Fora represent and aims to help meet the professional needs of early career researchers working on the four main LHC experiments. This is achieved by providing representation in experimental Collaboration or Management Boards, acting as contact persons, and organising events and initiatives. These include the LHC ECSF CERN Newcomers' Tours, LHC Job Matching Event (JMEv), LHC Soft Skills Workshops, Mentoring@CERN programme, Mental Health Workshops, surveys, social and networking events, talks and software/analysis tool tutorials. The Fora has elected members, while the ATLAS ECSB and CMS Young Scientists Committee also have voluntary members who contribute to the organisation of initiatives. A mental health check-in publication note is currently being drafted, led by the ALICE Junior Representatives, and publication is expected in 2024. There are also plans to publish overviews of the results of the CMS Young Scientists Committee surveys.

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