

ECRs in instrumentation talk at Pisa Meeting on Advanced
Detectors
ECFA ECR Panel Meeting

Armin Ilg

Physik-Institut
University of Zürich

14.06.2022

Original idea: Collecting **ECR input on training in instrumentation**

- Direct input from ECFA ECR panel
- Open [Townhall meeting](#) with interesting discussions in April 2021
- Survey filled by 473 ECRs from all over Europe (and beyond). Closed and open questions

Results were presented in [ECFA Detector R&D Roadmap Symposium on Training](#) and are summarised in [2107.05739](#) ← check out for details!

ECFA ECR Detector R&D WG

Jan-Hendrik Arling, Liron Barak, Katie Dunne, A.I, Adrián Irles, Magdalena Kuich, Predrag Milenovic, Steven Schramm, Mariana Shopova, Sarah Williams

Background

Original idea: Collecting **ECR input on training in instrumentation**

- Direct input from ECFA ECR panel
- Open [Townhall meeting](#) with interesting discussions in April 2021
- Survey filled by 473 ECRs from all over Europe (and beyond). Closed and open questions

Results were presented in [ECFA Detector R&D Roadmap Symposium on Training](#) and are summarised in [2107.05739](#) ← check out for details!

ECFA ECR Detector R&D WG

Jan-Hendrik Arling, Liron Barak, Katie Dunne, A.I, Adrián Irles, Magdalena Kuich, Predrag Milenovic, Steven Schramm, Mariana Shopova, Sarah Williams

Email from Pisa Meeting organisers

The conference is focused on instrumentation and we feel it would be beneficial to hear the views from early career researchers who will have to develop and build the instrumentation of the future. I am particularly sensitive to the issues of career development for instrumentation physicists. I had a nice conversation with Francesco Brizioli who suggested contacting the organizers lists to discuss the possibility and help select a prospective speaker.

You can find the slides [here](#)

- Birth of ECFA-ECR panel from ECR input to 2020 strategy update ([2002.02837](#))
- ECFA-ECR panel structure and overview on activities
- Results of Instrumentation R&D WG

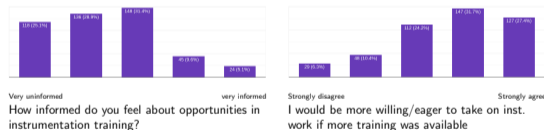
Results of Instrumentation R&D WG (1/2)

Limited amount of time → Focus on three key aspects:

- Training in instrumentation
- Instrumentation networks
- Diversity and inclusion

Training in Instrumentation

30% had expressed an interest in instrumentation training but were **not able to access it**



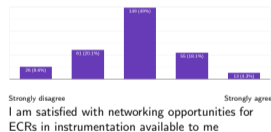
→ ECRs **want to do instrumentation training**, but **don't feel informed** about it

→ Respondents that **had instrumentation training in MSc./PhD.** were more likely to view instrumentation as a **benefit** to their careers and as something they **enjoy**

- 61% stated that their experience of remote training/work in instrumentation was positive
- 79% thought that the peer-to-peer training they had was useful → Also for **networking!**

Instrumentation Networks

COVID-19 struck ECRs in instrumentation hard as hands-on training and work are crucial



I am satisfied with networking opportunities for ECRs in instrumentation available to me

- **Not many satisfied** with networking opportunities in instrumentation!
- Maybe influenced by survey circulation time during COVID-19 (04/2021)
- Not many cross-experiment networks in instrumentation
- How to support increasing interdisciplinary? (i.e quantum sensors)

→ More workshops/summer schools devoted to instrumentation to connect those working in different experiments/user facilities

→ Having suited **channels to advertise networking and training opportunities** is as crucial as actually organising them!

Diversity and Inclusion

Only covering some key points (check [symposium on training slides](#) and [report](#) for more)

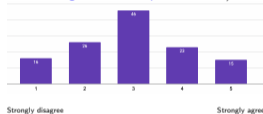
Gender identity related issues:

- Assumptions that women wouldn't want to get involved in instrumentation
- Being treated differently in meetings, sexism in the workplace

Geographical diversity:

- Lack of facilities for instrumentation training

Remote training is an opportunity to lower barriers due to e.g travel, financial or care-related constraints!



Strongly disagree Strongly agree
My identity as underrepresented minority has impacted my training experience

42 out of 126 respondents say that there was an impact on their training experience!

Followed by some ideas for action and discussion points

Diversity and Inclusion

Only covering some key points (check [symposium on training slides](#) and [report](#) for more)

Gender identity related issues:

- Assumptions that women wouldn't want to get involved in instrumentation
- Being treated differently in meetings, sexism in the workplace



Strongly disagree
My identity as underrepresented minority has impacted my training experience
Strongly agree

42 out of 126 respondents say that there was an impact on their training experience!

Geographical diversity:

- Lack of facilities for instrumentation training

Remote training is an opportunity to lower barriers due to e.g travel, financial or care-related constraints!

Ideas for Action and Discussion Points

Identified some key needs of ECRs in instrumentation:

- More networking opportunities specifically for instrumentation
 - ECFA-ECR panel discussion on instrumentation (to be announced soon), could be a series
- Lacking information about instrumentation training
 - Webpage for collecting information about instrumentation schools (inspired by [webpage on HEP semiconductors](#)): <https://early-career-instrumentation.web.cern.ch/>

Lot of **interest and enthusiasm in instrumentation** work in the ECR community!

Possible discussion topics during the week

- Inter-experimental networking opportunities
- Collecting initiatives relevant for ECRs in instrumentation and make them known widely
 - Instrumentation R&D e-group?
- Recognition of instrumentation work

Some correlated efforts:

- AIDAInnova [Task 2.3](#)
- ECFA-ECR Survey on career perspectives

- Great interest in issues of ECRs in instrumentation, also in ECFA ECR panel in general
- Many discussions, among ECRs AND seniors
- Recognition of instrumentation work and providing (alternative) career paths for instrumentalists are big concerns
- An instrumentation conference of course is fertile ground for these issues
→ These discussions need to happen elsewhere as well!
- Writing a proceeding of this talk: Who should be the author?
- Was approached by Tommaso Dorigo, editor of "Reviews in Physics"
→ **We could write an article for the journal about these issues and needed actions**

- Great interest in issues of ECRs in instrumentation, also in ECFA ECR panel in general
- Many discussions, among ECRs AND seniors
- Recognition of instrumentation work and providing (alternative) career paths for instrumentalists are big concerns
- An instrumentation conference of course is fertile ground for these issues
→ These discussions need to happen elsewhere as well!
- Writing a proceeding of this talk: Who should be the author?
- Was approached by Tommaso Dorigo, editor of "Reviews in Physics"
→ **We could write an article for the journal about these issues and needed actions**

What do you think?

Thank you