

Welcome & Introductions

HEP Early Career Award Network Summer 2023 Workshop

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Michael Mooney (Colorado State University), Kazuhiro Terro (SLAC),
Faya Wang (SLAC), Peter Winter (ANL)

8-9 June 2023

Background and history

- Currently there have been 146 HEP Early Career Awardees from the beginning of the program in FY 2010
 - 58 at National Laboratories & 88 at Universities
- The mission of the High Energy Physics (HEP) Early Career Award Network (ECAN) is to organize past and present awardees to make a strong, beneficial impact to the overall DOE HEP program.
- We do this by connecting awardees from all areas of HEP science and technology research, by providing networking and career development resources, and by attracting, inspiring, and supporting exceptional STEM talent.

Background and history

- This network was first suggested by Program Manager Dr. Alan Stone in 2019 in order to provide a supported resource to connect, collaborate and amplify efforts of Early Career Awardees and to provide more uniform engagement with the broader HEP community and other stakeholders (NSF, NASA, other Office of Science programs).
- Several objectives were proposed:
 - Driven by a sub-group of the community
 - HEP provides some seed funding to get started
 - Enable members to have greater role in community planning (P5)
 - Develop a formal structure
 - Develop competitive and/or bridge funding for post-docs and grad students
 - Expand network to adjacent programs (NP, BER, BES, ASCR, etc)
 - BES recently started a similar effort in Early Career (not just awardees) network

Background and history

- The first virtual meeting was held in Oct 2020, to brainstorm what such a ECAN program might look like. This led to a ½ day workshop in March 21, 2021
 - <https://indico.fnal.gov/event/48127/>
 - Also organized through SLACK Channel: <http://hep-eca-alumninetwork.slack.com>
- This 4-hour meeting concluded with the decision to follow up with an in-person meeting that expanded on the topics of interest that were discussed:
 - Career Development
 - DEI
 - Mentoring
 - Networking
- After pausing active work on the network due to the SNOWMASS process we began planning for a hybrid in-person / virtual workshop with the ultimate goal of laying out a more detailed charter for the program.

Current Organizing Committee

- Initially this was led by Sam Posen & Jen Raff at Fermilab
- After the first ½ day workshop they handed co-lead responsibility to GP Carosi (LLNL) & Kazu Terao (SLAC).
- We worked with Missy Miller of ORISE to assist in organizing meetings.
- Joined by Rupak Mahapatra (Texas A&M), Peter Winter (ANL), Michael Mooney (Colorado State) and Faya Wang (SLAC) as part of the overall organizing committee.
- Meetings were initially bi-weekly (have moved to a weekly format).
- Anticipate maintaining a modest sized executive committee (6-8 members?) with rotating leadership / membership in the 1-2 year level of commitment
 - Would like to maintain a balance between Labs and Universities.
 - Open to other organizational structures.

Scope

This workshop will focus on establishing the initial setup of working groups for the **four** major topics so far identified,

1. Mentoring and Career Development
2. Scientific Collaboration
3. DEI / Community Outreach,
4. Project Management.

and define initial timelines and milestones for the ECAN

The workshop offers several keynote speakers on selected topics and a variety of networking opportunities for ECAN members to get to know each other.

The expected results of this workshop will be essential for defining the structure of the Early Career Awards Network by focusing both the needs of the new ECA members and the experiences of the alumni.

Resources

Initially ORISE (Oak Ridge Institute for Science and Education) was brought in to provide the facilitator (Missy Miller) and services such as web-site hosting.

It was later determined that ORISE's Scope of Work was limited to temporary programs (operating a review for example) and did not allow for permanent and ongoing programs which the ECAN network aspires to be.

Though we still have access to the [ORISE Sharepoint](#) and the currently hosted [ECAN website template](#) we have saved the relevant information gathered there to google drives with the aim of transferring to a more permanent home (perhaps hosted by a National Lab).

Website Template

Open question on where to permanently host the website

Needs a champion to pull in the material and curate it.

<https://cvent.me/qzE7gy>

The screenshot displays a website template for the Early Career Award Network. At the top, a dark navigation bar contains the following links: Home, About (with a dropdown arrow), FAQ, Events Calendar, Progress Reports, Proposals, Best Practices, Funding Opportunities, and Library. Below this is a large green banner with the text "Early Career Award Network" in white. The main content area features a blue header with the mission statement: "The mission of the High Energy Physics (HEP) Early Career Award Network (ECAN) is to organize past and present awardees to make a strong, beneficial impact to the overall DOE HEP program. We do this by connecting awardees from all areas of HEP science and technology research, by providing networking and career development resources, and by attracting, inspiring, and supporting exceptional STEM talent." Below the text is a large image of a cryogenic germanium detector, showing its copper housing and the internal TES array. A caption below the image reads: "A cryogenic germanium detector fabricated by the Mahapatra group @TAMU for the SuperCDMS SNOLAB project. The detector has more than a thousand Transition Edge Sensors (TES) photolithographically patterned on a kg-scale germanium crystal to detect low-energy interactions in the crystal from potential low-mass Dark Matter interactions. TAMU and SLAC shared the detector payload fabrication for the project." The TAMU logo is visible in the bottom right of the image. At the bottom of the page, there is a row of small thumbnail images and a green button labeled "2023 ECA Network Workshop".

Home About ▾ FAQ Events Calendar Progress Reports Proposals Best Practices Funding Opportunities Library

Early Career Award Network

The mission of the High Energy Physics (HEP) Early Career Award Network (ECAN) is to organize past and present awardees to make a strong, beneficial impact to the overall DOE HEP program. We do this by connecting awardees from all areas of HEP science and technology research, by providing networking and career development resources, and by attracting, inspiring, and supporting exceptional STEM talent.

A cryogenic germanium detector fabricated by the Mahapatra group @TAMU for the SuperCDMS SNOLAB project. The detector has more than a thousand Transition Edge Sensors (TES) photolithographically patterned on a kg-scale germanium crystal to detect low-energy interactions in the crystal from potential low-mass Dark Matter interactions. TAMU and SLAC shared the detector payload fabrication for the project.

2023 ECA Network Workshop

The screenshot shows the "LIBRARY" section of the website. It features a "Videos" subsection with a video player. The video title is "Hunt for the Axion with the ADMX Experiment". The video player interface includes a progress bar at 27:34 and a "vimeo" logo. Below the video player, there is a "News Events" section with a list of four items, and a "Papers" section with a list of four items.

LIBRARY

Videos

Hunt for the Axion with the ADMX Experiment

ECANS 2-24-23.mp4

Hunt for the Axion with the ADMX Experiment

Early Career Alumni Network (ECAN)
Gianpaolo (GP) Carosi
Feb 17th, 2023

27:34

News Events

- Item 1
- Item 2
- Item 3
- Item 4

Papers

- Item 1
- Item 2
- Item 3
- Item 4

Workshop plan – Presentations

Understand the big picture: HEPAP/P5/Budget/Project Management/Early Career

Presentations are 20 mins + 10 mins Q&A

Lightning talks from each of the HEP frontiers with quick summary and specific research enabled by ECA

Presentations are 12 mins + 3 mins Q&A

We have twice as many virtual attendees as in-person signed up

People will take turns between in-person and virtual participants to ensure equity in discussions.

In-person attendees will use a hand-held microphone to speak, when prompted by the moderator. The moderator will cycle through virtual and in-person participants.

Workshop plan – Discussion Sessions

Questions to consider: [google doc](#)

1. Project Management

- a.** Can the ECAN provide or point to training in how to work on Projects of various sizes.
- b.** What are effective ways for the HEP PIs to engage with Project Controls and Engineering support as they work on projects of various sizes?
- c.** Is there feedback that ECAN members can provide to DOE to better guide how projects are managed?
- d.** How are big projects managed by DOE? How do the National Labs and the Universities collaborate and find optimum balance of project and collaboration needs for medium and large experiments?

Workshop plan – Discussion Sessions

Questions to consider: [google doc](#)

2. Scientific Collaboration

- a. How to identify collaborators with complementary skills and expertise?
- b. How can I effectively communicate my research interests and goals to potential collaborators?
- c. How can I establish trust and build relationships with potential collaborators?
- d. How can I ensure that all collaborators are appropriately acknowledged and credited for their contributions?
- e. How can the ECAN facilitate the building of scientific collaborations?
- f. Next steps (do we maintain a working group and what is their specific goal)?

Workshop plan – Discussion Sessions

Questions to consider: [google doc](#)

3. Mentoring & Career Development

- a. How does one find a good mentor?
- b. What should I expect as a mentee and how do I get the most out of mentoring sessions?
- c. What skills should I develop to be an effective mentor?
- d. How can I provide mentoring to ECA applicants at my own institution?
- e. How can the ECAN help in guiding members to effective mentoring training material?

Workshop plan – Discussion Sessions

Questions to consider: [google doc](#)

4. Diversity, Equity and Inclusion (DEI) & Outreach

- a. How can the ECAN effectively share best practices in DEI and Outreach?
- b. What works and what doesn't, while developing hiring and retention practices with DEI in mind?
- c. Where are ECAN members current participating in outreach activities and are there ways to expand?
- d. What are barriers to increasing diversity in HEP and how can the ECAN help to rectify it?

Workshop Deliverables

By the end of the day on Friday we'd like to present a summary of the discussions and an actionable plan for the next year to implement including:

1. Laying out regular meetings, training sessions and information gathering sessions for the various sub-activities
2. Identify a plan to populate the ECAN website as a resource for the community.

Produce an updated statement of work draft that will be developed for DOE HEP to consider supporting.

Outlook

We appreciate the strong support from our initial survey (approximately 2/3rd response from the Early Career community).

Healthy turnout in-person and virtually during this busy season (thank you!)

We have a solid framework to start with but welcome additional help and suggestions on how to continue to streamline the program!

