# Early Career Scientists: Welcome!

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Bootcamp 2022

Borrowed heavily from Delia Tosi's 2016 Bootcamp talk

# THE ICECUBE COLLABORATION

**319 People
56 Institutions
14 Countries**

**AUSTRALIA**
University of Adelaide

**BELGIUM**
UCLouvain
Université libre de Bruxelles
Universiteit Gent
Vrije Universiteit Brussel

**CANADA**
SNOLAB
University of Alberta–Edmonton

**DENMARK**
University of Copenhagen

**GERMANY**
Deutsches Elektronen-Synchrotron
ECAP, Universität Erlangen-Nürnberg
Humboldt–Universität zu Berlin
Karlsruhe Institute of Technology
Ruhr-Universität Bochum
RWTH Aachen University
Technische Universität Dortmund
Technische Universität München
Universität Mainz
Universität Wuppertal
Westfälische Wilhelms-Universität
    Münster

**ITALY**
University of Padova

**JAPAN**
Chiba University

**NEW ZEALAND**
University of Canterbury

**SOUTH KOREA**
Sungkyunkwan University

**SWEDEN**
Stockholms universitet
Uppsala universitet

**SWITZERLAND**
Université de Genève

**TAIWAN**
Academia Sinica

**UNITED KINGDOM**
University of Oxford

**UNITED STATES**
Clark Atlanta University
Drexel University
Georgia Institute of Technology
Harvard University
Lawrence Berkeley National Lab
Loyola University Chicago
Marquette University
Massachusetts Institute of Technology
Mercer University
Michigan State University

Ohio State University
Pennsylvania State University
South Dakota School of Mines
    and Technology
Southern University
    and A&M College
Stony Brook University
University of Alabama
University of Alaska Anchorage
University of California, Berkeley
University of California, Irvine
University of Delaware
University of Kansas

University of Maryland
University of Rochester
University of Texas at Arlington
University of Utah
University of Wisconsin–Madison
University of Wisconsin–River Falls
Yale University

**IceCube**
South Pole Neutrino Observatory

icecube.wisc.edu

# Useful resources

IceCube information lives in a variety of places.

I suggest you double check that what you find is not obsolete!

- **Wiki:** https://wiki.icecube.wisc.edu/
    - Working groups, phone calls, analyses, papers
- **Docushare:** https://docushare.icecube.wisc.edu/dsweb/HomePage
- **Software:** https://software.icecube.wisc.edu/
- **Google Drive:** https://drive.google.com/drive/folders/0ByNbmxZGFYM7QUxJWXlNcUNrLVE?resourcekey=0-qi3LE1suN3PJhjPGDaPg1A&usp=sharing
- **Mailing lists:** http://lists.icecube.wisc.edu/
- **Slack:** https://icecube-spno.slack.com/
- **Galleries:** https://gallery.icecube.wisc.edu/internal/main.php
https://icecube.wisc.edu/gallery/

# Some Slack channel recommendations

**#idontgetit**     Ask IceCube-related questions you don't know where else to ask, or that you want to ask anonymously

**#ecs**     For Early Career Scientists (ECS)

**#icecube-it**     IT related issues: "Is cobalt/the cluster down?"

**#banana-party**     Informal social events/organizing: "Does anyone at Bootcamp want to go to the Terrace?"

**#software**     "Can someone add me to the IceCube github?"

**#off-topic**

**#gradstudents**

**#job-postings**

**#icecube**

# How does the collaboration work?

- **Governance document version 9.1**:
  - https://res.cloudinary.com/icecube/images/v1646848844/IceCube-governance-v9-1-20220307/IceCube-governance-v9-1-20220307.pdf
- **Ever up-to-date governance document** on:
  - https://icecube.wisc.edu/collaboration/organization/
- **IceCube Collaboration Board (ICB):**
  - Comprised of 1-2 PIs from each institution.
  - Meets a few times during/around each collaboration meeting.
  - Each institution votes with a weight, $w = \mathrm{int}(\sqrt{\text{\# PhDs}})$
  - Early Career Scientists (ECS) get 1 vote
- Fee is paid by each institution to the "Common Fund". The fee is proportional to the number of PhD scientists.
- **Ignacio Taboada** is our current spokesperson

# Early Career Scientists (ECS)

- *"Member of the IceCube collaboration who has received their Ph. D. within 7 years of the most recent past January 1st, but who has not received an assistant professor or tenured position; or who is a graduate student who has been on the author list for two years."*

- There are two **ECS representatives:**
  - Marjon Moulai (WIPAC, 01/2022 - 01/2024)
  - Brian Clark (MSU, 01/2021 - 01/2023)
  - Elected by ECS. Serve 2-year terms.

- **ECS meetings:**
  - One at each collaboration meeting. Can be more, virtually, throughout the year.
  - Bring up young scientists' issues.

- ECS reps present at ICB meetings.

- ECS gets 1 vote at ICB.

# When do I become an author?

- *"As a rule collaborators may become authors six months after joining the collaboration. They are normally removed from the list one year after leaving. This period may be extended in special cases of former collaborators who contributed essential effort to the construction of IceCube."*

- Institutional leads add members to the author list.

- **Author list:**     https://authorlist.icecube.wisc.edu/icecube (searchable by date)

# How do I do an IceCube analysis?

See page 1
https://wiki.icecube.wisc.edu/images/0/0f/Analysis_in_the_IceCube_collaboration_-_2021-05-10.pdf

Analysis overview          https://wiki.icecube.wisc.edu/index.php/Analysis_overview

# How do I give an IceCube talk at a conference?

1. Ask your advisor

2. Ask your working group leads

3. Ask Speakers Committee
   icecube-speakerscom@icecube.wisc.edu
   https://wiki.icecube.wisc.edu/index.php/Speakers_Committee

Make sure your plots are approved!

See page 2:
   https://wiki.icecube.wisc.edu/images/0/0f/Analysis_in_the_IceCube_collaboration_-_2021-05-10.pdf

# Collaboration meetings

- **Twice a year**
  - Generally Spring meeting in Europe and fall meeting in U.S.
  - Generally every other U.S. meeting in Madison
- Very busy! ~5 days IceCube, often preceded by **pre-meetings** and followed by **post-meetings**
- Often lots of social events (organized and not) – see #banana-party
- Intense! Pace yourself.
- Workload is often very high before the meetings. The computer cluster will be very busy.
- **Suggestion:** Plan on taking it easy immediately after a collaboration meeting. If you traveled somewhere cool, consider taking a few days off there (if you can).

# Will I go to Pole?

- You can't know for sure!
- Most people think it's awesome, but some hated it
- Before the pandemic, sent several (or more) people every year
- Criteria is important for selection:
  - Service work!!!
  - Fit to specific activities planned for the season
  - Number of years in IceCube
- More people go when construction is occurring
- Actively seeking drillers for IceCube Upgrade
- If you are interested, talk with your supervisor and to Farshid Feyzi if you want to drill