

ERIN O’SULLIVAN

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Education

- PhD in Physics, Queen’s University, Canada: 2014

Current and Previous Positions

- Universitetslektor, Uppsala University, Sweden: 2019 – present
 - Postdoctoral Fellow, Stockholm University, Sweden: 2017 – 2019
 - Postdoctoral Fellow, Duke University, USA: 2014 – 2017
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External funding

- ERC research infrastructure grant for “Astrophysics Center for Multimessenger studies in Europe” (15M EUR total - 105 300 EUR my share), 2025 – 2029, co-applicant
 - Forskningsinfrastrukturbidrag (research infrastructure grant) from the Swedish Research Council for “Infrastructure for astroparticle physics with neutrinos” (28,291,000 SEK), 2025 – 2029, main applicant
 - Forskningsinfrastrukturbidrag (research infrastructure grant) from the Swedish Research Council for “IceCube Neutrino Observatory” (11,418,000 SEK total - 1 341 100 SEK my share), 2022 – 2024, co-applicant
 - Etableringsbidrag (starting grant) from the Swedish Research Council for “Neutrinos from supernovae in IceCube and Hyper-Kamiokande” (3,300,000 SEK), 2020 – 2024, main applicant
 - Research grant from Stockholm University for the project “New Windows to the Universe: The Hyper-Kamiokande Neutrino Experiment” (150,000 SEK), 2018 – 2019, main applicant
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Scientific Leadership

- Chair of the IceCube publications committee, which is responsible for coordinating and setting collaboration policies for the roughly 20 publications per year from the collaboration. The chair of the publication committee also sits on the IceCube executive committee and is a ex-officio member of the governing board of representatives. March 2023 – present
- Deputy chair of the IceCube publications committee 2022 – 2023
- Lead of the IceCube supernova scientific working group, one of the six central physics groups in the collaboration, 2020 – present
- Swedish representative on the Hyper-Kamiokande international board of representatives, the main management body of the collaboration. 2018 – present
- Committee member for the IceCube Impact Award, a prize that recognizes the work of early career members within the IceCube collaboration, 2021 – present
- Topical group convener for the “Neutrinos from natural sources” group in Snowmass2021, the decadal planning survey for the US high energy physics community, 2020 – 2022
- Board member of the Particle Physics Division in the Swedish Physical Society, co-organizer of the Swedish particle physics annual meeting (Partikeldagarna2020), 2020 – present
- Convener of the firedrill work package for the SuperNova Early Warning System (SNEWS2.0), an initiative to improve the neutrino alert system for galactic supernovae, 2019 – present

- Co-convener of the Hyper-Kamiokande software working group, 2017 – 2021
- Co-coordinator and corresponding author of the Hyper-Kamiokande design report (arXiv:1805.04163), 2018
- Evaluation committee for 4 PhD defences, in Sweden and abroad

Invited presentations

(24 invited presentations since 2015, including 3 international summer schools)

Below I list a selection of invited presentations:

- Cosmic Rays and Neutrinos in the Multi-Messenger Era, Paris, France, December 2024 (planned), “IceCube from MeV to PeV”
- APS April Meeting Invited Session, Sacramento, California, USA, April 2024, “IceCube-Gen2: A new frontier in detecting the elusive neutrino messenger”
- IAU Symposium on The Multimessenger Chakra of Blazar Jets, Kathmandu, Nepal, November 2022, “Exploring the extreme universe with the IceCube Neutrino Observatory and IceCube-Gen2”
- SKKU International summer school, Seoul, South Korea (virtual), June 2022, “Astrophysical Neutrinos at the IceCube Observatory”
- Lund Science Seminar, Lund, Sweden (virtual), November 2021, “Supernova neutrino physics with IceCube and Hyper-Kamiokande”
- New windows to the Universe symposium, Royal Swedish Academy of Sciences, Stockholm, Sweden, November 2018. “Neutrino Astronomy with IceCube”
- 16th Conference on Flavor Physics and CP violation, Hyderabad, India, July 2018. “Latest results from IceCube and status of future astrophysical neutrino experiments”
- International Workshop on Next Generation Nucleon Decay and Neutrino Detectors (NNN), University of British Columbia, Vancouver, Canada, November 2018. “Current and future prospects of solar and supernova neutrinos”
- International Workshop on Neutrinos from Accelerators (NuFact), Uppsala University, Uppsala, Sweden, September 2017. “Status of the Hyper-Kamiokande Experiment”
- International Workshop on Neutrino-Nucleus Scattering in the Few-GeV Region (NuInt), The Fields Institute, Toronto, Canada, June 2017. “Low Energy Neutrino Experiment Overview”
- Caltech Gravitational Wave Astrophysics School, California Institute of Technology, Pasadena, California, July 2015. “Neutrinos and Neutrino Detection”

Supervision

Current and past group members:

- Emile Moyaux, Joint principal supervisor (UC Louvain, Belgium): 2024 – present
- Martin Råven, Co-supervisor: 2023 – present
- Ting Wing Choi, Co-supervisor: 2022 – present
- Jakob Beise, Principal supervisor: 2021 – present
- Nora Valtonen-Mattila, Principal supervisor: 2020 – 2024 (now a postdoc at Ruhr University Bochum)
- Ankur Sharma (postdoc): 2020 – 2022 (now a postdoc at University of APC)

Teaching

My primary course is Advanced Quantum Mechanics, for which I am the course director. I also teach the lessons in the Elementary Particle Physics course and am the lab coordinator for one section of the course Electromagnetism I.