Ulster University
Intelligent Systems Research Centre

Computational Neuroscience, Neurotechnology & Neuro-inspired

(ISRC-CN<sup>3</sup>)

**Summer School** 

26-30 August 2024











IEEE Engineering in Medicine & Biology Society





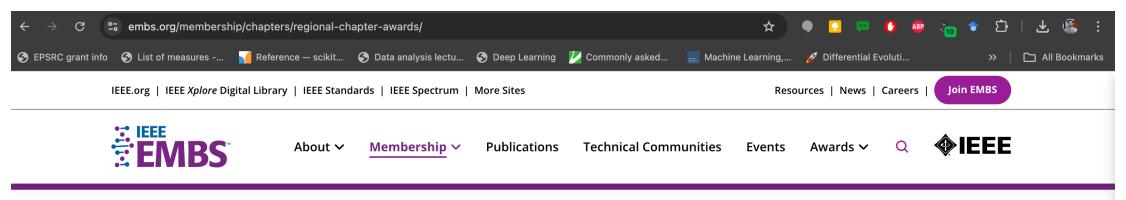


## The School

 Conceptualized to train the next generation of researchers on state-of-the-art developments on computational neuroscience, neurotechnology and neuro-inspired Al

Started in 2021; 4<sup>th</sup> year and beyond

Showcases the research capabilities of ISRC



Home > Membership > EMBS Chapters > Regional Chapter Awards

#### **2024 Best Regional Professional Chapter Winners**

UK - Ireland

Malaysia

Colombia

Jordan

Lone Star

#### **2024 Best Regional Student Chapter Winners**

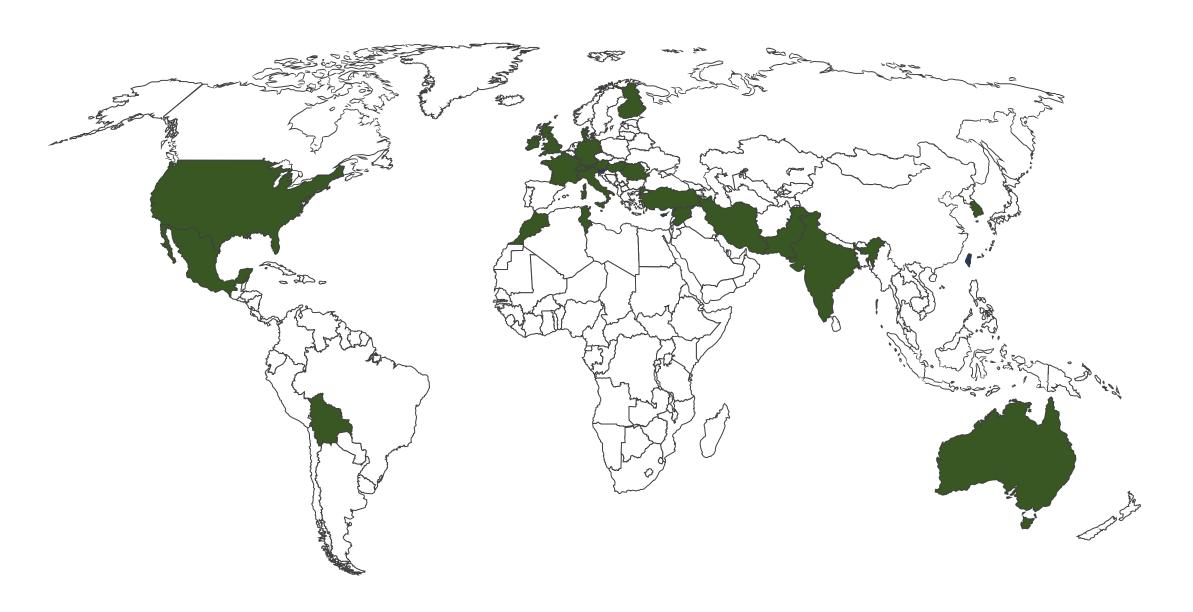
Indian Institute of Technology – Kharagpur
National Technical University of Athens
Latin University from Panama
National School of Electronics and Telecoms

#### **2024 Best Overall Regional Chapter Winners**

Professional: UK - Ireland

Student: Indian Institute of Technology – Kharagpur

# Applicants from 22 countries



## Affiliation























Massachusetts
Institute of
Technology











**AUP** 

The American University of Paris











# Affiliation













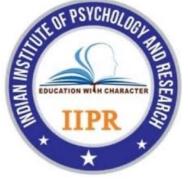
UNIVERSITY OF COPENHAGEN





**NISER** 



















## **Maastricht University**



University Mohammed VI Polytechnic







## Affiliation







Salute Devices

Rehumanity

AutocurriculaLab, NeuroAlLab & LangTechAl

## Housekeeping

- Latest update of the information booklet available on GitHub (<a href="https://github.com/ISRC-CN3/General-Information">https://github.com/ISRC-CN3/General-Information</a>)
- The GitHub link (<a href="https://github.com/ISRC-CN3">https://github.com/ISRC-CN3</a> ) will be where the Summer School's resources will be stored and made available
- Join the ISRC-CN3 2024 Slack (<a href="https://join.slack.com/t/isrccn32024/shared-invite/zt-2ohou3y42-BzpMftB~hW7GIMTzyAspDQ">https://join.slack.com/t/isrccn32024/shared-invite/zt-2ohou3y42-BzpMftB~hW7GIMTzyAspDQ</a>) for queries, discussions, networking, etc.
- Online attendees: Please turn off your microphone when not speaking use chat box for questions.
- Please do not talk during lecture
- Videos of recorded presentations made available at end of day don't share to non-attendees
- In-person attendees:
  - On arrival today, please complete registration at Reception
  - **Temporary username and password** will be provided to access our lab computers on Day 1 Lab session.
  - Each morning, please sign-in at the reception of the ISRC building
  - Wi-fi Guest Account joining instruction: <a href="https://www.ulster.ac.uk/ds/services/wifi-services/visitor-wifi">https://www.ulster.ac.uk/ds/services/wifi-services/visitor-wifi</a>
  - Coffee, tea breaks and Lunches will be provided and held at MU301, MU Building
  - Thursday (29<sup>th</sup> August) dinner will be held at Stitch & Weave, Derry, at 7:30pm
  - Derry City Tour Keep an eye out for the weather!!!

- Monday, 26<sup>th</sup> August:
- Madeleine Lowery (9.30am 10.30am GMT): <a href="https://teams.microsoft.com/l/meetup-join/19%3ameeting\_OTkxNGY0ZDMtYWI5Zi00MWJkLTgxODktZWU1OWZhMzNkNGMw%40thread.v2/0?context=%7b%22Tid%22%3a%226f0b9487-4fa8-42a8-aeb4-bf2e2c22d4e8%22%2c%22Oid%22%3a%22d3079e99-7fd1-41a0-ae91-5192657eae6c%22%7d</a>
- Daniela Tropea (10.45am 12.45pm GMT): <a href="https://teams.microsoft.com/l/meetup-join/19%3ameeting\_Mjk3MGJhNGltMGMwMS00ZWYzLTg3YTQtOGY3Mzk5YjZlMTJi%40thread.v2/0?context=%7b%22Tid%22%3a%226f0b9487-4fa8-42a8-aeb4-bf2e2c22d4e8%22%2c%22Oid%22%3a%22d3079e99-7fd1-41a0-ae91-5192657eae6c%22%7d</a>
- Lunch & Derry City Tour (12.45pm 3.00pm GMT)
- Barry Dillon (3.15pm 5.15pm GMT): <a href="https://teams.microsoft.com/l/meetup-join/19%3ameeting\_YzQwNGFmNzAtYzQyNi00MGFhLWJmZDUtMjg3MzQ1ZWRkNTBI%40thread.v2/0?context=%7b%22Tid%22%3a%226f0b9487-4fa8-42a8-aeb4-bf2e2c22d4e8%22%2c%22Oid%22%3a%22d3079e99-7fd1-41a0-ae91-5192657eae6c%22%7d</a>
- Lab (5.30pm 7.00pm GMT): <a href="https://teams.microsoft.com/l/meetup-join/19%3ameeting\_MGQyNGI4ZmQtYThjYi00ZTk3LWE1M2MtYzViMzc3OTY1MGQ2%40thread.v2/0?context=%7b%22Tid%22%3a%226f0b9487-4fa8-42a8-aeb4-bf2e2c22d4e8%22%2c%22Oid%22%3a%22d3079e99-7fd1-41a0-ae91-5192657eae6c%22%7d</a>

- Tuesday, 27<sup>th</sup> August:
- Athena Akrami (9.00am 10.00am GMT): <a href="https://teams.microsoft.com/l/meetup-join/19%3ameeting\_NzdkN2EzZDUtNmM1ZC00ZjM0LWE5YjQtMDA2Yjg3N2IzOGUy%40thread.v2/0?context=%7b%22Tid%22%3a%226f0b9487-4fa8-42a8-aeb4-bf2e2c22d4e8%22%2c%22Oid%22%3a%22d3079e99-7fd1-41a0-ae91-5192657eae6c%22%7d</a>
- Cian O'Donnell (10.00am 11.30am GMT): <a href="https://teams.microsoft.com/l/meetup-join/19%3ameeting\_NzRhYzEwNmltNDBjOS00MWMwLTllYjctYzY3ZjEyYjZkNThj%40thread.v2/0?context=%7b%22Tid%22%3a%226f0b9487-4fa8-42a8-aeb4-bf2e2c22d4e8%22%2c%22Oid%22%3a%22d3079e99-7fd1-41a0-ae91-5192657eae6c%22%7d">https://teams.microsoft.com/l/meetup-join/19%3ameeting\_NzRhYzEwNmltNDBjOS00MWMwLTllYjctYzY3ZjEyYjZkNThj%40thread.v2/0?context=%7b%22Tid%22%3a%226f0b9487-4fa8-42a8-aeb4-bf2e2c22d4e8%22%2c%22Oid%22%3a%22d3079e99-7fd1-41a0-ae91-5192657eae6c%22%7d</a>
- Marinus Toman (11.30am 12.30pm GMT): <a href="https://teams.microsoft.com/l/meetup-join/19%3ameeting\_ZDkwNDFhMGYtOGI0YS00YWE4LTk1NGYtN2ExMmE4ZWEyMWZm%40thread.v2/0?context=%7b%22Tid%22%3a%226f0b9487-4fa8-42a8-aeb4-bf2e2c22d4e8%22%2c%22Oid%22%3a%22d3079e99-7fd1-41a0-ae91-5192657eae6c%22%7d</a>
- Lunch & ISRC Lab Tour (12.30pm 2.30pm GMT)
- KongFatt Wong-Lin (2.30pm 4.00pm): <a href="https://teams.microsoft.com/l/meetup-join/19%3ameeting\_MzkzODNmNWMtOTcxMy00YTI4LWJjNWUtMWJmMzgwNmYzMTk1%40thread.v2/0?context=%7b%22Tid%22%3a%226f0b9487-4fa8-42a8-aeb4-bf2e2c22d4e8%22%2c%22Oid%22%3a%22d3079e99-7fd1-41a0-ae91-5192657eae6c%22%7d">https://teams.microsoft.com/l/meetup-join/19%3ameeting\_MzkzODNmNWMtOTcxMy00YTI4LWJjNWUtMWJmMzgwNmYzMTk1%40thread.v2/0?context=%7b%22Tid%22%3a%226f0b9487-4fa8-42a8-aeb4-bf2e2c22d4e8%22%2c%22Oid%22%3a%22d3079e99-7fd1-41a0-ae91-5192657eae6c%22%7d</a>
- Panel Discussion (2.30pm 4.00pm): <a href="https://teams.microsoft.com/l/meetup-join/19%3ameeting\_NmJIOWM4NzItMTJhMy00NTgzLWJhYjUtYjE3YzRkMTJiNjk0%40thread.v2/0?context=%7b%22Tid%22%3a%226f0b9487-4fa8-42a8-aeb4-bf2e2c22d4e8%22%2c%22Oid%22%3a%22d3079e99-7fd1-41a0-ae91-5192657eae6c%22%7d">https://teams.microsoft.com/l/meetup-join/19%3ameeting\_NmJIOWM4NzItMTJhMy00NTgzLWJhYjUtYjE3YzRkMTJiNjk0%40thread.v2/0?context=%7b%22Tid%22%3a%226f0b9487-4fa8-42a8-aeb4-bf2e2c22d4e8%22%2c%22Oid%22%3a%22d3079e99-7fd1-41a0-ae91-5192657eae6c%22%7d</a>
- Lab (5.30pm 7.00pm GMT): <a href="https://teams.microsoft.com/l/meetup-join/19%3ameeting\_ODY2ODEyNzctNzFkNS00MTlhLWE1ZjktYTdkNjAyNDlzMmZl%40thread.v2/0?context=%7b%22Tid%22%3a%226f0b9487-4fa8-42a8-aeb4-bf2e2c22d4e8%22%2c%22Oid%22%3a%22d3079e99-7fd1-41a0-ae91-5192657eae6c%22%7d</a>

- Wednesday, 28<sup>th</sup> August:
- Shirin Dora (9.00am 10.30am GMT): <a href="https://teams.microsoft.com/l/meetup-join/19%3ameeting\_MWI0ZmU1NWItNGJkYy00NDUwLWEzMDMtZGMzNTlkNjMwYjM3%40thread.v2/0?context=%7b%22Tid%22%3a%226f0b9487-4fa8-42a8-aeb4-bf2e2c22d4e8%22%2c%22Oid%22%3a%22d3079e99-7fd1-41a0-ae91-5192657eae6c%22%7d">https://teams.microsoft.com/l/meetup-join/19%3ameeting\_MWI0ZmU1NWItNGJkYy00NDUwLWEzMDMtZGMzNTlkNjMwYjM3%40thread.v2/0?context=%7b%22Tid%22%3a%226f0b9487-4fa8-42a8-aeb4-bf2e2c22d4e8%22%2c%22Oid%22%3a%22d3079e99-7fd1-41a0-ae91-5192657eae6c%22%7d</a>
- Saugat Bhattacharyya (10.45am 12.15pm GMT): <a href="https://teams.microsoft.com/l/meetup-join/19%3ameeting\_YzhjOTY2NjUtMjQ2OS00NTExLWJhZTltODRIYmJiZjkyMzcy%40thread.v2/0?context=%7b%22Tid%22%3a%226f0b9487-4fa8-42a8-aeb4-bf2e2c22d4e8%22%2c%22Oid%22%3a%22d3079e99-7fd1-41a0-ae91-5192657eae6c%22%7d">https://teams.microsoft.com/l/meetup-join/19%3ameeting\_YzhjOTY2NjUtMjQ2OS00NTExLWJhZTltODRIYmJiZjkyMzcy%40thread.v2/0?context=%7b%22Tid%22%3a%226f0b9487-4fa8-42a8-aeb4-bf2e2c22d4e8%22%2c%22Oid%22%3a%22d3079e99-7fd1-41a0-ae91-5192657eae6c%22%7d</a>
- Lunch (12.15pm 2.15pm GMT)
- Javier Minguez (2.15pm 3.15pm): <a href="https://teams.microsoft.com/l/meetup-join/19%3ameeting\_ODVkMmZmMWUtM2lwMi00MTU2LWIxODktY2U2NGRkYjRiOTE2%40thread.v2/0?context=%7b%22Tid%22%3a%226f0b9487-4fa8-42a8-aeb4-bf2e2c22d4e8%22%2c%22Oid%22%3a%22d3079e99-7fd1-41a0-ae91-5192657eae6c%22%7d</a>
- Damien Coyle (3.30pm 5.00pm): <a href="https://teams.microsoft.com/l/meetup-join/19%3ameeting\_MTExNDJIMWMtOWYzYy00MDQyLWFIMjYtOGE0ZGE4MmRkOThk%40thread.v2/0?context=%7b%22Tid%22%3a%226f0b9487-4fa8-42a8-aeb4-bf2e2c22d4e8%22%2c%22Oid%22%3a%22d3079e99-7fd1-41a0-ae91-5192657eae6c%22%7d">https://teams.microsoft.com/l/meetup-join/19%3ameeting\_MTExNDJIMWMtOWYzYy00MDQyLWFIMjYtOGE0ZGE4MmRkOThk%40thread.v2/0?context=%7b%22Tid%22%3a%226f0b9487-4fa8-42a8-aeb4-bf2e2c22d4e8%22%2c%22Oid%22%3a%22d3079e99-7fd1-41a0-ae91-5192657eae6c%22%7d</a>
- Lab (5.30pm 7.00pm GMT): <a href="https://teams.microsoft.com/l/meetup-join/19%3ameeting\_NTQ1MGQ0YjUtODA5MS00NDUyLTgyMzUtNTRIMmJIYWI3YWQy%40thread.v2/0?context=%7b%22Tid%22%3a%226f0b9487-4fa8-42a8-aeb4-bf2e2c22d4e8%22%2c%22Oid%22%3a%22d3079e99-7fd1-41a0-ae91-5192657eae6c%22%7d">https://teams.microsoft.com/l/meetup-join/19%3ameeting\_NTQ1MGQ0YjUtODA5MS00NDUyLTgyMzUtNTRIMmJIYWI3YWQy%40thread.v2/0?context=%7b%22Tid%22%3a%226f0b9487-4fa8-42a8-aeb4-bf2e2c22d4e8%22%2c%22Oid%22%3a%22d3079e99-7fd1-41a0-ae91-5192657eae6c%22%7d</a>

- Thursday, 29<sup>th</sup> August: Dinner at Stitch & Weave from 7.30pm onwards
- Nikola Kasabov (9.00am 10.00am GMT): <a href="https://teams.microsoft.com/l/meetup-join/19%3ameeting\_ZDVhNjU0ZWQtOGFhMS00MjBjLWE3ZjYtYTNINmYwMWIxNTBm%40thread.v2/0?context=%7b%22Tid%22%3a%226f0b9487-4fa8-42a8-aeb4-bf2e2c22d4e8%22%2c%22Oid%22%3a%22d3079e99-7fd1-41a0-ae91-5192657eae6c%22%7d</a>
- Girijesh Prasad (10.15am 11.45am GMT): <a href="https://teams.microsoft.com/l/meetup-join/19%3ameeting\_MjhmZTYyNjMtM2ZIZS00YTk5LWIxMzMtZjA4OTU2MzVmNGQx%40thread.v2/0?context=%7b%22Tid%22%3a%226f0b9487-4fa8-42a8-aeb4-bf2e2c22d4e8%22%2c%22Oid%22%3a%22d3079e99-7fd1-41a0-ae91-5192657eae6c%22%7d">https://teams.microsoft.com/l/meetup-join/19%3ameeting\_MjhmZTYyNjMtM2ZIZS00YTk5LWIxMzMtZjA4OTU2MzVmNGQx%40thread.v2/0?context=%7b%22Tid%22%3a%226f0b9487-4fa8-42a8-aeb4-bf2e2c22d4e8%22%2c%22Oid%22%3a%22d3079e99-7fd1-41a0-ae91-5192657eae6c%22%7d</a>
- Lunch & Networking (11.45am 1.30pm GMT)
- Chiara Bartolozzi (1.30pm 3.00pm): <a href="https://teams.microsoft.com/l/meetup-join/19%3ameeting\_ZTkxMWQ4MGYtNTc2OS00Y2FmLTkyZmEtZDVIYjBiNjYzMWI0%40thread.v2/0?context=%7b%22Tid%22%3a%226f0b9487-4fa8-42a8-aeb4-bf2e2c22d4e8%22%2c%22Oid%22%3a%22d3079e99-7fd1-41a0-ae91-5192657eae6c%22%7d">https://teams.microsoft.com/l/meetup-join/19%3ameeting\_ZTkxMWQ4MGYtNTc2OS00Y2FmLTkyZmEtZDVIYjBiNjYzMWI0%40thread.v2/0?context=%7b%22Tid%22%3a%226f0b9487-4fa8-42a8-aeb4-bf2e2c22d4e8%22%2c%22Oid%22%3a%22d3079e99-7fd1-41a0-ae91-5192657eae6c%22%7d</a>
- KC Santosh (3.00pm 4.00pm): <a href="https://teams.microsoft.com/l/meetup-join/19%3ameeting\_YzUwZTkzYjctMjcyZS00ODkwLTk1N2MtNzlxN2ZkZTBhM2Yw%40thread.v2/0?context=%7b%22Tid%22%3a%226f0b9487-4fa8-42a8-aeb4-bf2e2c22d4e8%22%2c%22Oid%22%3a%22d3079e99-7fd1-41a0-ae91-5192657eae6c%22%7d</a>
- Panel Discussion (4.15pm 5.00pm): <a href="https://teams.microsoft.com/l/meetup-join/19%3ameeting\_MGMwNTU4ZGYtNjY5Yy00NDhmLTIINzQtZjUwODY0ZTBIMWFk%40thread.v2/0?context=%7b%22Tid%22%3a%226f0b9487-4fa8-42a8-aeb4-bf2e2c22d4e8%22%2c%22Oid%22%3a%22d3079e99-7fd1-41a0-ae91-5192657eae6c%22%7d</a>
- Lab (5.30pm 6.30pm GMT): <a href="https://teams.microsoft.com/l/meetup-join/19%3ameeting\_OTUzNWNIZGUtY2FIMS00YTE0LThmNzAtNDBiNzA2N2YxOTc2%40thread.v2/0?context=%7b%22Tid%22%3a%226f0b9487-4fa8-42a8-aeb4-bf2e2c22d4e8%22%2c%22Oid%22%3a%22d3079e99-7fd1-41a0-ae91-5192657eae6c%22%7d">https://teams.microsoft.com/l/meetup-join/19%3ameeting\_OTUzNWNIZGUtY2FIMS00YTE0LThmNzAtNDBiNzA2N2YxOTc2%40thread.v2/0?context=%7b%22Tid%22%3a%226f0b9487-4fa8-42a8-aeb4-bf2e2c22d4e8%22%2c%22Oid%22%3a%22d3079e99-7fd1-41a0-ae91-5192657eae6c%22%7d</a>

- Friday, 30<sup>th</sup> August:
- Student Presentation (9.30am 12.30pm GMT): <a href="https://teams.microsoft.com/l/meetup-join/19%3ameeting\_ODI5YjA4M2UtZjIzZi00YjBILWI0NGQtNjcyMzY4YjZmM2Mw%40thread.v2/0?context=%7b%22Tid%22%3a%226f0b9487-4fa8-42a8-aeb4-bf2e2c22d4e8%22%2c%22Oid%22%3a%22d3079e99-7fd1-41a0-ae91-5192657eae6c%22%7d">https://teams.microsoft.com/l/meetup-join/19%3ameeting\_ODI5YjA4M2UtZjIzZi00YjBILWI0NGQtNjcyMzY4YjZmM2Mw%40thread.v2/0?context=%7b%22Tid%22%3a%226f0b9487-4fa8-42a8-aeb4-bf2e2c22d4e8%22%2c%22Oid%22%3a%22d3079e99-7fd1-41a0-ae91-5192657eae6c%22%7d</a>
- Lunch & Networking (12.30pm 2.00pm GMT)
- Industry Talks BITBrain & g.tec (2.00pm 3.30pm): <a href="https://teams.microsoft.com/l/meetup-join/19%3ameeting\_MmQxMmZkNGEtYjNiNy00OWQzLTllMDAtMjc1NGU2ZmQ1ZWI2%40thread.v2/0?context=%7b%22Tid%22%3a%226f0b9487-4fa8-42a8-aeb4-bf2e2c22d4e8%22%2c%22Oid%22%3a%22d3079e99-7fd1-41a0-ae91-5192657eae6c%22%7d">https://teams.microsoft.com/l/meetup-join/19%3ameeting\_MmQxMmZkNGEtYjNiNy00OWQzLTllMDAtMjc1NGU2ZmQ1ZWI2%40thread.v2/0?context=%7b%22Tid%22%3a%226f0b9487-4fa8-42a8-aeb4-bf2e2c22d4e8%22%2c%22Oid%22%3a%22d3079e99-7fd1-41a0-ae91-5192657eae6c%22%7d</a>

### **Student Presentation**

- PRESENT YOUR OWN RESEARCH IDEA OR WORK
  - How will neuroscience help in your research?
- Mini-presentation on the project → 30<sup>st</sup> August 2024 (Friday) from 9.30am-12.30pm
- Title of mini-presentation to be submitted by 29<sup>th</sup> August 2024 (Thursday), 7pm

#### Join as member



IEEE Circuits and Systems Society

IEEE Computational Intelligence Society

**IEEE Computer Society** 

**IEEE Electron Devices Society** 

IEEE Engineering in Medicine and Biology Society

**IEEE Magnetics Society** 

**IEEE Signal Processing Society** 

**IEEE Solid-State Circuits Society** 

IEEE Systems, Man, and Cybernetics Society

#### Use the link below to join as a professional or student

https://www.ieee.org/membership/join/index.html?WT.mc\_id=hc\_join

#### Join as member



IEEE Engineering in Medicine and Biology Society (EMBS) is the world's largest international society of biomedical engineers. Members are interested in bioinformatics, biotechnology, biomechanics, clinical engineering, information technology, instrumentation and measurement, micro and nanotechnology, radiology, and robots. They are researchers and educators, technicians and clinicians - biomedical engineers are the link between science and life science, creating innovations in healthcare technology for the benefit of all humanity.

For more information:

https://www.embs.org/

#### Join as member





# Northern Ireland Local Group

https://www.bna.org.uk/

https://neuroscienceireland.com/

Contact: Elaine Murray (e.murray@ulster.ac.uk), Ulster University

# **Derry City**



Walking Tour- Monday 26<sup>th</sup>



