Re-Introducing

Women in HPC

How We're Driving Change and How You Can Help

Eleanor Broadway, EPCC
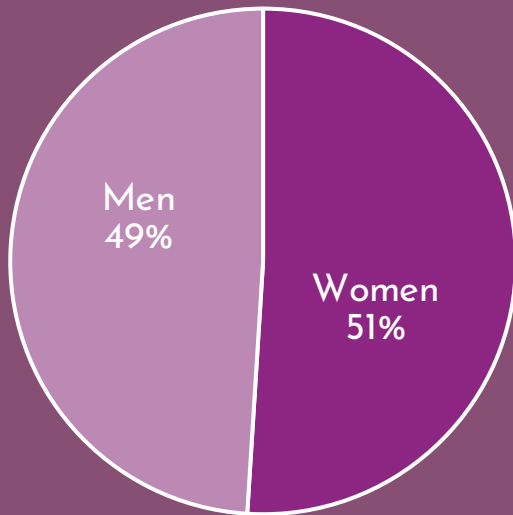
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Diversity in HPC:

SC'21 - Representation of Women in High Performance Computing (HPC) Conferences [1]
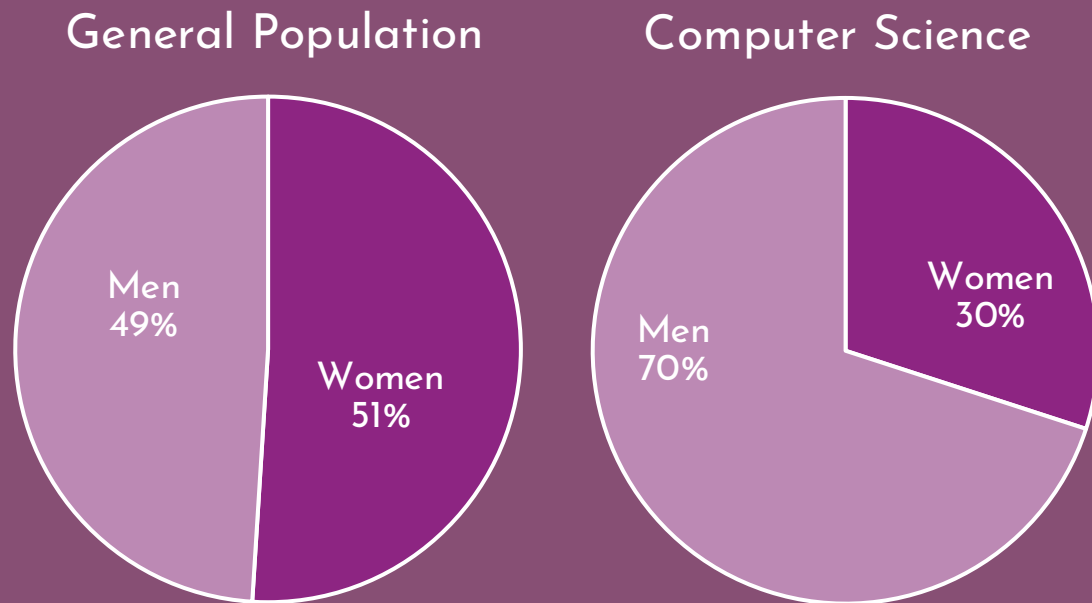
General Population

Men 49%

Women 51%

[1] Eitan Frachtenberg and Rhody D. Kaner. 2021. Representation of Women in HPC Conferences. In Proceedings of the International Conference for High Performance Computing, Networking, Storage and Analysis (St. Louis, Missouri) (SC '21). ACM.

Women in HPC

Diversity in HPC:

SC'21 - Representation of Women in High Performance Computing (HPC) Conferences [1]

General Population

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Computer Science

Men 70%

Women 30%

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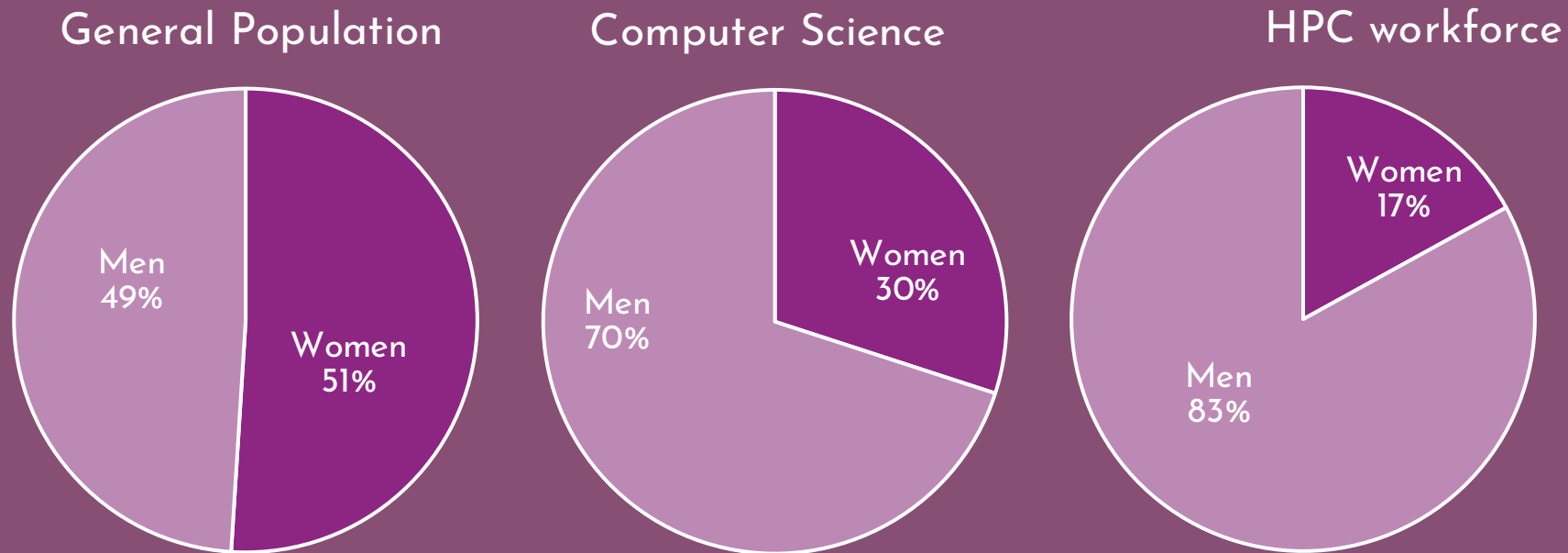
Diversity in HPC:

SC'21 - Representation of Women in High Performance Computing (HPC) Conferences [1]

General Population

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HPC workforce

Women 17%

Men 83%

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Women in HPC

Diversity in HPC:

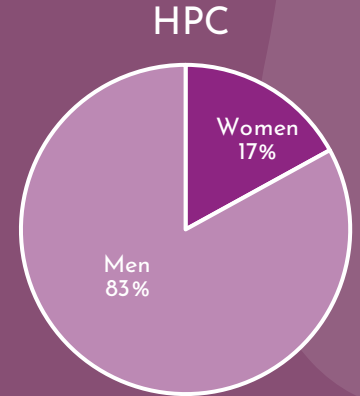10% of HPC conference authors are female. [1][2]

Women 17%

Men 83%

In 2021:

ISC High Performance
The HPC Event.

SC24
Atlanta, GA | hpc creates.

5.77%

8.12%

[1] Eitan Frachtenberg and Rhody D. Kaner. 2021. Representation of Women in HPC Conferences. In Proceedings of the International Conference for High Performance Computing, Networking, Storage and Analysis (St. Louis, Missouri) (SC '21). ACM.

[2] AJ Lauer, Max Cordes Galbraith, Milana Wolff, and David Hart. 2023. The Inclusive Conferences Survey: Analysis and validation of inclusivity at HPC conferences. In Practice and Experience in Advanced Research Computing 2023: Computing for the Common Good (PEARC '23). Association for Computing Machinery, New York, NY, USA, 363-366. https://doi.org/10.1145/3569951.3597580

Women in HPC

"Diversity in HPC won't improve until we start counting"
John West, SC'16 Chair [3]

SC16 = 13.3% female attendees [4]   SC21 = 14% female attendees [5]

[3] John West. n.d.. Diversity in HPC Won't Improve Until We Start Counting. Retrieved March 17, 2023 from
https://www.top500.org/news/diversity-in-hpcwont-improve-until-we-start-counting/

[4] https://sc16.supercomputing.org/diversity/

[5] https://sc21.supercomputing.org/attend/inclusivity/demographics/

Women in HPC

Why are there not more women in HPC?

The WHPC Mission:

"To promote, build and leverage **a diverse and inclusive HPC workforce** by enabling and energising those in the HPC community to increase the participation of women and highlight their contribution to the success of supercomputing.

To ensure that women are treated fairly and have **equal opportunities to succeed** in their chosen HPC career.

To ensure everyone understands the **benefits of promoting and achieving inclusivity**."

Goals:

- Bring the HPC community together.

- Raise awareness about underrepresentation and the impact on women, the community and research outputs/progress.

- Encourage the supercomputing community to embrace diversity and inclusivity initiatives.

- Provide fellowship, education and support to advocate for a more inclusive community for all.

- Visibility of women role models in HPC.

Women in HPC

History of WHPC

Apr	2013	WHPC is launched at **epcc**
Nov	2014	Start of regular workshops at SC and ISC
Nov	2015	Website launch
Feb	2018	Chapters and Affiliates Programme
Mar	2019	Global Mentoring Programme
May	2023	Travel Fellowship Initiative
Feb	2024	Re-launch of Global Mentoring Programme
May	2024	ISC become an official collaborator

Current Focus Areas

- Development of early-career opportunities.

- Improving our visibility internationally.

- Increased emphasis on diversity and inclusion of both women and men from underrepresented groups: by explicitly broadening our scope, we hope to increase participation from other minority groups and particularly those individuals who feel marginalized across multiple dimensions.
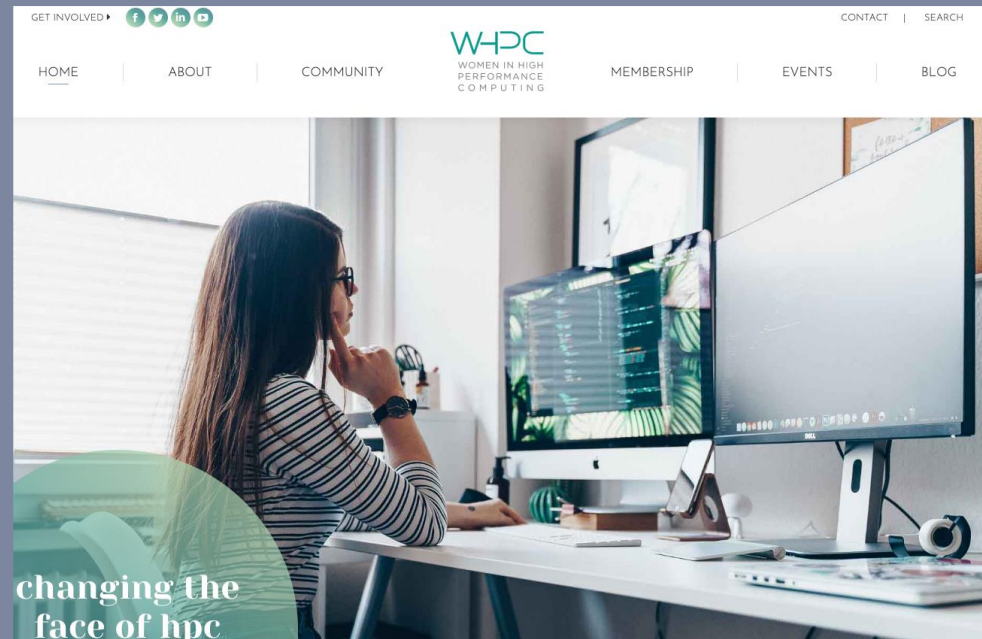
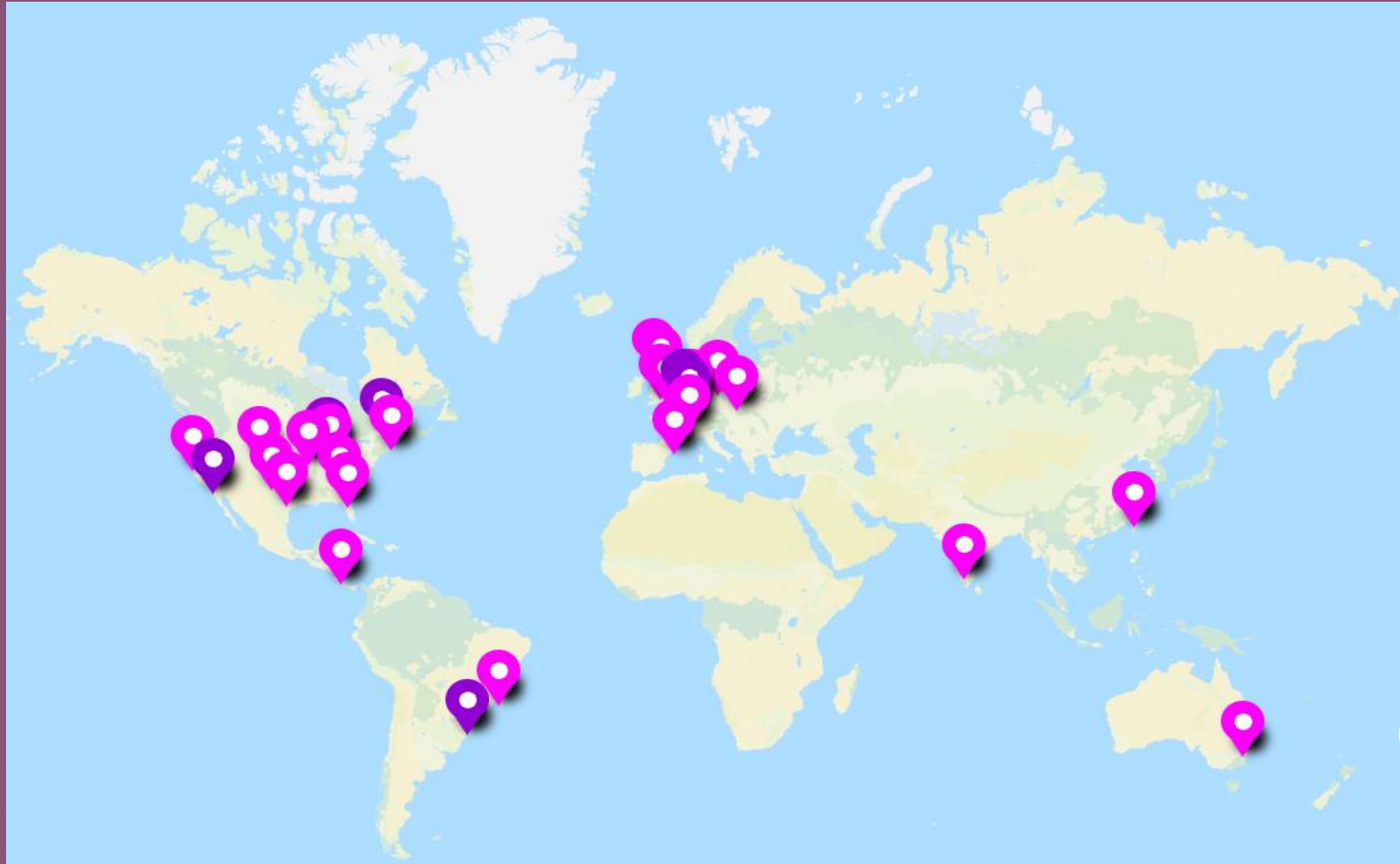Women in HPC

Overview of Recent Initiatives:

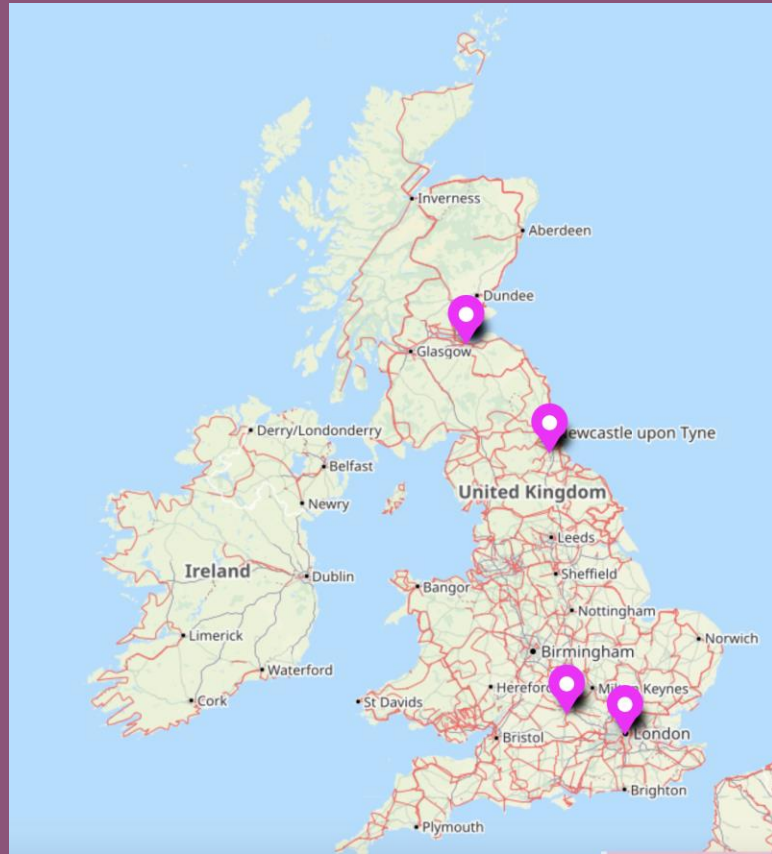## What do we actually do?

Finding your community

Chapters and Affiliates

Chapters and Affiliates

- EPCC, University of Edinburgh

- Numerical Algorithms Group (NAG)

- Thomas Young Centre, MMM Hub

- N8 CIR including the universities of: Leeds, Sheffield, Manchester, York, Newcastle, Durham, Liverpool, Lancaster.

Women in HPC

International Conferences

ISC High Performance
The HPC Event.

2024: WHPC Announce Official Partnership with ISC

- Solution Forum Takeover
- Diversity Day
- Branded ice cream truck!
- Birds of a Feather: Mentoring

- **Main track! Women in HPC Posters**
  - Poster Pitch Opportunity
  - Networking Reception
  - Best Women in HPC Poster Award

Women in HPC

Join us in Georgia, Atlanta in November!

- Diversity Day

- Chapters+Affiliates Meet-Up

- Networking Reception

- **20th International WHPC Workshop:**

  - Keynote speakers

  - Mid- and Late- Career Perspectives

  - Speed-Networking

  - Early-Career Lightning Talk

- Highlights from SC23:
  - 100% Workshop Capacity
  - 1st Male Minority Travel Fellow
  - 50% Increase in Early-Career Applications
  - 300+ Networking Reception Attendees

See: https://womeninhpc.org/events/sc-2024/

Early-Career Opportunities

- Opportunities to speak at international conferences can often be inaccessible or unwelcoming to early-career.

- WHPC offers the chance to present in a welcoming and inclusive environment, forge valuable networks, and attend with confidence.

  - Friendly Cohort
  - Expert mentorship
  - Publication of Abstracts
  - Travel Fellowships

Women in HPC

Global Mentoring Program

- Open 3 times a year, each cohort lasting 4 months.

- Receive one-to-one mentoring, training on how to make the most of mentoring, develop key skills, build your network!

- First cohort: 13 mentors, 17 protégés

- Second cohort: Launching mid-August 2024

Apply now!

Measuring success:

How do we measure success?

- This is something that we are evolving as we grow.
- We get a feel of our success at the international events, with an evolving climate around diversity discussions and support from the community.

- Current initiatives include:
  - Statistics from conferences
  - Annual reports from Chapters and Affiliates
  - Move the Needle

Women in HPC

Conference Fun Facts!

WHPC · SC23
WOMEN IN HPC · Denver, CO | I am hpc.

More Action!
Thanks to feedback 2023 welcomed an interactive audience panel and speed networking.

1st Male Fellow
Babar Khan was the first ever male minority to join our Fellowship Program.

300+ Attendees
Our networking reception upgrade allowed more than 300 people to come say hello.

12 New Speakers
This year's Early Career talks came from a highly talented bunch of women and men from around the world!

Marvelous Media!
Our media partners, insideHPC and HPCWire, both put out pieces highlighting the work WHPC does! *

See the interviews from SC23*:

- https://www.youtube.com/watch?v=a3UCuh8Boi4
- https://www.hpcwire.com/livewire-interviews/

100%
Workshop capacity was reached at SC23 and never dropped below 60 attendees.

50%
Increase in Early Career Poster applications.

25%
Increase in Networking Reception attendees thanks to a bigger venue.

Women in HPC

01st OFFICIAL COLLAB!
2024 marked the first time that Women in HPC worked in an offical partnership collaboration with the iSC Conference Series – resulting in 2x the level of engagement over 2023!

02nd WHPC CHAMPION
Do IT Now returned in 2024 to secure WHPC Travel Fellowships into early 2025! In total their contributions have and will allow up to 6 individuals to attend iSC conferences.

doitnow

03rd MORE ACTIVITIES!
Thanks to our offical collaboration we added three more conference activites including: a Poster Pitch Session; a Birds of a Feather (BoF) Session; and provided attendees ice cream at two WHPC-branded kiosks!

04th TOP COUNTRIES
Germany had the highest representation across all of our activities (including a Travel Fellow), followed by the US and UK, respectively. A special mention goes to our Australia + New Zealand Chapter, who travelled the furthest to present!

Women in HPC

Annual Reports - Highlights!

JuWinHPC

Hosted a writeathon: "Increase Female Wiki-bility". Enthusiastic WHPC members met up to write Wikipedia profiles for female Julich professors to improve their visibility!
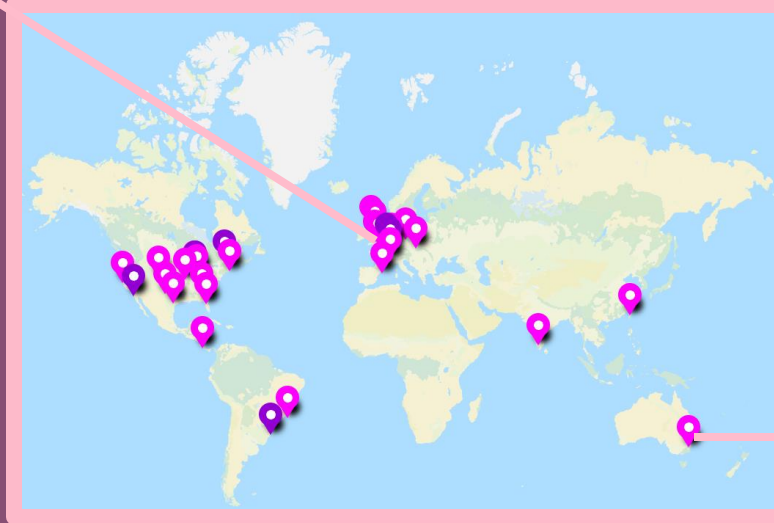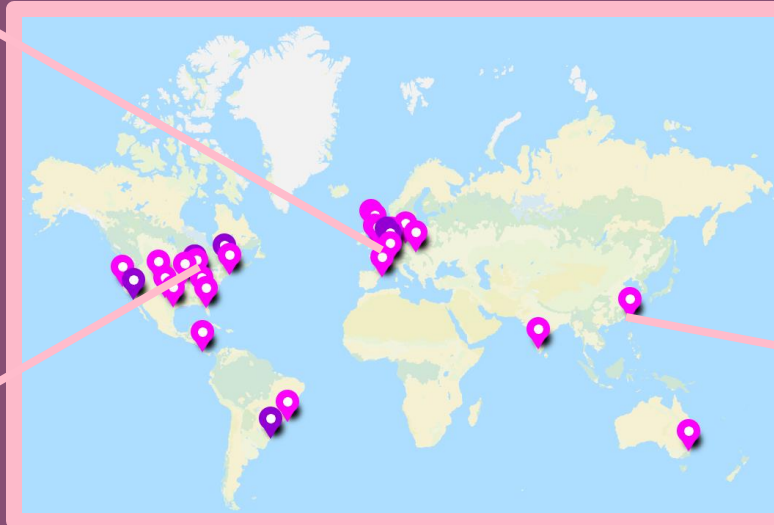
Australasian

Collaborated with Pawsey to host a Diversity & Inclusion Track at **SC Asia 2023!**

Women in HPC

Annual Reports - Highlights!

IDEAS4HPC

Obtained a 3-year grant from the Simons Foundation, to help supporting young scientists attending summer schools and conferences!

WHPC at Purdue

Launched their own scholarship opportunities, mentorship programme, events AND workshops!

Taiwan

Conducted an outreach event for Taiwanese middle and high school girls, introducing them to HPC and the WHPC community!

Women in HPC

Move the Needle

When: 12 months (2024)

Who: HPC community:

What: Commitment to 1-3 actions aimed at advancing inclusion.

Why: Demonstrate achievement, celebrate success, address barriers

Goal: Results to be published at CIUK (Dec 5-6, 2024)

Halfway Report – Now Available

See: https://alces-flight.com/move-the-needle/

There's lots still to do!
How can I help?

Getting Involved
with WHPC

Women in HPC

Volunteering

- Executive Board: Oversees the global organization
  - Treasurer, Chapters+Affiliates, Comms, Outreach, Business Development, Research
- Event Organisation: Regular programmes at SC, ISC and others
  - Overall organising committee (submissions, receptions, merchandise, comms)
  - Contributing content to event programmes (finding speakers, submitting abstracts)
  - Reviewing
  - Mentoring
- Chapter/Affiliate Committees
- Global mentoring: mentee or mentor
- Website content/Job board
- Graphic design

Get in touch!

Women in HPC

Sponsorship and Fundraising
We couldn't do what we do without **YOU!**

Partnership Opportunities - 2024

At Women in HPC, we are bringing together women leaders and young career women in corporate organizations, research institutions, academia, and business. Together with our supporters and leaders in the community, we are creating opportunities for women to network, learn, and build connections and identify opportunities, whether they be for their next career step, training, education or skills.

For 2024 we are seeking partners to assist us with our global efforts through sponsorship. These sponsorships help build opportunities for women to be recognized in their field, enhance their skills, and create a more diverse HPC community.
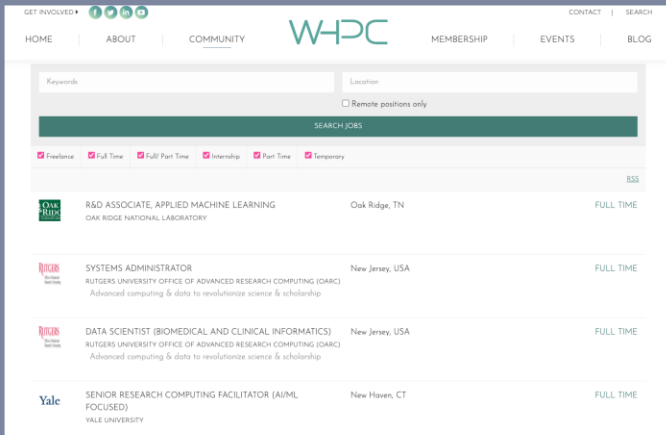
Community Engagement and Advocacy

Ideas collected at the ARCHER2 Celebration of Science event:

- Organising your own events?
  - Prioritise diversity representation amongst invited speakers.
  - Integrate diversity and outreach events directly into event programmes

- Day-to-day:
  - Be vocal about your support, let others know you are a safe and friendly ally.
  - Internal lightning talks to learn what your colleagues do: promotes respect for all contributions, ensures voices are heard.
  - Collect feedback, hear from everyone.

Check out your local chapter or affiliate group

Volunteer as a mentor for WHPC@SC24 Submissions

Join us in cheering on our early-career speakers at SC24

Say hello on our social media

Check out our website: info@womeninhpc.org

Join

WHPC
WOMEN IN HPC

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Questions?

Get in touch to find out more:
info@womeninhpc.org, e.broadway@epcc.ed.ac.uk