

FLEET News: December 2023

I hope you're preparing to take some well-deserved time off.

This month's FLEET News is a shorter newsletter to ease into your holiday: check out the report on our Legacy Meeting, and tune in to an interview with our COO Tich-Lam Nguyen.

Finally, congratulations to the 14 FLEET PhD candidates who submitted their thesis in 2023, many of them already in new positions.

Michael Fuhrer
Director, FLEET



In this edition of FLEET News:

- [Legacy Meeting report](#)
- [Tich-Lam interview](#)
- [NSW technology funding available](#)
- [Congratulations to the 2023 PhD cohort](#)
- [Quantum tech defence funding open](#)
- [More talks online](#)

Legacy Meeting report

The FLEET Legacy Workshop celebrated seven years of transformative innovation, capacity building, and future STEM leaders development.

As always, FLEET family and children were welcome, with 22 accompanying family and children, including some entertained in the on-site creche allowing some parents to participate more fully in workshop discussions.

In a significant shift since the Centre's first meetings, 13 out of 16 scientific highlight talks were presented by students and ECRs, plus another 40 early career researchers' science presented in the two poster sessions.

[Read the meeting report online.](#)



What's it like to be COO of FLEET?

Check out this great interview with FLEET's Chief Operating Officer Dr Tich-Lam Nguyen —including the story of an unconventional, 'curvy' career journey and advice for her past self. [Listen online.](#)



NSW technology funding

Applications are open for the **NSW government's MVP Ventures Program**, offering grants of \$25–50,000 to start-ups and SMEs to help commercialise highly innovative and new products or processes (TRL 3–9) to help them move along the technology readiness scale and attract investment. Applications close 30 April, with the following round opening 1 July.

PhDs submitted in 2023

Congratulations to the 14 FLEET PhD candidates who submitted their thesis in 2023:

From Swinburne: Rishabh Mishra (who has since taken up a postdoc position at UNSW), Jack Muir (postdoc position at CSIRO) and Mitchell Conway. From RMIT: Patjaree Aukarasereenont (postdoc position at CSIRO), Yik-Kheng Lee and Yogesh Kumar. From Monash: Phat Nguyen (researcher at Next Ore), Ben Lowe (postdoc position in the Czech Republic), Qile Li, Yi-Hsun Chen and Matt Gebert. From UOW: Abdulhakim Bake (postdoc position at Griffith). From UNSW: Maedehsadat Mousavi and Zeb Krix.



New defence funding for quantum technologies

The first round of Australia's Emerging Disruptive Technologies (EDT) funding has opened, to fund research aligned with defence priorities at approximately \$3M per project of 3-5 year duration. Applications (4pp) are due 9 February 2024, with shortlisted applications participating in co-design workshops in February/March.

Read more about the EDT program and identified quantum technology opportunities, including quantum sensing, quantum computing, navigation, ML and software.

Jobs board

The FLEET “jobs board” at [FLEET.org.au/jobs-board](https://fleet.org.au/jobs-board) is a useful resource for people looking for future positions. If you know of any positions of interest, let us know and we'll add them. Group leaders, we're happy to list your new positions here too.

Condensed matter meeting

The **Condensed Matter and Materials Meeting** will be back in Wagga Wagga NSW Australia 6-9 Feb 2024. Contributed papers are encouraged in all areas of condensed matter and materials research. Registrations accepted up to 25 January.

Catch up on past talks

All FLEET seminars and talks are available to catch up on YouTube:

- Wendy Rogers (Macquarie) **Understanding researcher values to build better scientific outcomes**
 - Miguel Ugeda (Donostia) **Collective electronic states in 2D heavy fermion system**
 - Peter Abbamonte (Illinois) **Observing Pines' Demon with momentum-resolved EELS**
 - Hui Deng (Michigan) **Different phases of polariton lasers**
 - Jukka Vayrynen (Purdue) **Extrinsic/intrinsic superconducting diode effects** (intranet)
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Grants and opportunities

Japan Society for the Promotion of Science (JSPS) Postdoctoral Fellowships for 12-24 month provide opportunities for Australian postdocs to pursue cooperative research with leading Japanese research groups. Deadline 5 January.

The Australian Institute of Physics is sponsoring two delegates to Science Meets Parliament in March 2024. Deadline 31 January.

The Pint of Science festival puts scientists in front of a friendly and relaxed crowd, to practice explaining their science in the most speaker-friendly atmosphere possible. Deadline 22 December (this Friday!)

Main Sequence Ventures (CSIRO's investment arm) deep-tech newsletter features over 40 companies with 300+ jobs on offer. **Sign up for the newsletter** to stay informed.

For ongoing outreach/development opportunities see **In2science** mentoring, and **CSIRO STEM Professionals in Schools**.

Applications for **FLEET's PhD writeup scholarships** are accepted monthly.

Women in FLEET scholarships and **Diversity in FLEET scholarships** are open to students who are accepted into an Honours or PhD program to work with any one of FLEET's investigators. Considered twice a year in June and November. Submit applications anytime.

Previous news

Meet FLEET report & resources October's 'Meet FLEET' innovation-and-industry event at UNSW gathered 90 researchers, industry representatives and others in the translation sphere. FLEET capabilities in quantum and electronic materials and systems were showcased in a poster session allowing industry reps to engage directly with the researchers, including quantum optics, semiconductor and superconducting devices, sensing, AI, software and hardware.

All 20 posters are now online covering STM automation, THz switching, low-noise quantum devices, thermoelectrics, high-bandwidth comms, LED encapsulants, biosensing, wearable EEG sensing and more.



Advancing AUS-EU links The FLEET-EU 2023 Conference Transport in exciton condensates and exciton insulators was run in San Benedetto del Tronto, the art-deco resort town known as the Riviera of the Palms situated on the Italian Adriatic coast. A joint effort between FLEET and partner organisations the University of Camerino (Italy), University of Antwerp (Belgium), and FLEET, the conference covered a range of exciton physics, strengthening Australian-European links in this area of physics. [See the report online](#)



Gordon Godfrey The 2023 Gordon Godfrey workshop 20-24 November at UNSW saw presentations across spin, topology and strong electron correlations, and featured an informal poster session for students and ECRs.



inSTEM report Kristen Harley (EQUS) wrote a report on the inSTEM networking and careers conference run by seven ARC Centres of Excellence recently. [See report and images online.](#)



Quantum atoms in regional outreach FLEET took a road trip to Horsham in regional Victoria recently to introduce a hundred Year 8 and 9 students to quantum physics and the colourful world of light. “The exercises helped students wrap their heads around the new idea that that electrons are (Mexican) wavy, and that electrical resistance causes the heat they have all felt coming out of their laptop and mobile phone,” says FLEET Research Fellow Yik Kheng Lee (RMIT). [See the report online.](#)



Jeff Davis' Nobel Prize lecture FLEET CI Jeff Davis (Swinburne) delivered the Australian Institute of Physics' annual lecture on the Nobel Prize (this year covering the field of ultrafast laser physics) to around 100 people at Swinburne last month. FLEET PI Ferenc Krausz, with Pierre Agostini, and Anne L'Huillier received the 2023 Physics Nobel Prize for experimental



Participating organisations

FLEET is The Australian Research Council Centre of Excellence in Future Low-Energy Electronics Technologies. Read more about our [participating nodes](#) and [partners](#) online.



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