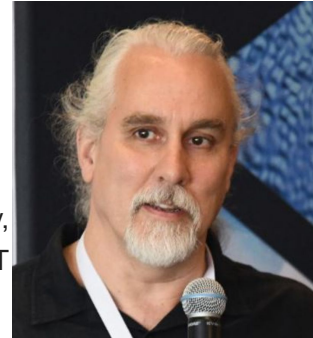


FLEET News: May 2022

We're gearing up for FLEET Annual Workshop in just over a month's time and I'm looking forward to seeing everyone in person. We'll be welcoming a number of international and Australian partners as well.

We're also holding a one-day FLEET ICPS Satellite Symposium in July, featuring some of the best speakers from ICPS as well as a few FLEET researchers.



Michael Fuhrer
Director, FLEET

In this edition of FLEET News:

- **Annual report approved**
- **Alumni report: Elizabeth Marcellina**
- **FLEET seminar in-person at Monash**
- **Melbourne Knowledge Week report**
- **Mitko Oldfield presents in Pint of Science**
- **FLEET ICPS satellite meeting**
- **Deep tech job watch**
- **Equity & diversity resources**
- **Congratulations to our ECR authors this month**
- **Talks, conferences and other opportunities**

Annual Report approved

FLEET's 2021 Annual report has been approved by the ARC, with particular praise for FLEET's new translation program, the expansion of Women in FLEET Fellowships to other, diverse groups under-represented in STEM (Diversity in FLEET), the planned ECR workshop running in conjunction with FLEET2022, and the new online mentorship tracking application.



Alumni profile: postcard from Elizabeth Marcellina in Singapore

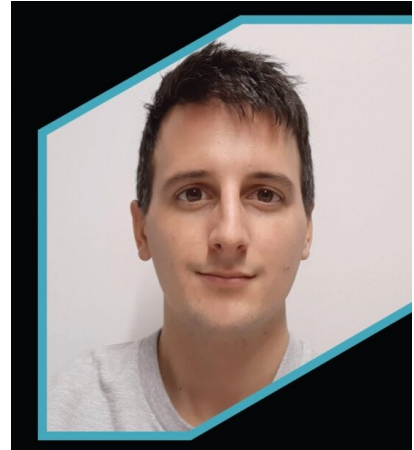
Elizabeth Marcellina, previously at UNSW, tells us how her multidisciplinary studies at FLEET, and always thinking about 'the big picture', have helped set her up for further studies at Nanyang. [Read more online.](#)



FLEET seminar: nanophotonics in TMDCs

Join us at Monash (if you are in Melbourne) or online on 21 June when Luca Sortino (visiting from Ludwig-Maximilians-Universität München) will present our first in-person FLEET seminar in a long while. We'll combine Luca's talk on all-dielectric nanophotonics in TMDC monolayers with lunch and a long overdue chat.

[Please register so that we can cater for lunch.](#)



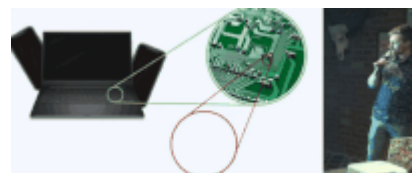
Melbourne Knowledge Week

Around 300 visitors coming thru the FLEET stall at Melbourne Knowledge Week last week talked to FLEET volunteers about role of physics and material science in addressing computing-energy issues + other challenges. Thanks to all our volunteers: Michael Barson, Bernard Field, Yi-Hsun Chen, Jesper Levinsen and Meera Parish from Monash, and Caiden Parker, Karen Bayros, Yik Lee and Patjaree Aukarasereenont from RMIT. [Check out great pics online.](#)



Mitko Pint of Science

FLEET PhD student Mitko Oldfield (Monash) gave a very entertaining and clear explanation of the role of exciton-polaritons in future superfluid-based electronics, for the national Pint of Science event this month. [Check out the video on youtube.](#)



FLEET ICPS satellite meeting

In conjunction with the International Conference on the Physics of Semiconductors (ICPS) in Sydney on 27-30 June, FLEET is hosting a satellite symposium on **Friday, 1 July** in Austinmer, about 1.5 hours south of Sydney, and will include talks by a number of international experts, including Allan MacDonald and Elaine Li from the University of Texas, Austin. [See more details and the program online.](#)



'Deep tech' job watch

A new Australian 'deep tech' newsletter currently features 41 companies with over 300 jobs on offer. [Sign up for the newsletter](#) to stay informed. Main Sequence Ventures is CSIRO's investment arm.



Equity & diversity resources/networking

A free workshop for women in research on 15 June will covers ways to enhancing the impact of your research beyond academia - [register](#).

inSTEM (20-21 July) is a networking and career-development conference for people from marginalised or underrepresented groups in STEM, and their allies. It is an initiative of the STEM-focused ARC Centres of Excellence and FLEET is a co-sponsor of the event.

Scholarships are available.

"People can only contribute their best when they feel that they are supported and respected and their contributions valued, regardless of their cultural, social-economic backgrounds, personal identity or beliefs. By creating equity in STEM, we are making the most of available grey matters and driving technological innovation and economic growth." –Tich-Lam Nguyen

Congratulations to our ECR authors this month

Congratulations to all the FLEET students and ECRs who are authors in our **most recent publications**: Abin Varghese, Abdulhakim Bake, Cheng Tan, Eliezer Estrecho, Jiong Yang, Lawrence Farrar, Matthias Wurdack, Maciej Pieczarka, Meri Algarni, Mohammad Ghasemian, Mohammad Mayyas, Oliver Stockdale, Stefan Todd, Stuart Earl, Sultan Albarakati, Tim Edmonds, Weiyao Zhao, Yifang Wang and Yuefeng Yin.



Rural schools outreach

FLEET outreach coordinator Jason Major, with Ivan Herrera Benzaquen (Swinburne), have engaged future scientists' experimental and problem-solving skills to design and test catapults

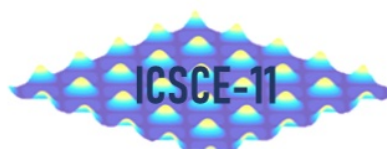


Workshops

The International Conference on the Physics of Semiconductors in Sydney 27-30 June will cover electronic, structural, optical, magnetic and transport properties of materials, plus an expert panel of editors from international journals, and scientific writing workshop aimed at PhD students and ECRs. FLEET is a sponsor of the ICPS, with Director Michael Fuhrer, Al Sue Coppersmith, PI Allan MacDonald and Centre advisor Francois Peeters all involved on committees or as plenary/invited speakers, along with other Centre speakers.



The **11th International Conference on Spontaneous Coherence of Excitons** (ICSCE-11) will be held in Burlington, Vermont, USA, 7-11 August 2022. Abstract submission is now open. See the [website](#) for further information.



The **10th International Conference on Advanced Materials & Nanotechnology** will proceed as an in-person conference in Roturua, New Zealand, 6-10 February 2023. This meeting is sponsored by FLEET partner organisation the MacDiarmid Institute and covers a broad variety of topics in nanotechnology and materials science. To receive updates and advise your intent to attend, please [register your interest](#) online.



Catch up on past talks

If you missed last week's transpacific colloquium by Ana Maria Rey (JILA, U. Colorado) about optical lattice clocks, you can [catch up via YouTube](#).



Also catch up on the following recent talks on YouTube:

- Mitko Oldfield (Monash) [Pint of Science talk](#)
- Nadya Mason (U. Illinois) [Electronic transport in strain-engineered graphene](#)
- Michael Fuhrer (FLEET Monash) [Negative capacitance in topological transistors](#)
- David Snoke (Pittsburgh) [Superfluids of light](#)

Grants and opportunities

Quad Fellowships were announced as part of the signing of the Quad agreement between the USA, Australia, Japan and India. The Fellowships provide \$50,000 plus further support to complete post-graduate studies. Applications close 1 June 2022 (tomorrow!)

Veski kickstart is offering ECRs a **project-management 101 workshop** covering initiating, planning, executing, monitoring and controlling, and closing a project. The 2 hour online workshop on 8 June costs just \$60. Limited spaces so get in fast.

Nano Letters and ACS's new Seed Grants competition will provide US\$2500 for high-risk, high-reward nano' research proposal ideas from later-stage graduate students (third year+).

EMBL Australia short-term travel grant applications are due 30 June.

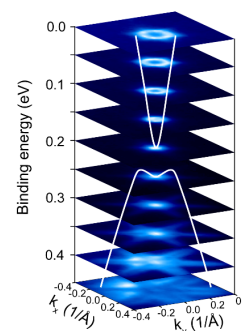
For ongoing outreach/development opportunities see **In2science** mentoring, and **CSIRO STEM Professionals in Schools**.

Interested in an **industry internship**? See active positions at **APR Interns**.

Previous news

Making a sandwich for lossless electronics A Monash-led FLEET team sandwiching a topological insulator between two ferromagnetic insulators have provided a quantum avenue towards ultra-low energy future electronics, with the designer heterostructure becoming a large-bandgap quantum anomalous Hall insulator. Qile Li and Mark Edmonds at Monash Science led the study, working with Nikhil Medhekar (Monash Engineering) and David Cortie (UOW, ANSTO).

[Read more online.](#)



Reaching academic heights in Europe: alumni profile We talked to FLEET alumni Pavel Kolesnichenko (ex Swinburne) who is now a senior postdoctoral scientist at Heidelberg University in Germany, applying expertise gained at FLEET on 2D materials and spectroscopy, and also putting other 'soft' FLEET skills to use, such as communication. [Read more online.](#)

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.

