

## Farewell to 2017

The first year of FLEET has been a great success, and our members are very proud of what we have accomplished together in our first year.

Team members and affiliates enjoyed the inaugural annual workshop in Torquay last month – our first big chance to share knowledge across nodes and themes, and forge collaborative links.



See below for a smattering of news from around the Centre, and upcoming workshops,

Best wishes for a happy holiday break, and I look forward to seeing many of you for the official launch of FLEET in June next year.

Regards,

**Michael Fuhrer**

Director

ARC Centre of Excellence in Future Low-Energy Electronics Technologies

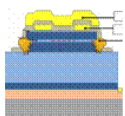
## News from around the Centre

**Spin, electron-correlation discussions** Over 80 Australian and international physicists met at UNSW last month, discussing spin and strong-electron correlations in the university's biennial Gordon Godfrey Workshop, including a very strong FLEET contingent.



**Funding success** November's ARC funding results saw FLEET research and researchers across five universities awarded additional funding. Across eight separate grants, almost \$4.6m of new research funding went to projects and facilities led by or involving FLEET researchers or directly contributing to FLEET's mission. In a future newsletter we'll describe two projects key to FLEET research success: a new materials characterisation facility at Monash and RMIT, and a quantum gas microscope at Swinburne.

**Hosting physicists at Monash** FLEET's Monash labs recently hosted a tour by members of the Victorian branch of the Australian Institute of Physics, the country's leading body for physics advocacy and support.



**UNSW researchers solve 10-year-old nanoscale transistors mystery** Until recently, theory predicted the opposite behaviour of hole-spin in nanoscale transistors to that observed in experiments. FLEET researchers at UNSW have solved this mystery, reconciling experiments and theory.

## Taking ultra-cold science to the people

FLEET advisor Wolfgang Ketterle made the most of his trip to Melbourne for the annual workshop, following it up with a day spent in Chris Vale's ultra-cold lab team at Swinburne, and then Kris Helmerson's BEC team at Monash University.

He also found time for public speaking events and a media appearance:

Ketterle told a crowd of around 200 at **Swinburne University of Technology** about BECs and other states of matter that exist at nano-Kelvin temperatures, in a talk co-presented by Swinburne University, FLEET and the Victorian branch of the Australian Institute of Physics.



For ninety school students and teachers at a **Monash University** event, Ketterle described his research and insights from his science career. Teachers and students then shared personal, round-table chats with physicists including FLEET's Meera Parish, Jeff Davis and Chris Vale, as well as Monash Dean of Science, particle physicist Jordon Nash.

Ketterle also spoke with **Red Symons on ABC Melbourne**. [Watch the talks and listen to the interview here](#).

## FLEET representing at Australasian science conferences

FLEET will be well represented at a number of science conferences around Australia/NZ in the coming months.

The **Topological Matter summer school** at ANU 8–19 January will be a golden opportunity for FLEET members senior and emerging to be involved in terms of education, outreach, and recruitment. There'll also be FLEET participation in a topologically themed Science in the Pub on Friday 12th. FLEET is sponsoring the two-week workshop, alongside the ANU, EQUUS, and the US Embassy.

The **International Conference on Nanoscience and Nanotechnology** will bring scientists and policymakers to Wollongong 29 January – 2 February. FLEET is one of six ARC Centres of Excellence showcasing nanoscience and nanotech research at ICONN 2018.

The **Summer School on Ferroelectrics** at UNSW 5–9 February will focus on fundamental ferroelectric science as well as cutting edge and emerging application, allowing young FLEET researchers to learn the ropes and build networks with the wider Asia-Pacific ferroelectric community.

The **Finite Temperature Non-equilibrium Superfluid Systems workshop** in Wanaka, NZ will include presentations by a numbers of FLEET researchers across cold-atom science and exciton-polariton condensation.

## Helping to spread FLEET news

If you're on **Facebook**, **Twitter** or **Linkedin**, follow our accounts, and Share our posts, particularly with other colleagues in the field. If a friend or colleague might be interested in our news, [click here to send them an invite](#). Or let us know and we'll invite them.

**If you have been forwarded this email, you can subscribe to future editions by [clicking here](#).**

## Participating organisations

FLEET's participating nodes are: the Australian National University, Monash University, RMIT University, Swinburne University of Technology, the University of New South Wales, the University of Queensland and the University of Wollongong.



FLEET is: The Australian Research Council Centre of Excellence in Future Low-Energy Electronics Technologies.