

# FLEET2023 ANNUAL WORKSHOP PROGRAM

@FLEETcentre | #FLEET2023

## MONDAY 3 JULY Chair: Tách-Lam Nguyễn

12:30	Lunch & Registration
13:30	Wominjeka! <b>Michael Fuhrer</b>
14:00	Tutorial - Twisty 2D materials: history, current status and open questions: <b>Shaffique Adam</b>
15:00	Invited - Atomistic self-assembly of nanostructure in liquid metals: <b>Nicola Gaston</b>
15:30	Tea break

Chair: Jan Seidel

16:00	Legacy and impact: <b>Tách-Lam Nguyễn</b>
16:30	Publishing trends & the peer-review process: <b>Esther Levy</b>
17:15	Invited - Berry curvature and strong light-matter coupling in liquid crystal microcavities with perovskites: <b>Mateusz Król</b>
17:45	Collaborative meetings   Free time
18:15	Dinner - Heritage Ballroom

## TUESDAY 4 JULY Chair: Michael Fuhrer

9:00	Invited - The concept of the brain: <b>Michael Ibbotson</b>
10:00	Research themes IAB overview: <b>Alex Hamilton</b>
10:30	Tea break

Chair: Baoyue Zhang

11:15	RT3 - The emergence of superfluidity in ultracold Fermi gases: <b>Emma Laird (virtual)</b>
11:30	RT2 - Polaritons in an excitonic reservoir: <b>Kenneth Choo</b>
11:45	RTIAB - Engineering order-disorder transitions at the surface of topological insulators: <b>Abdulhakim Bake</b>
12:00	RTIAB - Strong electron correlations in a two-dimensional kagome metal organic framework: <b>Ben Lowe</b>
12:15	RTIAB - Proton intercalation induced phase transitions in van der Waals materials: <b>Cheng Tan</b>
12:30	RTIAB - Imaging the breakdown and restoration of topological protection in magnetic TI $MnBi_2Te_4$ : <b>Mark Edmonds</b>
12:45	Lunch - The Larder   Executive Committee Meeting - Observatory
14:15	Lawn Bowling   Collaborative meetings   Free time
16:00	Poster Session - Convention Foyer
17:45	Collaborative meetings   Free time
18:15	Dinner - Heritage Ballroom

## WEDNESDAY 5 JULY Chair: Alex Hamilton

9:00	Tutorial - Exciton polaritons: <b>Eliezer Estrecho</b>
10:00	Invited - Spatially indirect exciton condensates: <b>Francois Peeters</b>
10:30	Tea break

Chair: Meera Parish

11:15	Research theme 2 overview: <b>Jeff Davis</b>
11:45	RT2 - Bose-Einstein condensation effects in semiconductor lasers: <b>Maciej Pieczarka</b>
12:00	RT3 - Fermi polaron approach to doped atomically thin semiconductors: <b>Jesper Levinsen</b>
12:15	RTIAB - Electrochemical deposition of metal tellurides using liquid metal autogenous surface potential for effective electrochemical sensing - Mechanism, characterisation & performance: <b>Maedeh-sadat Mousavi</b>
12:30	RTIAB - Fingerprint oscillations in a bulk-insulating 3D topological insulator: <b>Weiyao Zhao</b>
12:45	Lunch - The Larder

## WEDNESDAY 5 JULY Chair: Jeff Davis

14:15	What can I do to create an inclusive culture: <b>Winitha Bonney</b>
15:45	Tea break
16:15	Poster Session - Convention Foyer

## WEDNESDAY 5 JULY

17:45	Collaborative meetings   Free time
18:15	Group Photo
18:45	Conference Dinner - Convention Centre   Quiz: <b>Mitko Oldfield</b>

## THURSDAY 6 JULY

9:00	Collaborative meetings   Free time
10:30	Tea break

Chair: Dimi Culcer

11:00	Invited - Apparent strange metal behaviour in small angle twisted bilayer graphene: <b>Shaffique Adam</b>
11:30	Research theme 3 overview: <b>Kris Helmerson</b>
12:00	RT3 - Higgs oscillations in a strongly interacting Fermi gas: <b>Paul Dyke</b>
12:15	RT2 - Wave packet dynamics and emergent topological defects in non-Hermitian exciton polaritons: <b>Yow-Ming (Robin) Hu</b>
12:30	Lunch

Chair: Agustin Schiffrin

14:00	Tutorial - Magnetic topological insulators: <b>Kirily Rule</b>
15:00	RTIAB - Layer-dependent electron-phonon interactions at the surface of $MnBi_2Te_4$ : <b>Enamul Haque</b>
15:15	RTIAB - Bandgap and exciton energy renormalisation in doped TMD: <b>Jack Engdahl</b>
15:30	Tea break

Chair: Gol Akhgar

16:15	RTIAB - Growing and architecting liquid metal-derived crystals as electrocatalysts: <b>Jianbo Tang</b>
16:30	RTIAB - Modelling charge carrier dynamics in gold cluster assemblies: <b>Emma Vincent</b>
16:45	RT2 - Effective dissipative light-matter coupling in nonideal cavities: <b>Olivier Bleu</b>
17:00	RT2 - Polariton-electron scattering and trion resonance: <b>Sangeet Kumar</b>
17:15	RT3 - Effects of Floquet engineering on the coherent exciton dynamics in monolayer $WS_2$ : <b>Mitch Conway</b>
17:30	RT3 - Electric-field control of broadband THz conductivity in graphene - from Drude to non-Drude regime: <b>Phát Nguyễn</b>
17:45	Collaborative meetings   Free time
18:15	Dinner in Heritage Ballroom

## FRIDAY 7 JULY Chair: Matthew Davis

prior	Accommodation checkout before 10:00 AM
9:00	Responsible innovation and the future of FLEET: <b>Chris Browne</b>
10:30	Tea break

Chair: Jared Cole

11:00	Invited - Rapid exciton diffusion in non-fullerene acceptors and its implications for OPV device architectures and computational materials screening: <b>Justin Hodgkiss</b>
11:30	RTIAB - Enhanced itinerant ferromagnetism in hole-doped transition metal oxides - beyond the canonical double exchange mechanism: <b>Zhao Liu</b>
11:45	RTIAB - Modelling charge transport in $Al/AlO_x/Al$ tunnel junctions: <b>Karen Bayros</b>
12:00	RT2 - Towards BEC-BKT crossover in a trapped polariton condensate: <b>Eliezer Estrecho</b>
12:15	RT3 - Room temperature polariton condensates in spin-coated perovskite microcavities: <b>Mitko Oldfield</b>
12:30	Closing & Awards: <b>Michael Fuhrer</b>
13:00	Lunch
14:30	Buses depart for Melbourne Airport & Southern Cross station