



# Australasian Course in Advanced Neuroscience

## 2026 Course Program

● Neurons to Networks

● Networks to Systems

● Systems to Behaviour



**UNSW**  
SYDNEY

INTERNATIONAL BRAIN

**IBRO**  
RESEARCH ORGANIZATION



**Neurological  
Foundation**  
A pathway to hope



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COURSE **SITE MAP & COMMUTE**



ACAN (Wallace Wurth building)

Sydney Lodges (Perouse Randwick)



Entry vial UNSW **Gate 10**

Entry via **Perouse Road**

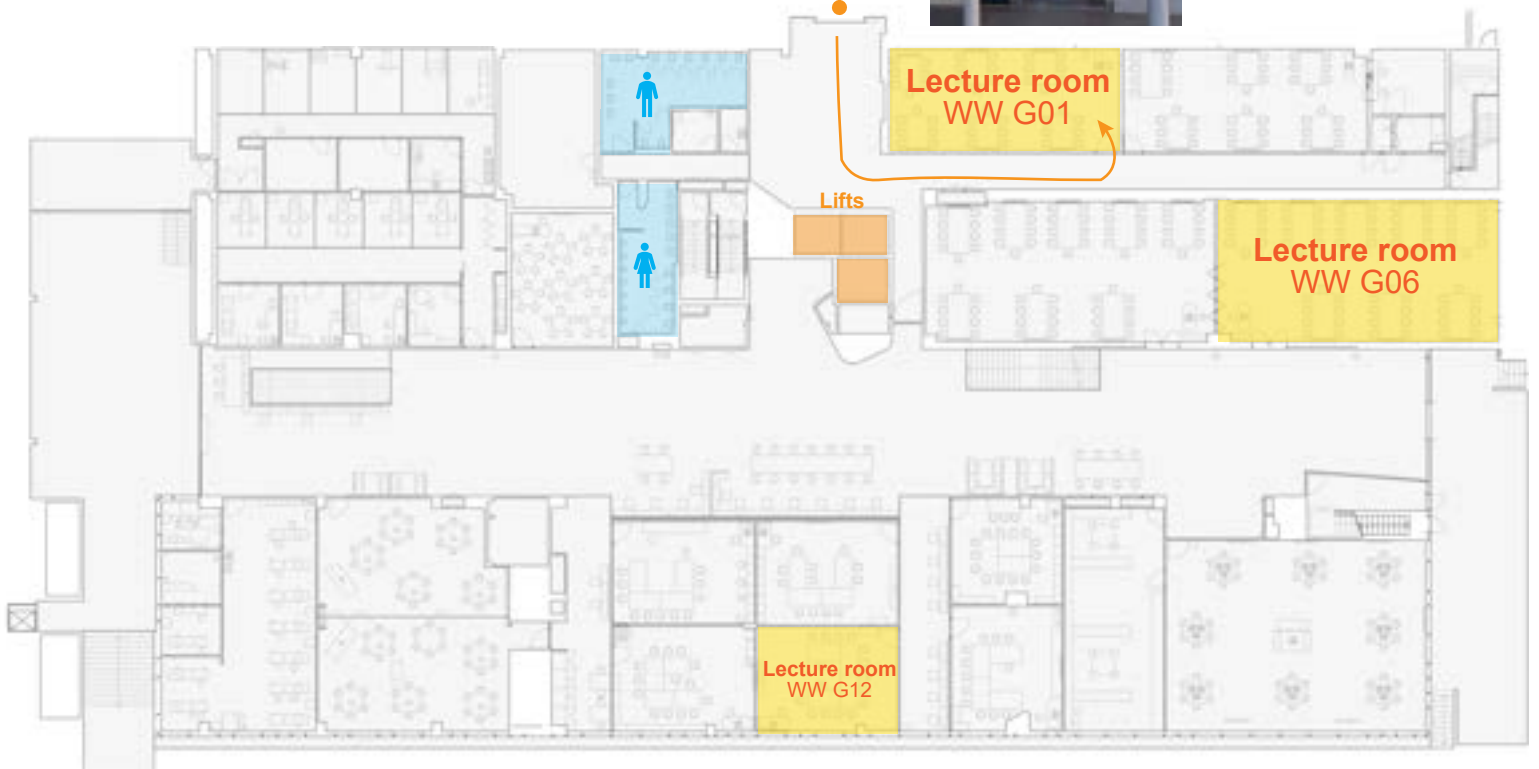
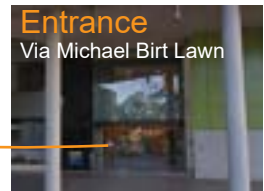
Coogee beach (follow Coogee beach Rd)



FLOOR PLAN

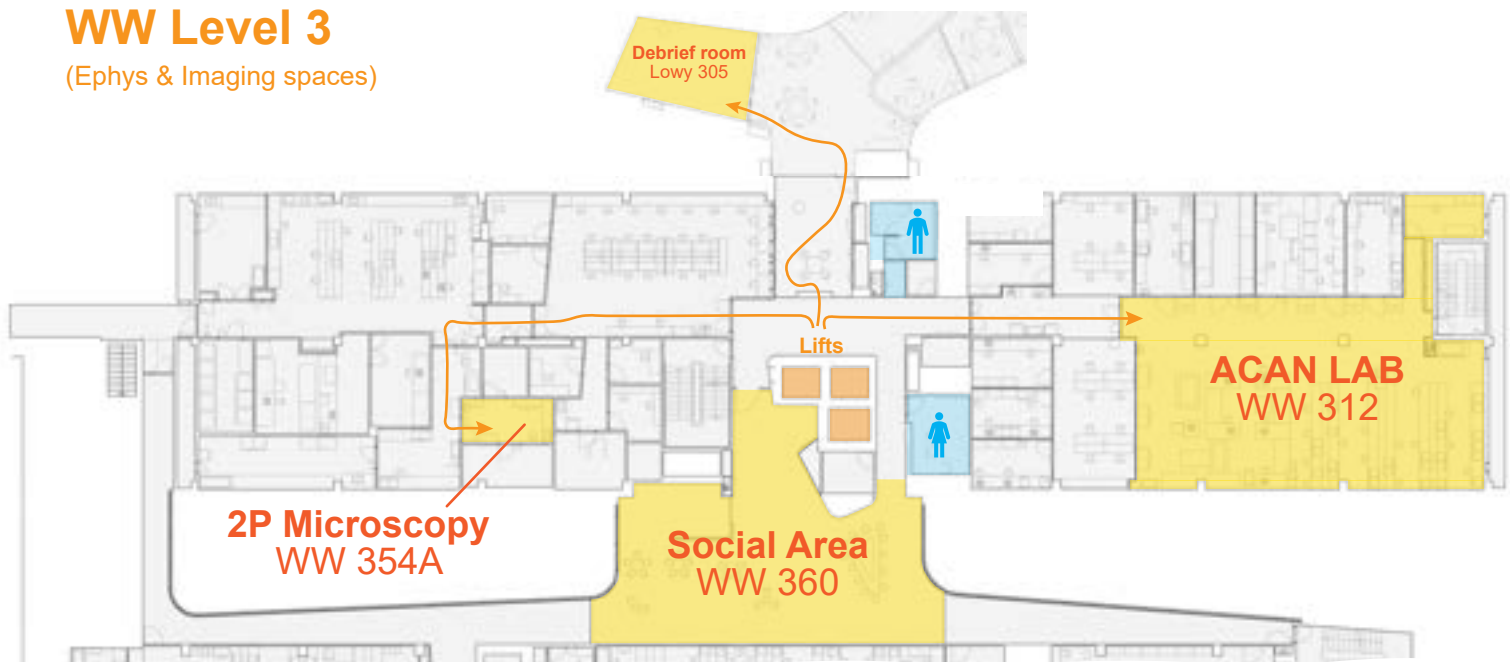
Wallace Wurth building (WW)

**WW Ground Level** (Lecture spaces)



**WW Level 3**

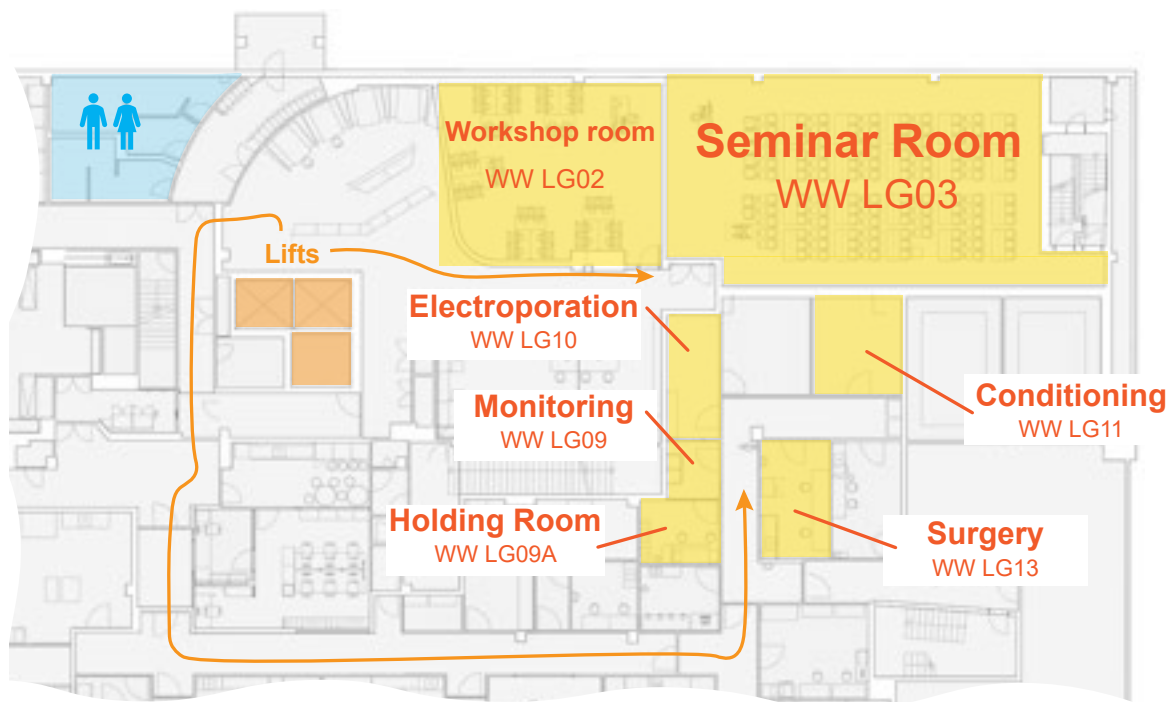
(Ephys & Imaging spaces)



FLOOR PLAN

Wallace Wurth building (WW)

**WW Lower Ground** (Evening Lectures, Behaviour & Surgery spaces)



## Welcome | Sunday 10 MAY

Important: This program is a preliminary draft. Some sessions, venues, and participant details are still being confirmed. Provisional or TBD/TBA items are highlighted in yellow and will be updated as confirmations are received.

### **EVENING SESSION**

Functions Patio (**AGSM G27**)

17:30 – 18:15

Welcome drinks | Course Introduction

<b>Alan Finkel</b>	<i>ACAN Founder (tbc)</i>
<b>Jason Mattingley</b>	<i>ANS President (tbc)</i>
<b>John Bekkers</b>	<i>Former ACAN Director</i>
<b>Stephen Williams</b>	<i>Former ACAN Director</i>
<b>Chris Reid</b>	<i>Former ACAN Director</i>
<b>Jay Bertran-Gonzalez</b>	<i>Course Director</i>
<b>Lee Fletcher</b>	<i>Co-director</i>
<b>Christina Mo</b>	<i>Co-director</i>
<b>John Power</b>	<i>Co-director</i>
<b>Robyn Brown</b>	<i>Co-director</i>
<b>ACAN Faculty and Students</b>	

18:30 – 20:30

Functions Patio (**AGSM G27**)

**WELCOME DINNER**

Students and Faculty



# THEME 1 | NEURONS to NETWORKS

Monday 11 MAY

## FUNDAMENTALS OF ELECTROPHYSIOLOGY

07:30 – 08:15	Breakfast (Perouse Randwick)
<b>SUNRISE SESSION</b>	Lecture Room (WW G12)
08:30 – 09:00	<b>Introduction to Theme</b> <b>Lee Fletcher</b>   <i>Monash University</i> (VIC)
09:00 – 10:15	<b>The Golden Rules of Electrophysiology</b> <b>John Bekkers</b>   <i>Eccles Institute of Neuroscience ANU</i> (ACT)
10:15 – 10:45	Coffee Break
<b>MORNING SESSION</b>	Lecture Room (WW G12)
10:45 – 12:00	<b>Practical Aspects of Patch Clamp Recordings</b> <b>Lee Fletcher</b>   <i>Monash University</i> (VIC)
12:00 – 13:00	Lunch (UNSW Food Court)
<b>AFTERNOON PRAC</b>	ACAN Lab (WW 312)
13:00 – 13:30	<b>Pre-Lab Debrief</b> (Lowy 305)   <b>Cherry Mao</b> (Florey VIC), <b>Alex Tang</b> (UWA WA), <b>Ben Lau</b> (UNSW NSW), <b>Tobias Bluett</b> (UQ QLD), <b>Bryony Winters</b> (USyD NSW), <b>Lee Fletcher</b> (Monash VIC)
14:00 – 18:00	<b>Lab: Meeting the rigs</b>   <i>All groups</i>
<b>EVENING WORKSHOPS</b>	ACAN Lab (WW 317)
15:00 – 18:00	<b>Neuro-Electronics Workshop</b>   <i>Group A</i> <b>Ian Forster</b>   <i>Florey Institute of Neuroscience</i> (VIC)
18:30 – 19:30	Dinner (Social area – WW 360)
<b>SUNSET SESSION</b>	Meeting Room (Lowy 305)
19:30 – 22:00	<b>Student Presentations</b>



# THEME 1 | NEURONS to NETWORKS

Tuesday 12 MAY

## BUILDING BLOCKS OF NEURONS

07:30 – 07:55	Breakfast (Perouse Randwick)
<b>SUNRISE SESSION</b>	Lecture Room (WW G06)
09:00 – 10:15	<b>The Electrical Structure of The Neuron</b> <b>Greg Stuart</b>   <i>Monash University (ANU)</i>
10:15 – 10:45	Coffee Break
<b>MORNING SESSION</b>	Lecture Room (WW G06)
10:45 – 12:00	<b>Voltage-gated Ion Channels and Excitability</b> <b>Bill Connelly</b>   <i>University of Tasmania (TAS)</i>
12:00 – 13:00	Lunch (UNSW Food Court)
<b>AFTERNOON PRAC</b>	ACAN Lab (WW 312)
13:00 – 13:30	<b>Pre-Lab Debrief</b> (Lowy 305)   <b>Cherry Mao</b> (Florey VIC), <b>Alex Tang</b> (UWA WA), <b>Ben Lau</b> (UNSW NSW), <b>Tobias Bluett</b> (UQ QLD), <b>Bryony Winters</b> (USyD NSW), <b>Lee Fletcher</b> (Monash VIC)
13:30 – 18:00	<b>Lab: Current and voltage relationships in neurons</b>   <i>All groups</i>
<b>EVENING WORKSHOPS</b>	ACAN Lab (WW 317)
15:00 – 18:00	<b>Neuro-Electronics Workshop</b>   <i>Group B</i> <b>Ian Forster</b>   <i>Florey Institute of Neuroscience (VIC)</i>
18:30 – 19:30	Dinner (Social area – WW 360)
<b>SUNSET SESSION</b>	ACAN Lab (WW 312)
19:30 – Late.	<b>Lab After-hours</b>   <i>All groups</i>



# THEME 1 | NEURONS to NETWORKS

Wednesday 13 MAY

## NEURONAL COMMUNICATION

07:30 – 08:45	Breakfast (Perouse Randwick)
<b>SUNRISE SESSION</b>	Lecture Room (WW G01)
09:00 – 10:15	<b>Axons and Signal Transmission</b> <b>Maarten Kole</b>   <i>Netherlands Institute for Neuroscience and Utrecht University</i> (Netherlands)
10:15 – 10:45	Coffee Break
<b>MORNING SESSION</b>	Lecture Room (WW G01)
10:45 – 12:00	<b>Neurotransmission and Synaptic Function</b> <b>Karl Iremonger</b>   <i>University of Otago</i> (NZ)
12:00 – 13:00	Lunch (UNSW Food Court)
<b>AFTERNOON PRAC</b>	ACAN Lab (WW 312)
13:00 – 13:30	<b>Pre-Lab Debrief</b> (Lowy 305)   <b>Cherry Mao</b> (Florey VIC), <b>Alex Tang</b> (UWA WA), <b>Ben Lau</b> (UNSW NSW), <b>Tobias Bluett</b> (UQ QLD), <b>Bryony Winters</b> (USyD NSW), <b>Lee Fletcher</b> (Monash VIC)
13:30 – 18:00	<b>Lab: Action potential dynamics</b>   <i>All groups</i>
<b>EVENING WORKSHOPS</b>	ACAN Lab (WW 312)
15:00 – 18:00	<b>In Vivo Recording Workshop</b> <b>Saba Gharaei</b>   <i>Eccles Institute of Neuroscience, ANU</i> (ACT)
18:30 – 19:30	Dinner (Social area – WW 360)
<b>SUNSET SESSION</b>	ACAN Lab (WW 312)
19:30 – Late.	<b>Lab After-hours</b>   <i>All groups</i>



# THEME 1 | NEURONS to NETWORKS

Thursday 14 MAY

## SYNAPTIC PLASTICITY

07:30 – 08:45	Breakfast (Perouse Randwick)
<b>SUNRISE SESSION</b>	Lecture Room (WW G01)
09:00 – 10:15	<b>Synaptic Dynamics, Plasticity, and Modulation</b> <b>Elena Bagley</b>   <i>University of Sydney (NSW)</i>
10:15 – 10:45	Coffee Break
<b>MORNING SESSION</b>	Lecture Room (WW G01)
10:45 – 12:00	<b>Neuronal Mechanisms of Learning and Memory</b> <b>Christine Grienberger</b>   <i>Brandeis University (Massachusetts, USA)</i>
12:00 – 13:00	Lunch (UNSW Food Court)
<b>AFTERNOON PRAC</b>	ACAN Lab (WW 312)
13:00 – 13:30	<b>Pre-Lab Debrief</b> (Lowy 305)   <b>Cherry Mao</b> (Florey VIC), <b>Alex Tang</b> (UWA WA), <b>Ben Lau</b> (UNSW NSW), <b>Tobias Bluett</b> (UQ QLD), <b>Bryony Winters</b> (USyD NSW), <b>Lee Fletcher</b> (Monash VIC)
13:30 – 18:00	<b>Lab: Excitatory and Inhibitory Synaptic Potentials</b>   <i>All groups</i>
<b>EVENING WORKSHOPS</b>	ACAN Lab (WW 312)
15:00 – 18:00	<b>In Vivo Recording Workshop</b> <b>Saba Gharaei</b>   <i>Eccles Institute of Neuroscience, ANU (ACT)</i>
18:30 – 19:30	Dinner (Social area – WW 360)
<b>SUNSET SESSION</b>	Pioneer International Theatre (WW LG03)
19:30 – 20:30	<b>Special Lecture</b> <b>TBD</b> <b>Christine Grienberger</b>   <i>Brandeis University (Massachusetts, USA)</i>
20:30 – Late.	Post Lecture Discussion / Lab



# THEME 1 | NEURONS to NETWORKS

Friday 15 MAY

## NEURONAL OPERATION

07:30 – 08:45	Breakfast (Perouse Randwick)
<b>SUNRISE SESSION</b>	Lecture Room (WW G12)
09:00 – 10:15	<b>Dendritic Integration</b> <b>Stephen Williams</b>   <i>Monash University (VIC)</i>
10:15 – 10:45	Coffee Break
<b>MORNING SESSION</b>	Lecture Room (WW G12)
10:45 – 12:00	<b>In Vivo Patch Clamp and recording techniques</b> <b>Saba Gharaei</b>   <i>Eccles Institute of Neuroscience ANU (ACT)</i>
12:00 – 13:00	Lunch (UNSW Food Court)
<b>AFTERNOON PRAC</b>	ACAN Lab (WW 312)
13:00 – 13:30	<b>Pre-Lab Debrief</b> (Lowy 305)   <b>Cherry Mao</b> (Florey VIC), <b>Alex Tang</b> (UWA WA), <b>Ben Lau</b> (UNSW NSW), <b>Tobias Bluett</b> (UQ QLD), <b>Bryony Winters</b> (USyD NSW), <b>Lee Fletcher</b> (Monash VIC)
13:30 – 18:00	<b>Lab: Neural Circuits</b>   <i>All groups</i>
<b>EVENING WORKSHOPS</b>	ACAN Lab (WW 312)
15:00 – 18:00	<b>In Vivo Recording Workshop</b>   <i>Group 2</i> <b>Saba Gharaei</b>   <i>Eccles Neuroscience Institute (ACT)</i>
18:30 – 19:30	Dinner (Social area – WW 360)
<b>SUNSET SESSION</b>	ACAN Lab (WW 312)
19:30 – Late.	<b>Lab After-hours</b>   <i>All groups</i>



# THEME 1 | NEURONS to NETWORKS

Saturday 16 MAY

## NEURONAL FUNCTION

07:30 – 08:45	Breakfast (Perouse Randwick)
<b>SUNRISE SESSION</b>	Lecture Room (G01)
09:00 – 10:15	<b>Neural Coding and Information Theory</b> <b>Ehsan Arabzadeh</b>   <i>Eccles Institute of Neuroscience ANU (ACT)</i>
10:15 – 10:45	Coffee Break
<b>MORNING SESSION</b>	Lecture Room (G01)
10:45 – 12:00	<b>Pre-Lab Debrief and Lab setup</b>   <b>Cherry Mao</b> (Florey VIC), <b>Alex Tang</b> (UWA WA), <b>Ben Lau</b> (UNSW NSW), <b>Tobias Bluett</b> (UQ QLD), <b>Bryony Winters</b> (USyD NSW), <b>Lee Fletcher</b> (Monash VIC)
12:00 – 13:00	Lunch (Social area – WW 360)
<b>AFTERNOON PRAC</b>	ACAN Lab (WW 312)
13:00 – 18:00	<b>Lab: Paired / Dendritic recordings</b>   <i>All groups</i>
<b>EVENING WORKSHOPS</b>	ACAN Lab (WW 312)
15:00 – 18:00	<b>In Vivo Recording Workshop</b>   <i>Group 3</i> <b>Saba Gharaei</b>   <i>Eccles Neuroscience Institute (ACT)</i>
18:30 – 19:30	Dinner (Social area – WW 360)
<b>SUNSET SESSION</b>	
19:30 – Late	Students' choice: The Lab or The Spot

Sunday 17 MAY

## FREE DAY ACTIVITY



## THEME 2 | CIRCUITS to NETWORKS

Monday 18 MAY

### MEASURING NEURAL FUNCTION WITH LIGHT

07:30 – 08:15	Breakfast (Perouse Randwick)
<b>SUNRISE SESSION</b>	Lecture Room (WW G01)
08:30 – 09:00	<b>Intro to Theme</b> <b>Christina Mo</b>   <i>Florey</i> (VIC) & <b>John Power</b>   <i>UNSW Sydney</i> (NSW)
09:00 – 10:15	<b>Fundamentals of Optics &amp; Microscopy</b> <b>Michael Carnell</b>   <i>UNSW Sydney</i> (NSW)
10:15 – 10:45	Coffee Break
<b>MORNING SESSION</b>	Lecture Room (WW G01)
10:45 – 12:00	<b>Neuronal Calcium Signalling</b> <b>John Power</b>   <i>UNSW Sydney</i> (NSW)
12:00 – 13:00	Lunch (UNSW Food Court)
<b>AFTERNOON PRAC</b>	ACAN Lab (WW 312) or Animal Facility
13:00 – 13:30	<b>Pre-Lab Debrief (Lowy 305)</b>   <i>All groups</i> <b>John Power</b> ( <i>UNSW NSW</i> ), <b>Dennis Cheung</b> ( <i>NIPS Japan</i> ), <b>Michel Herde</b> ( <i>Otago NZ</i> ), <b>Sophia Gilchrist</b> ( <i>USyD NSW</i> ) & <b>Si Yin Lui</b> ( <i>UNSW NSW</i> ), <b>Billy Chieng</b> ( <i>UNSW NSW</i> )
13:30 – 15:30	<b>Ca<sup>2+</sup> imaging in brain slices</b>   <i>Group A</i> <b>Headplate Surgery</b>   <i>Groups B</i>
15:30 – 18:00	<b>Headplate Surgery</b>   <i>Groups Group A</i> <b>Ca<sup>2+</sup> imaging in brain slices</b>   <i>Groups B</i>
18:30 – 19:30	Dinner (Social area – WW 360)
<b>SUNSET SESSION</b>	ACAN Lab (WW 312)   Meeting room (Lowy 305)
19:30 – Late.	<b>Using Image J, Lab After-hours: back at the rig!</b>   <i>All groups</i>



## THEME 2 | CIRCUITS to NETWORKS

Tuesday 19 MAY

### CONTROLLING NEURAL FUNCTION WITH LIGHT

07:30 – 07:55

Breakfast (Perouse Randwick)

#### SUNRISE SESSION

Lecture Room (WW G01)

09:00 – 10:15

**How to Probe Neuronal Circuits and Networks**  
**Christina Mo** | *Florey Institute of Neuroscience (VIC)*

10:15 – 10:45

Coffee Break

#### MORNING SESSION

Lecture Room (WW G01)

10:45 – 12:00

**Advances in Optogenetics**  
**John Lin** | *University of Tasmania (TAS)*

12:00 – 13:00

Lunch (UNSW Food Court)

#### AFTERNOON PRAC

ACAN Lab (WW 312) or TNF (WW 354A)

13:00 – 13:30

**Pre-Lab Debrief** (Lowy 305) | *All groups*  
**John Power** (UNSW NSW), **Dennis Cheung** (NIPS Japan),  
**Michel Herde** (Otago NZ), **Sophia Gilchrist** (USyD NSW) &  
**Si Yin Lui** (UNSW NSW), **Billy Chieng** (UNSW NSW)

13:30 – 18:00

**Optogenetics or Ca<sup>2+</sup> imaging in brain slices** | *Group A*  
**Cranial Window Surgery (TNF)** | *Group B*

18:30 – 19:30

Dinner (Social area – WW 360)

#### SUNSET SESSION

ACAN Lab (WW 312)

19:30 – Late.

**Lab After-hours** | *All groups*



## THEME 2 | CIRCUITS to NETWORKS

Wednesday 20 MAY

### A WINDOW TO NEURAL FUNCTION

07:30 – 08:45

Breakfast (Perouse Randwick)

#### SUNRISE SESSION

Lecture Room (WW G01)

09:00 – 10:15

**Molecular Mechanisms of Synaptic Function**

**Victor Anggono** | *Queensland Brain Institute (QBI)*

10:15 – 10:45

Coffee Break

#### MORNING SESSION

Lecture Room (WW G01)

10:45 – 12:00

**How to Investigate Peripheral Circuits**

**Johanna Montgomery** | *University of Auckland (NZ)*

12:00 – 13:00

Lunch (UNSW Food Court)

#### AFTERNOON PRAC

ACAN Lab (WW 312) or TNF (WW 354A)

13:00 – 13:30

**Pre-Lab Debrief** | *All groups*

**John Power** (UNSW NSW), **Michel Herde** (Otago NZ),  
**Sophia Gilchrist** (USyD NSW), **Si Yin Lui** (UNSW NSW),  
**Billy Chieng** (UNSW NSW)

13:30 – 18:00

**Optogenetics or Ca<sup>2+</sup> imaging in brain slices** | *Group B*

**Cranial Window Surgery (TNF)** | *Group A*

18:30 – 19:30

Dinner (Social area – WW 360)

#### SUNSET SESSION

Wallace Wurth Seminar Room (WW LG03)

19:30 – 20:30

**Special Lecture Diamond Voltage Imaging Microscopy**

**David Simpson** | *University of Melbourne (VIC)*

20:30 – Late.

Post Lecture Discussion



## THEME 2 | CIRCUITS to NETWORKS

Thursday 21 MAY

### FUNCTIONAL IMAGING IN WHOLE SYSTEMS

07:30 – 08:45

Breakfast (Perouse Randwick)

#### SUNRISE SESSION

Lecture Room (WW G01)

09:00 – 10:15

**Light-sheet Imaging of Whole Brain Networks in Zebra Fish**  
**Ethan Scott** | *University of Melbourne* (VIC)

10:15 – 10:45

Coffee Break

#### MORNING SESSION

Lecture Room (WW G01)

10:45 – 12:00

**Using Brain organoids to Model Disease**  
**Lezanne Ooi** | *University of Wollongong* (NSW)

12:00 – 13:00

Lunch (UNSW Food Court)

#### AFTERNOON PRAC

Imaging Labs (TNF | ACAN Lab | Katharina Gaus Facility)

13:00 – 13:30

**Pre-Lab Debrief** | *All groups*

13:30 – 18:00

*Group rotations (groups X, Y, Z)*

**2P Imaging head-fixed mouse**

**Dennis Cheung** (*NIPS Japan*) & **Christina Mo** (*Florey VIC*)

**Dendritic Imaging**

**KGLMF staff** | *UNSW Sydney* (NSW) & **Michel Herde** (*Otago NZ*)

**Multi-Electrode Arrays**

**Lezanne Ooi** (Wollongong NSW) & **Albert Steiner** *3Brain AG* (Switzerland)

18:30 – 19:30

Dinner (Social area – WW 360)

#### SUNSET SESSION

19:30 – 21:30

*Group rotations (continued)*



## THEME 2 | CIRCUITS to NETWORKS

Friday 22 MAY

### FUNCTIONAL IMAGING IN WHOLE SYSTEMS

07:30 – 08:45

Breakfast (Perouse Randwick)

#### SUNRISE SESSION

Lecture Room (WW G01)

09:00 – 10:15

**Holographic Microscopy**

**Vince Daria** | *Australian National University (ACT)*

10:15 – 10:45

Coffee Break

#### MORNING SESSION

Lecture Room (WW G01)

10:45 – 12:00

**Analysing Neural Populations**

**Clarissa Whitmire** (*QBI QLD*)

12:00 – 13:00

Lunch (UNSW Food Court)

#### AFTERNOON PRAC

ACAN Computing Lab (**TBD**)

**Analysing Population Data**

13:00 – 16:00

**2P image analysis**

**Clarissa Whitmire** (*QBI QLD*) & **Christina Mo** (*Florey VIC*)

16:30 – 18:00

**MEA analysis pipeline**

**Lezanne Ooi** (*Wollongong NSW*) & **Albert Steiner** (*3Brain AG Switzerland*)

18:30 – 19:30

Dinner (Social area – WW 360)

#### SUNSET SESSION

ACAN Computing Lab (**TBD**)

19:30 – 21:00

**MEA Analysis (continued)**

**Lezanne Ooi** (*Wollongong NSW*) & **Albert Steiner** (*3Brain AG Switzerland*)



## THEME 2 | CIRCUITS to NETWORKS

Saturday 23 MAY

WRAP UP!

07:30 – 08:45

Breakfast (Perouse Randwick)

MORNING

ACAN Computing Lab (**TBD**) | Lecture Room (G01)

09:00 – 12:00

**Data Analysis** | *All Groups*

**Clarissa Whitmire** (QBI QLD) & **Christina Mo** (Florey VIC)

**Michel Herde** (Otago NZ), **John Power** (UNSW NSW)

**Albert Steiner** 3Brain AG (Switzerland)

12:00 – 13:00

Lunch (Social area – WW 360)

AFTERNOON

Lecture Room (G01)

13:00 – 15:00

**Data Analysis** | *All Groups*

16:00 – 18:00

**Student Presentations** | *All students*

18:30 – 19:30

Dinner (Social area – WW 360)

SUNSET SESSION

Wallace Wurth Seminar Room (**WW LG03**)

19:30 – 20:30

*Special Lecture* **Manipulating Neuron-Glia Interactions Holographically**

**Hiro Wake** | *National Institute for Physiological Sciences (Japan)*

20:30 – Late.

Post Lecture Discussion

Sunday 24 MAY

FREE DAY ACTIVITY



# THEME 3 | SYSTEMS to BEHAVIOUR

Monday 25 MAY

## LEARNING & BEHAVIOUR

07:30 – 08:15	Breakfast (Perouse Randwick)
<b>SUNRISE SESSION</b>	Lecture Room (WW G12)
08:30 – 09:00	<b>Intro to Theme</b> <b>Jay Bertran-Gonzalez</b>   UNSW Sydney (NSW)
09:00 – 10:15	<b>Associative Learning and Behaviour</b> <b>Nathan Holmes</b>   UNSW Sydney (NSW)
10:15 – 10:45	Coffee Break
<b>MORNING SESSION</b>	Lecture Room (WW G12)
10:45 – 12:00	<b>Interrogating Neural Systems Function with Behaviour</b> <b>Karly Turner</b>   UNSW Sydney (NSW)
12:00 – 13:00	Lunch (UNSW Food Court)
<b>AFTERNOON PRAC</b>	Lecture Room   Computing Lab   Behaviour Lab
13:00 – 18:00	<b>Designing our Behavioural Experiment</b>   Rotations   WW LG03 <b>Jay Bertran-Gonzalez</b> (UNSW NSW) <b>Controlling a Conditioning Rig</b>   Rotations   WW LG02 <b>Karly Turner &amp; Beatrice Leung</b> (UNSW NSW) <b>Meet Your Mouse &amp; Training Day 1</b>   Rotations   WW LG11 <b>Chelsea Goulton</b> (UNSW NSW) & <b>Leigh Walker</b> (Floreys VIC)
18:30 – 19:30	Dinner (Social area – WW 360)
<b>SUNSET SESSION</b>	Wallace Wurth Seminar Room (WW LG03)
19:30 – 20:30	<b>Special Lecture Neuroscience of Associative Learning</b> <b>Mihaela Iordanova</b>   Concordia University (CAN)
20:30 – Late.	Post Lecture Discussion



# THEME 3 | SYSTEMS to BEHAVIOUR

Tuesday 26 MAY

## SETTING UP BRAIN SYSTEMS

07:30 – 07:55

Breakfast (Perouse Randwick)

### SUNRISE SESSION

Lecture Room (WW G06)

09:00 – 10:15

**Investigating Brain Structure and Function at the Macroscale**  
**Dylan Black** | *University of Queensland* (QLD)

10:15 – 10:45

Coffee Break

### MORNING SESSION

Lecture Room (WW G06)

10:45 – 12:00

**Studies of Neurogenesis and Neural Circuit Formation**  
**Annalisa Paolino** | *University of Queensland* (QLD)

12:00 – 13:00

Lunch (UNSW Food Court)

### AFTERNOON PRAC

ACAN Computing Lab | Behaviour Lab

13:00 – 18:00

**Training Day 2** | *All Groups* | **WW LG11**  
**Jay Bertran-Gonzalez** (*UNSW NSW*) & **Beatrice Leung** (*UNSW NSW*)

Prac 3\_1 | **In Utero Electroporation** | *Group 1* | **LG10**  
**Annalisa Paolino** (*UQ QLD*) & **Dylan Black** (*UQ QLD*)

Prac 3\_2 | **Advanced Behaviour** | *Group 2* | **TBD**  
**Chris Nolan** & **Tom Burton** (*UNSW, NSW*)

Prac 3\_3 | **In Vivo Fibre Photometry** | *Group 3* | **WW LG13**  
**Chelsea Goulton**, **Phil JRDB** (*UNSW NSW*), **Leigh Walker** (*Florey VIC*)

18:30 – 19:30

Dinner (Social area – WW 360)

### SUNSET SESSION

Wallace Wurth Seminar Room (WW LG03)

19:30 – 20:30

**Special Lecture Astrocyte Evolution**  
**Carmen Falcone** | *Towson University* (USA)

20:30 – Late.

Post Lecture Discussion



# THEME 3 | SYSTEMS to BEHAVIOUR

Wednesday 27 MAY

## LEARNING AND NEUROMODULATION (I)

07:30 – 08:45

Breakfast (Perouse Randwick)

### SUNRISE SESSION

Lecture Room (WW G12)

09:00 – 10:15

*Studying Neural Systems in vivo*

Lizzie Manning | *University of Newcastle* (NSW)

10:15 – 10:45

Coffee Break

### MORNING SESSION

Lecture Room (WW G12)

10:45 – 12:00

*Capturing Learning through Fibre Photometry*

Philip Jean-Richard Dit Bressel | *UNSW Sydney* (NSW)

12:00 – 13:00

Lunch (UNSW Food Court)

### AFTERNOON PRAC

ACAN Computing Lab | Behaviour Lab

13:00 – 18:00

*Training Day 3* | *All Groups* | WW LG11

Jay Bertran-Gonzalez (*UNSW NSW*) & Beatrice Leung (*UNSW NSW*)

Prac 3\_1 | *In Utero Electroporation* | *Group 2* | LG10

Annalisa Paolino (*UQ QLD*) & Dylan Black (*UQ QLD*)

Prac 3\_2 | *Advanced Behaviour* | *Group 3* | TBD

Chris Nolan & Tom Burton (*UNSW, NSW*)

Prac 3\_3 | *In Vivo Fibre Photometry* | *Group 1* | WW LG13

Chelsea Goulton, Phil JRDB (*UNSW NSW*), Leigh Walker (*Florey VIC*)

18:30 – 19:30

Dinner (Social area – WW 360)

### SUNSET SESSION

Wallace Wurth Seminar Room (WW LG03)

19:30 – 20:30

*Special Lecture* *Unique Signatures for Learning in Distinct Dopamine Circuits*

Melissa Sharpe | *University of Sydney* (NSW)

20:30 – Late.

Post Lecture Discussion



## THEME 3 | SYSTEMS to BEHAVIOUR

Thursday 28 MAY

### LEARNING AND NEUROMODULATION (II)

07:30 – 08:45	Breakfast (Perouse Randwick)
<b>SUNRISE SESSION</b>	Lecture Room (WW G06)
09:00 – 10:15	<b>Acetylcholine Systems in the Striatum</b> <b>Nathalie Dehorter</b>   <i>Queensland Brain Institute</i> (UQ)
10:15 – 10:45	Coffee Break
<b>MORNING SESSION</b>	Lecture Room (WW G06)
10:45 – 12:00	<b>Muscarinic Control of Neural Function and Chemogenetics</b> <b>Leigh Walker</b>   <i>The Florey Institute of Neuroscience</i> (VIC)
12:00 – 13:00	Lunch (UNSW Food Court)
<b>AFTERNOON PRAC</b>	ACAN Computing Lab   Behaviour Lab
13:00 – 18:00	<b>Learning Encoding Test 1</b>   <i>All Groups</i>   <b>WW LG11</b> <b>Jay Bertran-Gonzalez</b> (UNSW NSW) & <b>Beatrice Leung</b> (UNSW NSW)
	Prac 3_1   <b>In Utero Electroporation</b>   <i>Group 3</i>   <b>LG10</b> <b>Annalisa Paolino</b> (UQ QLD) & <b>Dylan Black</b> (UQ QLD)
	Prac 3_2   <b>Advanced Behaviour</b>   <i>Group 1</i>   <b>TBD</b> <b>Chris Nolan</b> & <b>Tom Burton</b> (UNSW, NSW)
	Prac 3_3   <b>In Vivo Fibre Photometry</b>   <i>Group 2</i>   <b>WW LG13</b> <b>Chelsea Goulton</b> , <b>Phil JRDB</b> (UNSW NSW), <b>Leigh Walker</b> (Florey VIC)
18:30 – 19:30	Dinner (Social area – WW 360)
<b>SUNSET SESSION</b>	Wallace Wurth Seminar Room (WW LG03)
19:30 – 20:30	<b>Special Lecture Dopamine, Acetylcholine and Corticostriatal plasticity</b> <b>John Reynolds</b>   <i>University of Otago</i> (NZ)
20:30 – Late.	Post Lecture Discussion



# THEME 3 | SYSTEMS to BEHAVIOUR

Friday 29 MAY

## SYSTEMS FAILURE

07:30 – 08:45

Breakfast (Perouse Randwick)

### SUNRISE SESSION

Lecture Room (WW G01)

09:00 – 10:15

**Subcortical Systems and Disease**

**Robyn Brown** | *The Florey Institute of Neuroscience* (VIC)

10:15 – 10:45

Coffee Break

### MORNING SESSION

Lecture Room (WW G01)

10:45 – 12:00

**Synaptic Genes & Cognition**

**Jess Nithianantharajah** | *Florey Institute of Neuroscience* (VIC)

12:00 – 13:00

Lunch (UNSW Food Court)

### AFTERNOON PRAC

Lecture Room | Behaviour Lab

13:00 – 18:00

**Learning Encoding Test 2** | *All Groups* | **WW LG11**

**Jay Bertran-Gonzalez** (UNSW NSW) & **Beatrice Leung** (UNSW NSW)

**INTEGRATIVE WORKSHOP** | WW G06

**Lee Fletcher** (Monash VIC), **Christina Mo** (Florey VIC), **John Power** (UNSW NSW) & **Jay Bertran-Gonzalez** (UNSW NSW)

*Discussion-based session aimed at integrating the fundamental concepts acquired during the course with a novel experimental research program individually or as groups. Students will work on their research question together with faculty.*

18:30 – 19:30

Dinner (Social area – WW 360)

### SUNSET SESSION

Wallace Wurth Seminar Room (WW LG03)

19:30 – Late.

**Preparation of Presentations** | *All Groups*



# THEME 3 | SYSTEMS to BEHAVIOUR

## Saturday 30 MAY

## WRAP UP!

07:30 – 08:45

Breakfast (Perouse Randwick)

### MORNING PRAC

Lecture Room (G01) & Computing Lab (TBD)

09:00 – 12:00

Preparation of Presentations | *All Groups*

Behavioural data processing | *Selected groups*

12:00 – 13:00

Lunch (Social area – WW 360)

### AFTERNOON SESSION

Lecture Room (WW G01)

13:00 – 19:30

Student Presentations | *All students*

Conditioning Experiment Results | *All students*

### SUNSET SESSION

Coogee Beach

19:30 – 21:00

END OF COURSE DINNER

21:00 – Late.

Drinks Coogee + The Spot

## Sunday 31 MAY

## RETURN HOME

07:30 – 09:00

Breakfast (Perouse Randwick)

09:00 –

Checkout and Safe return home.



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STUDENTS

TBA



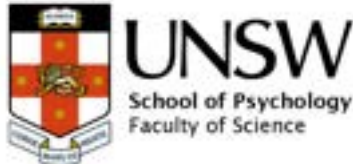
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