



Program

8:30 Registration Opens

9:00 Welcome (*Prof. Simon Gandevia*)

Session 1: Brain stimulation in motor control (*Session chair: Assoc. Prof. John Semmler*)

- 9:10 Prof. Ulf Ziemann (*Keynote Lecture*)
University of Tübingen, Germany Brain-state-dependent stimulation of human motor cortex.
New windows into physiology and therapy
- 9:45 Brodie Hand TMS coil orientation and muscle activation influence lower limb corticospinal and intracortical excitability
- 10:00 Cassio Ruas Test-Retest Reliability of Short-Interval Intracortical Inhibition in the Quadriceps Muscles
- 10:15 Tess Nikitenko Investigating the neural correlates of decision-making using transcranial magnetic stimulation
- 10:30 Rohan Puri Role of expectancy in selective stopping: a behavioural and neural perspective
- 10:45 Poster blitz 1 (1 min each)

11:00 – 11:25 Morning Tea (*Supported by Symbiotic Devices*)

Session 2: Brain activation in motor control (*Session chair: Assoc. Prof. Kylie Tucker*)

- 11:25 Prof. Mark Jenkinson (*Keynote Lecture*)
University of Adelaide, Australia Approaches for calculating biomarkers using structural and functional MRI
- 12:00 James Coxon Effects of the Dopamine D2 antagonist Sulpiride on response inhibition
- 12:15 Hakuei Fujiyama Application of online transcranial alternating current stimulation selectively modulates beta brain oscillations associated with response inhibition network
- 12:30 An Nguyen Cortical activation during movement preparation is associated with both voluntary and involuntary responses during intense acoustic stimulation
- 12:45 Poster blitz 2 (1 min each)

1:00 – 1:45 Lunch & Posters

Proudly supported by:

**Session 3: Neural injury and repair** (Session chair: Prof. Sheila Lennon)

1:45	Prof. Lara Boyd (Keynote lecture) University of British Columbia, Canada	The Neurobiology of Recovery after Stroke: Who Responds and Why?
2:20	Ines Serrada	Does body awareness change over time after stroke?
2:35	Rebekah Blakemore	Modulation of corticostriatal activity underpins the volitional suppression of parkinsonian tremor
2:50	Duncan Austin	Bihemispheric neuroplasticity following unilateral ischaemic stroke
3:05	Maryam Zoghi	The effect of transcranial direct current stimulation on chronic neuropathic pain in patients with multiple sclerosis
3:20	Lewis Ingram	Quantifying upper limb motor impairment in people with Parkinson's disease: a physiological profiling approach

3:35 – 4:00 Afternoon Tea

Session 4: Neurophysiology and movement control (Session chair: Assoc. Prof. Gabrielle Todd)

4:00	Prof. John Rothwell (Keynote Lecture) University College London, UK	The importance of inhibition in movement control: clues from tics in Tourette's syndrome
4:35	Kemal Turker	Re-wiring of human neuromuscular system using stimulus-induced changes in motor unit discharge pattern
4:50	Andrew Cresswell	Discharge properties of flexor hallucis brevis during maximal effort ramp contractions
5:05	Brendan Keane	The likelihood of Bayesian integration in motor planning: precision and accuracy in reaching movements
5:20	Angus McMorland	Intermuscular, and not corticomuscular, coherence reflects synergy structure during isometric upper limb tasks

5:35 Awards and closing remarks (Prof. Simon Gandevia)

5:45 – 7:00 Drinks & Cheese

Proudly supported by:



Poster Presentations

<i>Authors</i>	<i>Title</i>
Tanaka S & Funase K	Modulation of cerebellar brain inhibition during adaptive learning in coincident timing task
Mckeown DJ & Kavanagh JK	Acute hypoxic exposure increases perception of fatigue prior to affecting voluntary activation during maximal contractions
Otieno LA, Semmler JG & Sidhu SK	Age-related changes in GABA-mediated inhibition with fatiguing single joint exercise
Thorstensen JR, Taylor JL, Tucker MG & Kavanagh JJ	Enhanced availability of serotonin increases perceived fatigue and modulates the cortical silent period during sustained low-intensity elbow flexions
Berryman C, Hordacre B, Goldsworthy M & Ridding MC	Dose dependency and reliability of the online effect of transcranial direct current stimulation on corticospinal excitability
Nuzzo JL, Kennedy DS, Finn HT & Taylor JL	Use of transcranial magnetic stimulation to test voluntary activation of the knee extensor muscles
Dempsey L & Kavanagh JJ	Cortical excitability for resting muscle and active muscle is enhanced with the blockade of muscarinic receptors
Berryman C, Moseley L, Goldsworthy M, Ridding MC, Semmler J, Rogasch N & Hutchinson M	A proposal to investigate the contribution of peripheral immune activation to corticomotor excitability.
Kakoschke I & Hordacre B	A comparison of corticospinal tract integrity metrics as a biomarker of upper limb behaviour in chronic stroke
Héroux ME, Qureshi HG, Rana A, Kerr GK, Butler A & Gandevia SC	The hidden hand is perceived closer to midline: a perceptual error that does not drift over time
Latella C, Pinto MD & Taylor JL	Remote voluntary contraction and mental stress increase sustained force output and activity of motoneurons
Watanabe N & Polus BI	The contribution of neck proprioceptive inputs to cardiovascular responses during orthostasis.
Harman S, Wong M, Vindigni D & Polus BI	The role of neck muscles in the brain's perception of the direction of movement of the body relative to the head-neck
Tucker K, Cruzier M, Collins N & Hug F	Balancing muscle force in adolescent patellofemoral pain

Proudly supported by:



van den Hoorn W, Alshehri MA, Klyne DM & Hodges PW

Altered spine control in acute low back pain revealed using an unstable sitting paradigm: coherence between lumbar segments and seat orientation

McInnes AN, Lipp OV & Marinovic W

Benefit of intense acoustic stimulation on response force and vigour is enhanced by a preparatory contraction

Lau S, Naskovska K, Korobkov AA, Haueisen J & Haardt M

Alpha and theta oscillators during photic driving in meg-eeg signals differentiated using coupled cp decomposition

Proudly supported by:

