



Monday 18th June 2018 - PROGRAMME

08:15 – 08:50 **Registration and tea/coffee**

08:50 – 09:00 **Welcome** (Stephen Payne on behalf of the organising committee)

Physiology 1 (09:00 – 10:30)

Chair: Jon Smirl

09:00 – 09:40 Invited speaker (Damien Bailey, USW): How does the brain sense oxygen? Quantum insights from radical mechanisms!

09:40 – 09:55 Guo: Effects of Remote Ischemic Preconditioning on Dynamic Cerebral Autoregulation in Healthy Adults: A Self-controlled Intervention Study

09:55 – 10:10 Badrick: The Effect of Remote Ischaemic Conditioning on the Cerebral Haemodynamics of Healthy Volunteers

10:10 – 10:25 Rickards: Cerebral blood velocity and oxygenation responses to hypovolemic oscillatory lower body negative pressure

10:25 – 10:45 *Coffee break, Poster Display and Exhibition*

Clinical applications 1 (10:45 – 12:10)

Chair: Marcel Aries

10:45 – 11:25 Invited speaker (Jurgen Claassen / Radboud MC): Cerebral autoregulation and baroreflex function in ageing and Alzheimer dementia

11:25 – 11:40 Van Kaam: Cerebral autoregulation and critical closing pressure during human endotoxemia and sepsis

11:40 – 11:55 Nogueira: Is Cerebral Autoregulation Impaired during intravenous thrombolysis for acute ischemic stroke?

11:55 – 12:10 Nogueira: The influence of initial stroke severity on cerebral hemodynamics

12:10 – 12:30 Poster highlights (one slide per poster and no questions)

12:30 – 14:00 *Lunch, Poster Display and Exhibition*

Measurement and modelling 1 (14:00 – 15:40)

Chair: Stephen Payne

14:00 – 14:40 Invited speaker (Ronney Panerai, University of Leicester): Dynamic CA metrics: do we need 31 flavours?

14:40 – 14:55 Simpson: Cardio- and cerebrovascular responses to the squat-stand manoeuvre

14:55 – 15:10 Mahdi: Why do we need standardised methods to estimate CA?

15:10 – 15:25 Liu: A simple neural network model to optimise autoregulation assessments from transfer function analysis: differentiation of cerebral autoregulation in patients with intracranial stenosis

15:25 – 15:40 Lee: Wavelet Phase Synchronization Analysis Applied in Cerebral Autoregulation during Normocapnia and Hypercapnia

15:40 – 16:15 *Tea break, Poster Display and Exhibition*

Clinical applications 2 (16:15 – 17:30)

Chair: Christina Haubrich

16:15 – 16:45 Bootstrap project update

16:45 – 17:00 Czosnyka: Utility of monitoring cerebral autoregulation in subarachnoid haemorrhage

17:00 – 17:15 Placek: Can the phase shift analysis reveal upcoming vasospasm in subarachnoid haemorrhage patients?

17:15 – 17:30 Petkus: Non-invasive cerebrovascular autoregulation assessment using the volumetric pressure reactivity index: prospective study

17:30 – 18:30 CARNet AGM (including elections) and conference photo

18:30 – 19:30 Free time

19:30 *Dinner*



Tuesday 19th June 2018 - PROGRAMME

Physiology 2 (09:00 – 10:30)

Chair: Caroline Rickards

- 09:00 – 09:40 Invited speaker (Catherine Hall, University of Sussex): Balancing energy supply and demand: Neurovascular coupling in health and disease
- 09:40 – 09:55 Favre: Young Women Demonstrate Improved Cerebral Autoregulation Compared to Young Men during Repeated Squat-to-Stand Maneuvers
- 09:55 – 10:10 Labrecque: Does sex influence the cerebral pressure-flow relationship in response to a sit-to-stand in healthy active volunteers?
- 10:10 – 10:25 Burma: Changes in neurovascular coupling and dynamic cerebral autoregulation metrics during eight hours of recovery from acute exercise
- 10:25 – 10:45 *Coffee break, Poster Display and Exhibition*

Measurement and modelling 2 (10:45 – 12:30)

Chair: Martin Shaw

- 10:45 – 11:25 Invited speaker (Peter Smielewski, University of Cambridge): Continuous monitoring of cerebral autoregulation in traumatic brain injury: technical considerations and the clinical impact
- 11:25 – 11:40 Kainerstorfer: Cerebral autoregulation measured with near-infrared and diffuse correlation spectroscopy during intracranial pressure changes in non-human primates
- 11:40 – 11:55 Payne: Separating the myogenic and metabolic components of cerebral autoregulation
- 11:55 – 12:10 Panerai: Modelling the cerebral haemodynamic response in the physiological range of PaCO₂
- 12:10 – 12:30 Poster highlights (one slide per poster and no questions)
- 12:30 – 14:00 *Lunch, Poster Display and Exhibition*

Clinical applications 3 (14:00 – 15:25)

Chair: Ricardo Nogueira

- 14:00 – 14:40 Invited speaker (Jonathan Smirl, UBC): Cerebral Autoregulation and Concussions: What do we Know? Where should we go?
- 14:40 – 14:55 Liu: Impaired Postural Cerebral Blood Flow Regulation in Acute Concussion: A Point-of-Care Assessment on Field
- 14:55 – 15:10 Lam: Rapid Changes in Head Positioning: A new paradigm of Dynamic Cerebral Autoregulation? Experience in Acute Ischaemic Stroke and Healthy Subjects
- 15:10 – 15:25 Czosnyka: Recovery time after transient hyperaemic response test of cerebral autoregulation
- 15:25 – 16:00 *Tea break, Poster Display and Exhibition*

Concluding session (16:00 – 17:00)

- 16:00 – 16:15 Award of prizes (Best talk, Best student talk, Best poster, Best student poster)
- 16:15 – 17:00 Infomatas project update
- 17:00 Meeting close