08:50 – 09:00  Welcome  
D M Simpson, University of Southampton, UK  

Physiology 1

09:00 – 09:40  Neural control of the cerebral circulation  
Invited Speaker: E Hamel, McGill University, Montreal, Canada

09:40 – 10:00  Cerebral blood flow changes in response to mild hypovolemia and positive pressure ventilation  
M Skytioti, University of Oslo, Norway

10:00 – 10:20  Comparison between wavelet phaseshift and pressure reactivity index in determination of optimal cerebral perfusion pressure  
X Liu, University of Cambridge, UK

10:20 – 10:40  Summary presentation of ‘Science Labs’  
C Haubrich, University Hospital Aachen, Germany

10:40 – 11:10  Break & Exhibition & Set-up for posters  

Measurement and Modelling 1

11:10 – 11:50  Individualised-patient modelling for in-silico interpretation and prediction of cerebral tissue physiology and pathophysiology  
Invited Speaker: I Tachtsidis, University College London, UK

11:50 – 12:10  Assessment of dynamic cerebral autoregulation without blood pressure measurement  
J L Jara, University of Santiago de Chile, Chile

12:10 – 12:30  The effect of random step-wise lower-body negative pressure on cardio and cerebrovascular measures  
D Nikolic, University of Southampton, UK

12:30 – 12:50  Posters – 2 minute summary for posters

12:50 – 14:00  Lunch & Exhibition & Posters  

Clinical 1

14:00 – 14:40  Lymphatic drainage of the brain and pathogenesis of Alzheimer’s disease  
Invited Speaker: R Carare, University of Southampton, UK

14:40 – 15:00  Dynamic cerebral autoregulation is impaired in idiopathic Parkinson's disease  
V Haunton, University of Leicester, UK

15:00 – 15:20  Dynamic cerebral autoregulation impairment in stroke patients with coexistent large artery and small vessel disease  
G Tian, Chinese University of Hong Kong, China

15:20 – 15:40  Posters – 2 minute summary for posters

15:40 – 16:10  Break & Exhibition & Posters  

Measurement and Modelling 2

16:10 – 16:20  Concensus on TFA analysis – short presentation  
J Claassen

16:20 – 16:40  Pseudorandom steps in lower body negative pressure can improve the repeatability in the assessment of cerebral autoregulation  
D M Simpson, University of Southampton, UK

16:40 – 17:00  Contribution of identifyability techniques to cerebral autoregulation  
A Mahdi, University of Oxford, UK

17:00 - 17:10  Posters – 2 minute summary for posters

17:10 – 17:30  CARNet bootstrap project: summary of first results  
J W Elting, University Medical Centre Groningen, Netherlands

17:30 – 18:00  Break & Exhibition & Posters

18:00 – 19:00  CARNet AGM

19:00 – 19:30  Break

19:30  Dinner at Chilworth Manor
Clinical 2

09:00 – 09:40 The brain controls physical exercise, but is also challenged by it
Invited Speaker: J J van Lieshout, University of Amsterdam, The Netherlands

09:40 – 10:00 Cerebral autoregulation in different hypertensive disorders of pregnancy
T van Veen, University Medical Center Groningen, The Netherlands

10:00 – 10:20 Cerebrovascular autoregulation during and after surgical ligation of the ductus arteriosus using two surgical approaches in preterm infants
JW Elting, University Medical Center Groningen, The Netherlands

10:20 – 10:40 Is this autoregulation?
M Czosnyka, University of Cambridge, UK

10:40 – 11:10 Break & Exhibition & Posters

Measurement and Modelling 3

11:10 – 11:50 Managing an integrated database and large-scale collaboration: the pain and the pleasure
Invited Speaker: I Piper, South Glasgow University Hospital, Glasgow, UK

11:50 – 12:10 Reduced dynamic cerebral vasomotor reactivity in patients with mild cognitive impairment
V Marmarelis, University of Southern California, Los Angeles, USA

12:10 – 12:30 Model-assisted assessment of effects of age and hypertension on cerebral blood flow velocity
G. Mader, North Carolina State University, USA

12:30 – 12:50 The time-dependent variability of arterial CO2 influences the nonstationary properties of dynamic CO2 reactivity estimates during resting conditions
G. Mitsis, McGill University, Montreal, Canada

12:50 – 14:00 Lunch & Exhibition & Posters

Physiology 2

14:00 – 14:40 Blood pressure trials in acute stroke: an exercise in futility? - what is the role of other haemodynamic parameters?
Invited Speaker: T Robinson, University of Leicester, UK

14:40 – 15:00 Comparison of cerebral tissue oxygenation with cerebral arterial flow velocity responses to spontaneous changes in blood CO2 and pressure in older adults
V Marmarelis, University of Southern California, Los Angeles, USA

15:00 – 15:20 Effects of ageing, and measurement method, on gross and cortical cerebral autoregulatory upper limits
E Thompson, University of Birmingham, UK

15:20 – 15:40 Aging is associated with maintained cerebral autoregulation despite impaired cerebrovascular dilatory response to carbon dioxide
J Serrador, Rutgers Biomedical Health Sciences, Newark, NJ, USA

15:40 – 16:10 Break & Posters

Clinical 3

16:10 – 16:30 Acute stages of sport concussion: heart rate variability and blood pressure suppression during postural hemodynamic drives
J P Neary, University of Regina, Canada

16:30 – 16:50 Autoregulation-based optimal cerebral perfusion pressure in a prospective traumatic brain injury cohort
J Donnelly, University of Cambridge, UK

16:50 – 17:10 Relationship between cerebrovascular pressure reactivity and intracranial hypertension in traumatic brain injury
M Czosnyka, University of Cambridge, UK

17:10 – 17:30 Association of the outcome of traumatic brain injury patients with cerebrovascular autoregulation impairment events
V Petkus, Kaunas University of Technology, Lithuania

17:30 – 17:45 Break & remove posters

17:45 – 18:45 Tutorial / Clinic
J Serrador, Rutgers Biomedical Health Sciences, Newark, NJ, USA

19:15 Conference Dinner
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<thead>
<tr>
<th>Time</th>
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<tr>
<td>09:00</td>
<td>Bootstrap project</td>
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<td>J W Elting</td>
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<td>10:30</td>
<td>Break</td>
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<td>Science Labs</td>
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<td></td>
<td>• The importance of head position on cerebral oxygenation in patients with acute severe</td>
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<td>• The autonomic nervous system and cerebral blood flow regulation in subarachnoid</td>
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<td>• Improved orthostatic tolerance - better cerebral blood flow regulation Andrea Maier</td>
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<td>MD, Christina Haubrich, Aachen, Germany.</td>
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<td>• Can cerebral haemodynamic and autoregulation indices be used to determine disease</td>
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<td>phenotype in idiopathic Parkinson’s disease? Victoria Haunton, Leicester, UK.</td>
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<td>• Dynamics of the Liquid Brain: New insights via MR imaging in health and diseases of the</td>
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<td>brain parenchyma, blood vessels, and cerebrospinal fluid circulation. Paul Summers,</td>
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<td>Milan, Italy.</td>
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<td>• MRI measurements of cerebral autoregulation – proof of principle Daan de Jong,</td>
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<td>Nijmegen, the Netherlands.</td>
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<td>• The effect of an extensive exercise program on mild cognitive impairment (MCI) and the</td>
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<td>role of cerebral perfusion regulation. Marit Sanders, Jurgen Claassen, Nijmegen, the</td>
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<td>12:20</td>
<td>Lunch</td>
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<td>Consensus on data analysis</td>
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<td>J Claassen</td>
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<td>14:30</td>
<td>Break</td>
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<td>14:50</td>
<td>Collaborative CARNet projects (TBC)</td>
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