

# **incf** | **Neuro Informatics 2016**

September 3-4  
Reading, UK



PROGRAM BOOK

## About INCF

The International Neuroinformatics Coordinating Facility INCF, is an international organization launched in 2005, following a proposal from the Global Science Forum of the OECD to establish international coordination and collaborative informatics infrastructure for neuroscience. INCF is hosted by Karolinska Institutet and the Royal Institute of Technology, and the Secretariat is located on the Karolinska Institute Campus in Solna.

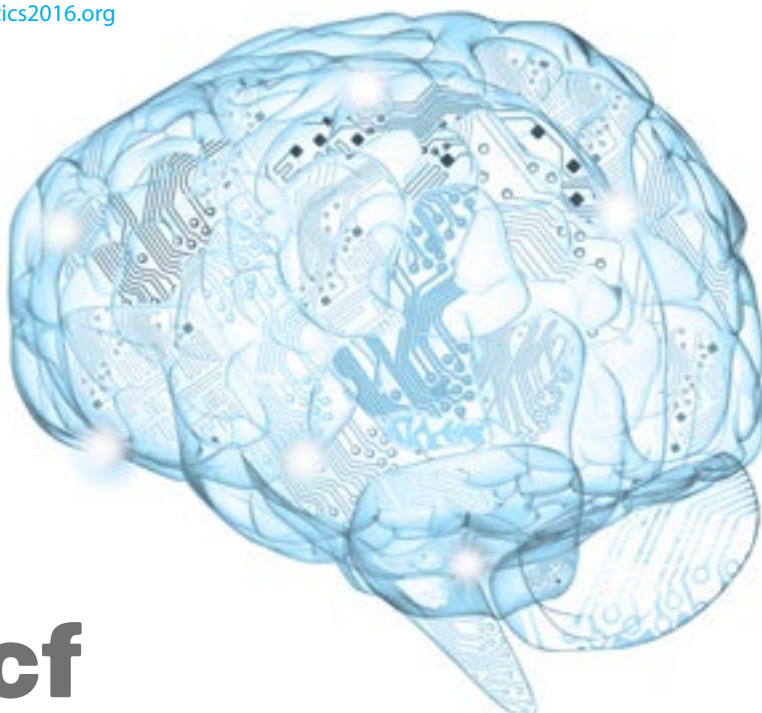
Our mission is to facilitate the work of neuroscientists around the world, and to catalyze and coordinate the global development of neuroinformatics. We aim to foster scientific collaboration, advance training in neuroinformatics, and act as an independent international facilitator. INCF currently has Governing and Associate Nodes spanning 4 continents, with an extended network comprising organizations, individual researchers, industry, and publishers.

The INCF Secretariat supports the Nodes with outreach, project management, and administration of community-driven projects regarding standards, data sharing, training, infrastructure, and interoperability issues in neuroscience.

Learn more:

[incf.org](http://incf.org)

[neuroinformatics2016.org](http://neuroinformatics2016.org)



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## Welcome to the 9th INCF Congress in Reading, UK!

Hello everybody. As a Brit (even if don't sound like one any more), it is a great pleasure to be back in the UK. On behalf of the organizers and Program Committee, I am delighted to welcome you all to Reading for the 9th INCF Congress on Neuroinformatics. Neuroinformatics 2016 is organized by INCF in association with the INCF U.K. Node.

This year's meeting comes at an exciting time in the evolution of neuroinformatics as a mature discipline that is ever more central to the conduct of brain research. Every level of brain research, from molecular/cellular neurobiology to cognitive neuroscience and every spatial scale in between, is awash in data. They all now appeal to information science for help in turning these data into knowledge and, ultimately, a better understanding of the brain. This is true for studies of genetics, epigenetics, imaging and behavior as well as their integration within multi-domain models of brain function. Furthermore, there is rapidly growing awareness of the importance of Open Science that is motivating the creation of national and international data-sharing initiatives. This drive carries with it a considerable burden upon neuroinformaticians to build reference datasets and ensure interoperability and reproducibility across hardware platforms and software workflows. INCF provides the critical forum for neuroinformaticians to come together and create lasting solutions that unravel these tangled threads as we move toward a globally interconnected neuroscience community.

The meeting is organized to cover generic neuroinformatics technologies for data handling as well as application domains where neuroinformatics can provide specific analytic solutions and interpretation of results. The generic aspects of data or computing systems, visualization and network modeling are presented in plenary session. Application domains in neuroimaging, cognition, neurodevelopment and brain disorders are distributed across two parallel tracks that allow us to cover more territory in two days. As always, there will be plenty of time for posters and discussion, hopefully heated at times, as well as a lot of British beer.

Welcome everybody, let's get this show on the road.

### **Alan Evans**

McGill University, Canada

*INCF 2016 Program Committee Chair*

### **Program Committee**

Katrin Amunts, Research Center Jülich, Germany

Giorgio Ascoli, George Mason University, USA

Ingo Bojak, University of Reading, UK

Kenneth Harris, University College London, UK

Michael Hawrylycz, Allen Institute for Brain Science, USA

Yong He, Beijing Normal University, China

Pedro Valdes-Sosa, Cuban Neuroscience Center, Cuba

Wim Vanduffel, KU Leuven, Belgium

### **Local Organizing Committee**

Dr. Ingo Bojak

Rosa Cusato-Sörnäs

# General information

The Neuroinformatics 2016 will take place at the Palmer building on Whiteknights campus at Reading University. Exhibits are located outside the lecture hall. Featured sponsors are listed on page 6 and 15-16.

The poster and demo sessions will take place at the Meadow Suite, located at campus. The poster and demo sessions are scheduled for Saturday, September 3 and Sunday, September 4.

The poster boards and the demo stations will be marked with numbers referring to those stated in the abstract book. Materials for putting up the posters will be provided. The meeting staff will remove posters not taken down by Sunday, September 4 at 20:30. The meeting organizers do not accept responsibility for any materials left behind.

## INTERNET

WiFi codes will be handed out at registration.

## LUNCH

Lunch will be served at the Palmer building outside the lecture hall according to the program schedule. Coffee breaks will be served in the exhibit area.

## CONFERENCE COORDINATORS ON SITE

Rosa Cusato-Sörnäs, INCF +46 8 524 870 16

## OPENING HOURS OF THE REGISTRATION DESK

September 3-4, 8:00-17:30

## PARTICIPATION, NAME TAGS

Official conference name tags will be handed out at registration and will be required for admission to all conference functions. Participants who lose their name tags will have to pay a fee of 25EUR to obtain a replacement tag.

## SOCIAL EVENTS

There will be two complimentary welcome receptions at the Meadow Suite during the poster and demo session on September 3-4 at 17:30-19:30.

## TO THE VENUE

Visitors arriving by plane at London's airports can take trains to London Paddington. Trains from London Paddington to Reading station run approximately every 15-20 minutes throughout the day and the average journey time is around 30 minutes. Find out more at the National Rail Website. The 21 and 21a buses run from Reading train station in the town centre to Whiteknights campus at regular intervals, 24 hours a day.

# Congress program at a glance

Saturday, September 3

Sunday, September 4

Monday, September 5

9.00	<b>WELCOME</b>	<b>UK NODE PRESENTATION</b>
9.15	<b>TRACK A</b> INFORMATICS I: DATA SYSTEMS	<b>TRACK E</b> INFORMATICS III: VISUALIZATION
	coffee break	coffee break
10.55	<b>TRACK B</b> INFORMATICS II: COMPUTING SYSTEMS	<b>TRACK F</b> INFORMATICS IV: FROM SINGLE NEURONS TO LARGE SCALE NETWORKS
12.05	<b>DISCUSSION</b>	<b>DISCUSSION</b>
	lunch	lunch
13.30	<b>TRACK C</b> NEUROIMAGING I <b>TRACK D</b> COMPUTATION AND COGNITION: FROM PHYSIOLOGY TO NEURAL PROCESSING	<b>TRACK G</b> BRAIN DISORDERS I <b>TRACK H</b> TRAUMATIC BRAIN INJURY
	coffee break	coffee break
15.10	<b>TRACK C</b> NEUROIMAGING II <b>TRACK D</b> COMPUTATION AND COGNITION: FROM NEURAL PROCESSING TO PSYCHOLOGY	<b>TRACK G</b> BRAIN DISORDERS II <b>TRACK I</b> NORMAL DEVELOPMENT/ COGNITION
16.20	<b>DISCUSSION</b>	<b>DISCUSSION</b>
17.30	<b>POSTER AND DEMO RECEPTION</b>	<b>POSTER AND DEMO RECEPTION</b>
19.30		

**OPTIONAL TOURS**

**Windsor Castle  
OR  
Stonehenge and Salisbury**



Human Brain Project



## Saturday, September 3, 2016

### 09:00 OPENING STATEMENT

Alan Evans, McGill University, Canada

### 09:15 TRACK A INFORMATICS I: DATA SYSTEMS

09:15 **KEYNOTE ▶** *Moving grounds: The evolution of neuroinformatics, statistical, and sociological aspects and their interactions in brain imaging research*  
**Jean-Baptiste Poline** University of California Berkeley USA

09:45 *Neuroscience gateway – cyberinfrastructure providing supercomputing resources for large scale computational neuroscience research*  
**Amitava Majumdar**, University of California San Diego

10:05 *Linking computational models to experimental data with the Brain Operation DataBase (BODB)*  
**James J Bonaiuto**, University College London, UK

### 10:25 COFFEE

### 10:55 TRACK B INFORMATICS II: COMPUTING SYSTEMS

10:55 **KEYNOTE ▶** *Web platforms for high-throughput neuroimaging analyses: state of the art and future directions*  
**Tristan Glatard**, McGill University, Canada

11:25 *Easy-to-use GPU acceleration of neural network simulations with GeNN*  
**James P Turner**, University of Sussex, UK

11:45 *Automatic analysis (aa): efficient and transparent multimodal neuroimaging workflows*  
**Tibor Auer**, University of Cambridge, UK

### 12:05 ROUNDTABLE DISCUSSION

### 12:35 LUNCH

Parallel sessions in the afternoon

### 13:30 TRACK C NEUROIMAGING I

13:30 **KEYNOTE ▶** *3D-Polarized light imaging – The structural connectome goes microscopic*  
**Markus Axer**, Forschungszentrum Jülich, Germany

14:00 *A symmetry-based method to infer structural brain networks from probabilistic tractography data*  
**Constantine Dovrolis**, Georgia Tech, USA

14:20 *Whole brain fMRI activity at a high temporal resolution: A novel analytic framework*  
**Niels Janssen**, Universidad de La Laguna, Spain

## Saturday, September 3, 2016

### 13:30 TRACK D COMPUTATION AND COGNITION: FROM PHYSIOLOGY TO NEURAL PROCESSING

- 13:30 **KEYNOTE ▶** *Emergence of subnetworks in plastic recurrent networks*  
**Claudia Clopath**, Imperial College, UK
- 14:00 *Common neural coding across domains of decision making identified by meta-analysis*  
**Manisha Chawla**, Indian Institute of Technology, India
- 14:20 *Statistical uncertainty and sensitivity analysis of intracellular signaling models - through approximate Bayesian computation and variance based global sensitivity analysis*  
**Olivia Eriksson and Alexandra Jauhiainen**, Royal Institute of Technology, Sweden

### 14:40 COFFEE

### 15:10 TRACK C NEUROIMAGING II

- 15:10 **KEYNOTE ▶** *Deep neural networks: a new framework for modelling brain information processing*  
**Nikolaus Kriegeskorte**, University of Cambridge, UK
- 15:40 *Over a unified connectivity estimator for intra and inter-frequency couplings through symbolic transfer entropy: A MEG resting-state analysis*  
**Stavros I. Dimitriadis**, Cardiff University School of Medicine, UK
- 16:00 *An information theoretic framework for neuroimaging data analysis: stimulus modulations, representational interactions and causal communication of specific information content*  
**Robin A. A. Ince**, University of Glasgow, UK

### 15:10 TRACK D COMPUTATION AND COGNITION: FROM NEURAL PROCESSING TO PSYCHOLOGY

- 15:10 **KEYNOTE ▶** *Neurocomputational Modeling in Psychiatry*  
**Peter Dayan**, University College London, UK
- 15:40 *Simultaneous modeling of brain and behavior using dynamic field theory: Probing the neural dynamics of response selection*  
**Sobana Wijeakumar**, University of East Anglia, UK
- 16:00 *Simulating word acquisition and semantic grounding in a neuroanatomically realistic, Hebbian-learning, spiking neural network model of the cortex*  
**Max Garagnani**, Freie Universität Berlin, Germany

### 16:20 ROUNDTABLE DISCUSSION

### 17:30 POSTER SESSION AND DRINK RECEPTION



## Sunday, September 4, 2016

### 09:00 UK NODE PRESENTATION

### 09:15 TRACK E INFORMATICS III: VISUALIZATION

- 09:15 **KEYNOTE ▶** *Massive Scale Neuroinformatics*  
**Hanchuan Peng**, Allen Institute for Brain Science, USA
- 09:45 *Measuring complex brain networks structure*  
**Ester Bonmati**, University of Girona, Spain
- 10:05 *Virtual reality visualisation of a biologically realistic anatomical and functional model of the tadpole spinal cord*  
**Marius Varga**, University of Plymouth, UK

### 10:25 COFFEE

### 10:55 TRACK F INFORMATICS IV: FROM SINGLE NEURONS TO LARGE-SCALE NETWORKS: CONNECTING MICRO MACRO SCALES

- 10:55 **KEYNOTE ▶** *Towards a modeling framework for the efficient creation, simulation and analysis of brain functions*  
**Jeffrey Krichmar**, University of California Irvine, USA
- 11:25 *Reconstructing and simulating neocortical microcircuitry*  
**Srikanth Ramaswamy**, Ecole Polytechnique Federale de Lausanne, Switzerland
- 11:45 *Relating extrinsic connections to the intrinsic architecture of the cerebral cortex*  
**Claus Hilgetag**, University Medical Center Hamburg-Eppendorf, Germany

### 12:05 ROUNDTABLE DISCUSSION

- 12:35 *Trellis spotlight presentation*  
**Lou Woodley**, AAAS, USA

### 12:45 LUNCH

Parallel sessions in the afternoon

### 13:30 TRACK G BRAIN DISORDERS I

- 13:30 **KEYNOTE ▶** *The evolving role for imaging in optimizing treatment for depression*  
**Helen Mayberg**, Emory University, USA
- 14:00 *Mechanisms underlying different onset patterns of focal seizures*  
**Yujiang Wang**, Newcastle University, UK
- 14:20 *Detection and cortical localization of ictal signatures using electroencephalogram signals*  
**Piyush Swami**, Indian Institute of Technology Delhi, India

## Sunday, September 4, 2016

### 13:30 TRACK H TRAUMATIC BRAIN INJURY

- 13:30 **KEYNOTE ▶** *Acquiring and analysing data in TBI: Challenges and opportunities*  
**David Menon**, University of Cambridge, UK
- 14:00 *Computational challenges for the analysis of intracranial pressure and heart rate data in traumatic brain injuries patients*  
**Pietro Lio**, University of Cambridge, UK
- 14:20 *Legal, ethical and technical challenges of international clinical data sharing: The Center-TBI experience*  
**Jeannette Söderberg**, INCF, Sweden

### 14:40 COFFEE

### 15:10 TRACK G BRAIN DISORDERS II

- 15:10 **KEYNOTE ▶** *Integrative hubs in the connectome*  
**Martijn van den Heuvel**, University Medical Center Utrecht, the Netherlands
- 15:40 *Contributions from white and grey matter on structural connectomes of temporal lobe epilepsy patients*  
**Peter Neal Taylor**, Newcastle University, UK
- 16:00 *Determining epilepsy surgery targets through connectome-based computer simulations*  
**Marcus Kaiser**, Newcastle University, UK

### 15:10 TRACK I NORMAL DEVELOPMENT / COGNITION

- 15:10 **KEYNOTE ▶** *Typical and atypical development of large-scale brain networks*  
**Vinod Menon**, Stanford School of Medicine, USA
- 15:40 *Detailed computational modeling of the developmental self-organization of neuronal structure and function*  
**Roman Bauer**, Newcastle University, UK
- 16:00 **KEYNOTE ▶** *The functional and neural architecture of object concepts*  
**Yanchao Bi**, Beijing Normal University, China

### 16:20 ROUNDTABLE DISCUSSION

### 17:30 POSTER SESSION AND DRINK RECEPTION (COMPLIMENTARY, REFRESHMENTS SERVED)

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## Monday, September 5, 2016

### Optional tours

#### **TOUR I: WINDSOR CASTLE - A WALK IN THE SHOES OF THE ROYAL BRITISH FAMILY**

Welcome to the Queen's home! Serving the British Monarchs for nearly 1,000 years, Windsor Castle is the oldest and largest inhabited castle in the world. Enjoy a tour around its extensive rooms, the State Apartments, located in the heart of the building. Further attractions include the Drawings Gallery, Queen Mary's dolls' house, as well as the fourteenth-century St. George's Chapel, the burial place of ten sovereigns and setting for many Royal weddings.

##### **QUICK FACTS**

**Duration:** Up to 4 hours

**Time:** 9:00-13:00

**Price:** £40

**Including:** guide, entry to the Drawings Gallery exhibition & transfer from/to Reading

**Driving distance from Reading:** 35 mins

#### **TOUR II: STONEHENGE AND SALISBURY - INNER CIRCLE TOUR**

England is the proud home of one of the wonders of the world which also happens to be the best known prehistoric monument in Europe. Whether Stonehenge was built for astronomic purposes or for human sacrifice, with an age of 3100 BC it certainly is an impressive sight. Mystery still surrounds its origin but this site affords an extraordinary glimpse into a vanished world, not to be missed by all of those in the area. After an exciting visit to Stonehenge, one has the perfect opportunity to discover Salisbury. Voted as one of the Lonely Planet's Top 10 Cities in the Best in Travel 2015, Salisbury is a city with timbered buildings, an Early English Gothic Cathedral home to the famous Magna Carta, a thriving market, a buzzing arts scene, museums and some of England's finest historic houses waiting to be explored. Lunch in the Côte Brasserie – Salisbury, a modern, all-day French brasserie chain, serving regional specialities and traditional classics, is included in this trip.

##### **QUICK FACTS**

**Duration:** Up to 6 hours

**Time:** 9:00-15:00

**Price:** £70

**Including:** guide, entrance fee Stonehenge, 3 course lunch menu in the centre of Salisbury & transfer from/to Reading

**Driving distance from Reading:** 1 hour 15 mins

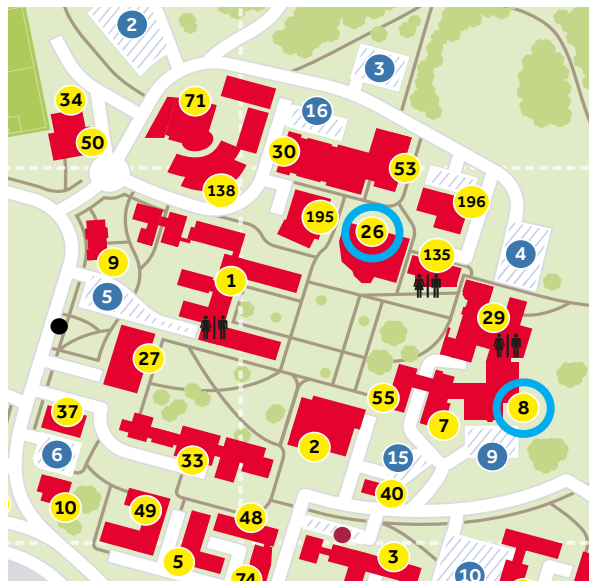
Palmer building: ground floor



Palmer building: first floor



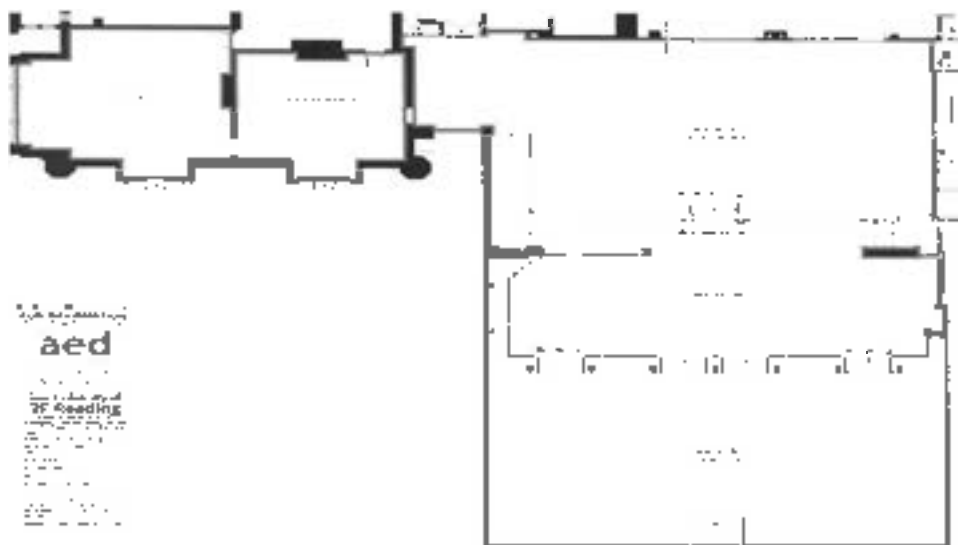
## Whiteknights campus



**26** Palmer building:  
Congress venue

**8** Meadow Suite:  
Venue for poster &  
demo receptions

## Meadow suite



Bigger maps of the campus are available at [reading.ac.uk/about/visit-us.aspx](http://reading.ac.uk/about/visit-us.aspx)

SAVE THE DATE!



# Neuro Informatics 2017

Kuala Lumpur, Malaysia | August 20 - 21

Join the global INCF community for  
keynotes | workshops  
posters | demos | socials

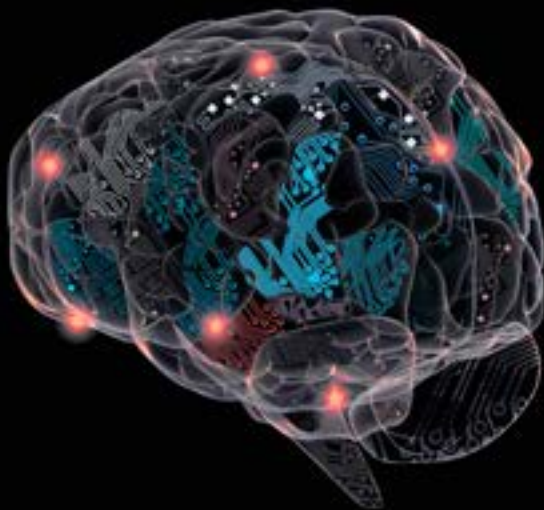
## PROGRAM COMMITTEE

Jean Baptiste Poline, co-chair  
University of California Berkeley, USA

Russ Poldrack, co-chair  
Stanford University, USA

## LOCAL ORGANIZING COMMITTEE

Fadzil Hani, chair  
Naufal Saad  
Eric Ho  
University Petronas, Malaysia



[neuroinformatics2017.org](http://neuroinformatics2017.org)

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Lundbeckfonden  
Call for Nominations for

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# THE BRAIN PRIZE

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THE PRIZE OF € 1 MILLION WILL BE AWARDED IN COPENHAGEN MAY 2017

## Nominations by 15 September 2016

Nominations will be reviewed by the Selection Committee:

ANDERS BJÖRKLUND, SWEDEN, VICE-CHAIRMAN

COLIN BLAKEMORE, UNITED KINGDOM, CHAIRMAN

JOSEPH COYLE, USA

GEOFFREY DONNAN, AUSTRALIA

TOM JESSELL, USA

STORY LANDIS, USA

PHILIP SCHELTENS, THE NETHERLANDS

IRENE TRACEY, UNITED KINGDOM

FOR THE NOMINATION FORM AND DETAILS OF THE NOMINATION PROCEDURE, PLEASE VISIT:

[WWW.THEBRAINPRIZE.ORG](http://WWW.THEBRAINPRIZE.ORG)

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## Prize Winners 2016

Timothy Bliss, The Francis Crick Institute, United Kingdom, Graham Collingridge, University of Bristol, United Kingdom

Richard Morris, The University of Edinburgh, United Kingdom



*The Brain Prize recognizes and rewards outstanding contributions to European neuroscience, from basic to clinical*



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# Abstracts

## **ABSTRACT INFORMATION**

The abstract list is sorted in alphabetical order by the corresponding author's last name.

D Demo

P Poster

IP Investigator presentation

### **Session 1**

Saturday, September 3, 17:30-19:30

Abstracts with uneven numbers will be presented

### **Session 2**

Sunday, September 4, 17:30-19:30

Abstracts with even numbers will be presented

All abstract presenters have been asked to be available during both sessions if possible.

Corresponding author	Abstract title	Abstract number
Ahmed, Zeeshan	MAV-seq: platform for the NGS data workflow management and automation	D12
Ahmed, Zeeshan	MSL: mining published scientific literature for the extraction and classification of text and images to support IR capabilities	P26
Ahmed, Zeeshan	Interactive quality and pre-processing pipeline for ATAC-seq data	P32
Asai, Yoshiyuki	Perspectives of ontology-based search server for making an intelligible list of metadata to represent target neuroinformatics contents in J-Node	P47
Auer, Tibor	Automatic Analysis (AA): efficient and transparent multimodal neuroimaging workflows	IP21
Bakker, Rembrandt	Web-based neuron morphology viewer as an aid to develop new standards for neuron morphology file formats	D06
Balbi, Pietro	A single Markov-type kinetic model reliably accounts for the macroscopic currents of all human voltage-gated sodium channel isoforms	P33
Bauer, Roman	Detailed computational modeling of the developmental self-organization of neuronal structure and function	IP20
Bauer, Roman	Computational modeling of pathological layer formation in neurodevelopmental disorders	P21
Bonaiuto, James J	Linking computational models to experimental data with the Brain Operation DataBase (BODB)	IP07
Bonmati, Ester	Measuring complex brain networks structure	IP12
Braun, Wilhelm	Characterising non-renewal stochastic dynamics by an iterated first-passage time approach	P17
Buccigrossi, Robert	ReproNim: a center for reproducible neuroimaging computation to support resource discovery, interoperability, and replicable results	P45
Chawla, Manisha	Common neural coding across domains of decision making identified by meta-analysis	IP03
Chen, Nan-Yow	NeuroRetriever: automatic single-neuron reconstruction from fluorescent images	P55
Cordeiro, Vinicius L	A stochastic version of the Potjans-Diesmann cortical column model	P23
Costa, Rui Ponte	Optimization of synaptic transmission during long-term plasticity explains expression loci	P35
Das, Samir	Open science at the Montreal Neurological Institute - LORIS & CBRAIN	P18
Denker, Michael	Challenges in designing workflows for reproducible analysis of electrophysiological data - usage of community tools	P41

Corresponding author	Abstract title	Abstract number
Diamond, Alan	Neuromorphic hardware in action: comparing the implementation of a spiking multivariate classifier model on three neuromorphic platforms	P40
Dimitri, Giovanna Maria	Computational challenges for the analysis of intracranial pressure and heart rate data in traumatic brain injuries patients	IP06
Dimitri, Giovanna Maria	Computational challenges for the analysis of intracranial pressure and heart rate data in traumatic brain injuries patients	P06
Dimitriadis, Stavros I	Over a unified connectivity estimator for intra and inter-frequency couplings through symbolic transfer entropy: A MEG resting-state analysis	IP11
Dovrolis, Constantine	A symmetry-based method to infer structural brain networks from probabilistic tractography data	IP15
Eriksson, Olivia	Statistical uncertainty and sensitivity analysis of intracellular signaling models - through approximate Bayesian computation and variance based global sensitivity analysis	IP01
Evans, Benjamin D.	Raining fire upon modelling difficulties: PyRhO in the cloud	D07
Fukuda, Tetsuya	Establishment of the estimation method of the neural network using CMA-ES for elucidating the neural mechanism of a silkworm moth brain	P15
Geminiani, Alice	Simulation of plasticity damage in the cerebellar cortex during cerebellum-driven tasks	P73
Garagnani, Max	Simulating word acquisition and semantic grounding in a neuroanatomically realistic, Hebbian-learning, spiking neural network model of the cortex	IP19
Goulas, Alexandros	Cross-species prediction of macroscale connectivity of mammalian cortices	P22
Goulas, Alexandros	Relating the transcriptional and structural architecture of mouse cortical areas	P30
Grethe, Jeffrey S	SciCrunch: A cooperative and collaborative data, information, and resource discovery portal for scientific communities	D09
Guhan Seshadri, N P	Visualization of brain connectivity during emotion induction	P48
Hagiwara, Rina	Functional connectivity analysis of working memory during a mental arithmetic task	P61
Helmer, K.G.	Constructing Terminologies for the INCF Neuroimaging Data Model (NIDM)	P39
Hernández, Guadalberto	Using Virtual Reality to visualize MRI images of the human brain	P54

Corresponding author	Abstract title	Abstract number
Hilgetag, Claus C	Relating extrinsic connections to the intrinsic architecture of the cerebral cortex	IP14
Hiroyasu, Tomoyuki	Adaptive HRF and BF approaches to fNIRS activation analysis	P59
Human Atlasing Working Group , HAWG	Standardizing neuroimaging atlas formats	P51
Ichiki, Mayu	A comparative analysis of indexing of mental workload by using neuro-driving tools based on EEG measurements coupling with the eye-tracking system	P05
Ikeno, Hidetoshi	A method for evaluation of neural structure based on reconstruction and its application to an interneuron in the honeybee brain	P12
Ince, Robin A. A.	An information theoretic framework for neuroimaging data analysis: stimulus modulations, representational interactions and causal communication of specific information content	IP13
Ivan, Claudiu Ionut	Interlocking fMRI and Allen Brain Atlas: paving the way for new investigations of structural-functional relationships in (transgenic) mice	P63
Iyer, Vijay	Sustainable research software tools and engineering for Neuroscience	P16
Janssen, Niels	Whole brain fMRI activity at a high temporal resolution: A novel analytic framework	IP17
Jeanson, Francis	From integration to visualization of multisite brain data on Brain-CODE	P50
Jeon, Hyungju	High-resolution subregion parcellation of subthalamic nucleus based on voxel-level connectivity	P20
Johannes Kellner, Christian	Versatile format and tools for comprehensive data organization in neuroscience	D03
Kaiser, Marcus	Determining epilepsy surgery targets through connectome-based computer simulations	IP08
Keator, David B	Describing assessments and experiment metadata with the Neuroimaging Data Model (NIDM)	P14
Kinouchi, Osame	Dynamical neuronal gains produce self-organized criticality in stochastic spiking neural networks	P19
Kiyomaru, Hirokazu	BiCAmon: Activity monitoring tool on 3D connectome structures for various cognitive architectures	D10
Kobeleva, Xenia	Divergent functional network deficits during an attention-executive task in Lewy body dementia and Alzheimer's disease	P69
Kumar, Neeraj	Assessment of locomotor activity in mice brain	P44
Majka, Piotr	Three-dimensional reconstruction of brain images from serial sections using the Possum framework	P10

Corresponding author	Abstract title	Abstract number
Majumdar, Amitava	Neuroscience Gateway – cyberinfrastructure providing supercomputing resources for large scale computational neuroscience research	IP09
Marimpis, Avraam D	NNMF connectivity microstates : A new approach to represent the dynamic brain coordination	P24
Miyamoto, Daisuke	Database integration pipeline for highly reliable spatial gene expression patterns	P34
Mohd Suhaim, Nur Farahana	Machine learning in fMRI classification	P01
Neşe, Hüden	Functional connectivity of resting state as a biomarker for working memory performance	P65
Okamura-Oho, Yuko	Anatomical and topological expression analysis of the mouse transcriptome in the virtual 3D MRI image spaces of the postnatal brain stages	P28
Peraza, Luis R.	Principal component discriminant analysis of mild cognitive impairment in Parkinson's disease reveals early functional changes in the resting state	P08
Ramaswamy, Srikanth	Reconstructing and simulating neocortical microcircuitry	IP16
Rathee, Dheeraj	Effective connectivity analysis in fronto-centro-parietal network during altered levels of consciousness	P67
Ruiz Olazar, Margarita	NES: a free software to manage data from neuroscience experiments	D05
Saari, Pasi	Decoding musicianship from neural processing of musical features	P07
Saari,Pasi	Decoding musicianship from neural processing of musical features	D13
Şahin, Duygu	Task related modulation of functional connectivity networks of alzheimer's disease and mild cognitive impairment patients	P02
Sáray, Sára	Developing software tools for parameter fitting and validation of neuronal models	P13
Schubert, Nicole	Atlas based visualization of fiber orientations in the rat brain derived from 3D polarized light imaging	P52
Scott James, Sebastian	Using the SpineML toolchain to simulate an integrated brain and biomechanical model of the oculomotor system	D01
Smith, Leslie Samuel	The CARMEN (Code Analysis Repository and Modelling for E-Neuroscience) project for collaborative sharing of data and analysis tools in electrophysiology: reviewing an early co-laboratory	P49
Ranjani , Sri	Functional connectivity during working memory task performance	P46
Steppan, Martin	Widening the focus. A methodological approach towards a whole-brain neuroanatomic similarity of personality traits	D15

Corresponding author	Abstract title	Abstract number
Swami, Piyush	Detection and cortical localization of ictal signatures using electroencephalogram signals	IP02
Söderberg, Jeannette	Legal, ethical and technical challenges of international clinical data sharing: The Center-TBI experience	IP22
Tamaki, Takaya	Region-of-interest estimation using convolutional neural network and long short-term memory for functional near-infrared spectroscopy data	P71
Tangwiriyasakul, Chayanin	Using a temporal decomposition technique to investigate dynamic changes in subnetworks derived from resting state fMRI during generalized spike-and-wave discharges: an EEG-fMRI pilot study	P53
Taylor, Peter Neal	Contributions from white and grey matter on structural connectomes of temporal lobe epilepsy patients	IP10
Theocharopoulou, Georgia	Modeling the UPR in neurodegeneration	P11
Thornton, Christopher Brian	Stimulus evoked layer-specific activity in vitro and in silico in the rat somatosensory cortex	P43
Tomkins, Adam	From GUI to GPU: A toolchain for GPU code generation for large scale Drosophila simulations using SpineML	D02
Tsuyuki, Tsukasa	Efficient numerical simulation of neuron models with spatial structure on graphics processing units	P31
Turner, James P	Easy-to-use GPU acceleration of neural network simulations with GeNN	IP05
Ulloa, Antonio	Incorporating the connectome into large-scale neuro-computational models to simulate neuroimaging experiments of visual and auditory short-term memory	P36
Wachtler, Thomas	A method for evaluation of neural structure based on reconstruction and its application to an interneuron in the honeybee brain"	P12
van Albada, Sacha Jennifer	Full-scale simulation of a cortical microcircuit on SpiNNaker	P42
Wang, Yujiang	Mechanisms underlying different onset patterns of focal seizures	IP04
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