Human Brain Project
Education Programme

3RD HBP CURRICULUM WORKSHOP SERIES

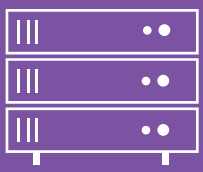
HIGH PERFORMANCE COMPUTING FOR NEUROSCIENCE:

HANDS-ON INTRODUCTION TO SUPERCOMPUTING USAGE, TOOLS AND APPLICATIONS

9-11 JULY 2019

FORSCHUNGSZENTRUM JÜLICH, GERMANY

APPLICATION DEADLINE: 3 JUNE 2019



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WORKSHOP INFORMATION

Neuroscience has become highly interdisciplinary, thus supercomputing and good data management strategies have become indispensable to the field. This workshop will set the grounds for students to get started with high-performance computing (HPC)-based research and lays the foundation for them to make state-of-the-art advancements in their fields. The workshop will teach scientific computing in Python, include an introduction to HPC and hands-on trainings for applications that can be used on supercomputers and standard computers, e.g. the simulators NEST and Arbor, as well as visualisation tools. A prior experience with at least one programming language (e.g. Python, C or C++) is highly recommended.

Application information

Application is open to the entire student community and early career researchers, regardless of whether they are affiliated with the Human Brain Project or not.

A maximum of 30 participants will be selected by the Scientific Chair and the HBP Education Programme. It is aimed to offer equal opportunities for all early career researchers regardless of gender, age, origin, etc. Applicants are required to submit a CV and a motivation letter with their application.

Application deadline: **3 June 2019**

Participation fee: 250 €
The fee does not include travel and accommodation. Fees will be collected after participants have been selected.

A limited number of fee waivers is available for participants who submit an abstract for poster presentation. Participants can apply for fee waivers prior to the application deadline by sending an email to **curriculum.edu@humanbrainproject.eu.**

Scientific Chair:
Abigail Morrison | Forschungszentrum Jülich

Organisers:
Sylvia Aßlaber | Medical University Innsbruck
Lisa-Marie Leichter | Medical University Innsbruck
Anna Lührs | Forschungszentrum Jülich
Alexander Peyser | Forschungszentrum Jülich
Meredith Peyser | Forschungszentrum Jülich

Contact:
curriculum.edu@humanbrainproject.eu

Further information and application:
http://bit.ly/ICT_HPC2019

JÜLICH FORSCHUNGSZENTRUM

Human Brain Project

Co-funded by the European Union

PRELIMINARY SCIENTIFIC PROGRAMME

This programme may be subject to change.

Tuesday 9 July 2019

Introduction to Python, part I | 60 min
Fahad Khalid (Forschungszentrum Jülich)

Introduction to Python, part II | 90 min
Fahad Khalid (Forschungszentrum Jülich)

Scientific computing in Python, part I | 120 min
Wouter Klijn (Forschungszentrum Jülich)

Scientific computing in Python, part II | 90 min
Wouter Klijn (Forschungszentrum Jülich)

Poster session | 30 min

Wednesday 10 July 2019

Introduction to High-Performance Computing | 120 min
Alberto Madonna (Swiss National Supercomputing Centre)

HPC data management | 90 min
Lena Oden (FernUniversität in Hagen)

Introduction to parallel computing, part I | 120 min
Jan Meinke (Forschungszentrum Jülich)

Introduction to parallel computing, part II | 90 min
Jan Meinke (Forschungszentrum Jülich)

Guided tour to the supercomputing facilities at Jülich Supercomputing Centre | 30 min
Andreas Müller (Forschungszentrum Jülich)

Thursday 11 July 2019

Getting started with NEST | 90 min
Susanne Kunkel (Norwegian University of Life Sciences)

Getting started with Arbor | 90 min
Benjamin Cumming (Swiss National Supercomputing Centre)

Interactive visual data analysis | 60 min
Benjamin Weyers (University of Trier)

Focus exercises | 165 min

ECTS information

Participants have the possibility of taking an exam related to the content of the HBP Curriculum online courses. Upon successful completion, up to **12 ECTS credits** can be awarded. The credits are awarded by the Medical University of Innsbruck / Austria (MUI). Further information on how to receive ECTS credits: www.humanbrainproject.eu/en/education/participatecollaborate/curriculum/

Poster session

A poster session is organised during the workshop. If you want to present your research in the poster session, please submit an abstract with your application.

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humanbrainproject.eu/education