Hands on reproducible brain imaging
Full Day Course / 8:00-16:30

Organizers:
Jean-Baptiste Poline
McGill University, Canada, and University of California at Berkeley, United States

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University of California, Irvine, United States

David Kennedy, Ph.D.
University of Massachusetts, United States

Nina Preuss, MBA, PMP
TCG, Inc., United States

Important reproducibility issues in life sciences and biomedical research call for a specific hands on training. This course will be limited to about 35 participants so that personalized help can be provided. Participant will be learning how to do a reproducible neuroimaging analysis starting from the DICOM files up to the statistical results. Sessions will be composed with both short lectures and hands on exercises or quizzes. Participants will be reached out and asked to install some software on their laptops before the course. Please pre-register here: https://www.eventbrite.com/e/hands-on-reproducible-brain-imaging-tickets-45694742204

Desired outcome:
Provide with an example of a reproducible analysis. Introducing materials on the critical aspects of reproducible brain imaging, focusing on four areas:

1- The FAIR (Findable, Accessible, Interoperable and Reusable) principles, creating and working with BIDS datasets.
2- Basic tools required in reproducible computational science (shell, version control systems, etc.).
3- Reproducible neuroimaging workflow, including an introduction to docker containers or virtual machines.
4- Practical understanding of the statistical issues associated with reproducibility.

Course Schedule:

8:00-8:30
Introduction to reproducible neuroimaging: motivations
David Kennedy, Ph.D., University of Massachusetts, United States

8:30-10:00
FAIR Data - BIDS datasets
Maryann Martone and Jeffrey Grethe, UCSD, United States

10:00-10:15
Break

10:15-11:45
Computational basis
Yaroslav Halchenko, Dartmouth College, United States and Michael Hanke, Magdeburg, Germany

12:00-13:00
Lunch

13:00-14:30
Neuroimaging Workflows
Dorota Jarecka and Satrajit Ghosh, MIT, United States, and Camille Maumet, INRIA, France

14:30-14:45
Break

14:45-16:00
Statistics for reproducibility
Celia Greenwood, McGill University, Canada and Jean-Baptiste Poline, McGill University, Canada

16:00-16:30
Conclusion & Feedback
Nina Preuss, MBA PMP, TCG, Inc., United States