ISTAART Immersives: Getting Started with Neuroimaging Analysis

Friday, July 10, 2026 | 8 a.m. - 12 p.m.
Aurora Ballroom 2, 3, 5, 6 — InterContinental — London, United Kingdom
All times are in British Summer Time
In-person attendance only

Overview

The workshop will provide attendees with an interactive, hands-on opportunity to view, process, analyze, and interpret medical imaging data. These sessions use neuroimaging data both from various magnetic resonance imaging (MRI) modalities as well as positron emission tomography (PET) scans employing amyloid and tau tracers. The first hour of the workshop will focus on helping the attendees become familiar with the basic data structures used in medical imaging (such as DICOM and NIFTI file formats), using image visualization software to view and navigate images, extracting information from the image itself and understanding how to relate voxels (volume elements, the three-dimensional equivalent of pixels) to physical space in the real world. This understanding enables critical quantitative measurements, such as volume calculations. After establishing these fundamentals, attendees will choose from subsequent interactive tutorials that demonstrate essential neuroimaging workflows, including: tissue segmentation, image co-registration, quantitative analysis of static and dynamic PET data, and pre-processing steps of functional MRI (fMRI) or diffusion tensor imaging (DTI). Each tutorial includes clearly marked core and optional exercises. Core exercises focus on essential skills and can be completed during the half-day Immersive, while optional exercises offer opportunities to explore the topics in greater depth. To support continued learning, the cloud virtual machines will remain available for two weeks after the Immersive, allowing participants to complete additional exercises and ask follow-up questions. The objective of the workshop is to build confidence in working with a neuroimaging computational environment and to deepen understanding of key clinical and/or research applications for each methodology. At the end of the workshop, we provide participants with a bespoke survey to gather detailed feedback for future improvements.

Organizing Committee

- Ludovica Griffanti, PhD
- Alexa Pichet Binette, PhD
- Tobey J. Betthauser, PhD

Target Audience

This ISTAART immersive workshop is designed for early-stage researchers.

Learning Objectives

- Distinguish the different elements of imaging data structure and their function.
- Reproduce standard processing methods on various MRI and PET data.
- Interpret results from image processing techniques to assess whether they are successful.

Registration

Pre-conferences are offered for in-person attendance only. Preconferences require a separate registration fee in addition to AAIC full conference registration, or they may be purchased as stand-alone events. Visit alz.org/AAIC.

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Time	Session Details	Speakers and Moderator
8:00 a.m. - 8:10 a.m.	Opening Remarks	
8:10 a.m. - 8:40 a.m.	Image data: Basic Structure and Function	
8:40 a.m. - 9:10 a.m.	Structural MRI	
9:10 a.m. - 9:20 a.m.	**Break**	
9:20 a.m. - 9:50 a.m.	Introduction to Advanced Imaging Analysis Sections	
9:50 a.m. - 10:40 a.m.	Independent working session 1: Diffusion MRI, functional MRI, PET	
10:40 a.m. - 10:50 a.m.	**Break**	
10:50 a.m. - 11:40 a.m.	Independent working session 2: Diffusion MRI, functional MRI, PET	

11:40 a.m. - 12:00 p.m.	Wrap-up, Q&A, feedback survey	