8th BigBrain Workshop - Challenges of Multimodal Data Integration



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Type: Hands-on session

The BigMac Dataset: combining multi-contrast MRI and microscopy in the macaque brain

Monday 9 September 2024 14:45 (1h 30m)

The BigMac dataset is an open access resource combining in vivo MRI, extensive postmortem MRI and multicontrast microscopy for multimodal characterisation of a single whole macaque brain. The data is highly complementary to BigBrain facilitating complementary analyses across scales, datasets and species. Crucially, the BigMac MRI and microscopy data have been carefully co-registered together to facilitate quantitative multimodal analyses and data-fusion approaches which more heavily rely on multiple modalities being acquired in the same subject. This session will start with an introductory talk where I will outline the acquisition and curation of the BigMac data, alongside some example applications from the lab. The latter part of the session will feature hands-on interactive notebooks where participants can explore the BigMac data and curated outputs, as well as running microscopy-informed "hybrid" tractography and performing MRI-microscopy comparisons.

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