



Institut de Neurociències UNIVERSITAT DE BARCELONA





## IMPROVING NEUROIMAGING METHODS

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## Abstract

I will describe recent tools developed by our team to aid neuroimaging. First, I will describe NiiVue, a domain-specific visualization tool that can work on any device and read the dominant formats of voxels, meshes, streamlines and connectomes in our field. Providing a universal visualization tool allows users to employ the best processing pipeline for the task at hand and enables cloud analyses. Second, I describe how feature selection can aid machine learning for modest sized clinical neuroimaging datasets. Third, I describe the challenges and opportunities we faced when openly sharing large neuroimaging datasets of acute and chronic stroke. Finally, I will discuss new tools that can improve spatial normalization of clinical neuroimaging data.

## **Biosketch**

Dr Chris Rorden is the director for the McCausland Center for Brain Imaging, he leads the National Institutes of Health (USA) neuroimaging core of the Center for the Study of Aphasia Recover, and he is the endowed chair of neuroimaging at the University of South Carolina. He earned his PhD at the University of Cambridge and a leading researcher on brain imaging, aphasia, visual perception and brain stimulation. He also develops some of the most popular software tools for brain imaging, including dcm2niix, MRIcro, MRIcroGL and MRIcron.



May 23rd Tuesday at 12:00h



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