Open position: 
PhD in “multimodal imaging to understand neurodevelopmental vulnerability for developing schizophrenia”

Developmental Imaging and Psychopathology laboratory, University of Geneva  
P.I. Prof. Stephan Eliez

Starting date: October 2019  
Deadline for application: 30th of September 2019

Working environment: 22q11.2 Deletion Syndrome is neuro-genetic disorder that represents the single highest molecular risk factor for developing schizophrenia. Indeed approximately 30% of individuals with 22q11DS with develop schizophrenia by adulthood. In our lab, since 2001, we perform longitudinal follow-up of children and adolescents with 22q11.2 leading to the single largest longitudinal cohort worldwide. Our research protocol includes gold-standard neuroimaging acquisitions, including structural MRI, task-based fMRI resting-state fMRI and diffusion-weighted MRI. Moreover we perform extensive neuro-cognitive and clinical evaluations. Our aim is to understand how atypical trajectories of brain maturation contribute vulnerability to schizophrenia, in order to both characterize neurodevelopmental mechanism involved and to detect early biomarkers of vulnerability to the disorder.

Tasks of the PhD student:
- To work in collaboration with clinical and engineering departments for the development and application of new neuroimaging methodologies;
- To analyze complex multimodal and longitudinal MRI data;
- To participate to MRI data acquisition;
- Manuscripts redaction.

Methods employed in the lab: Cortical morphometry (thickness, gyrification), voxel-based DTI, tractography, resting-state fMRI, graph theory, pattern recognition, multivariate pattern analysis (MVPA).

Toolboxes employed in the lab: Matlab, SPM, FSL, FreeSurfer, connectomemapper.

Academic requirements: We are looking for young, nearly graduated students with a master degree in medicine, psychology, biology, or neurosciences. Expertise in brain imaging and/or programming is not mandatory but a strong asset.

Contact: The application (motivation letter, CV, copy of the diploma and graduations, eventually letter of recommendation) has to be sent preferentially by email to the following addresses:

Corrado SANDINI (corrado.sandini@unige.ch)  
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