

TIC International Seminar

Wednesday, September 16th, 16:00



Location: Auditorium O2.211, sitem-insel, Freiburgstrasse 3, Bern

Broadcast on zoom: <https://unibe-ch.zoom.us/j/61079804322>

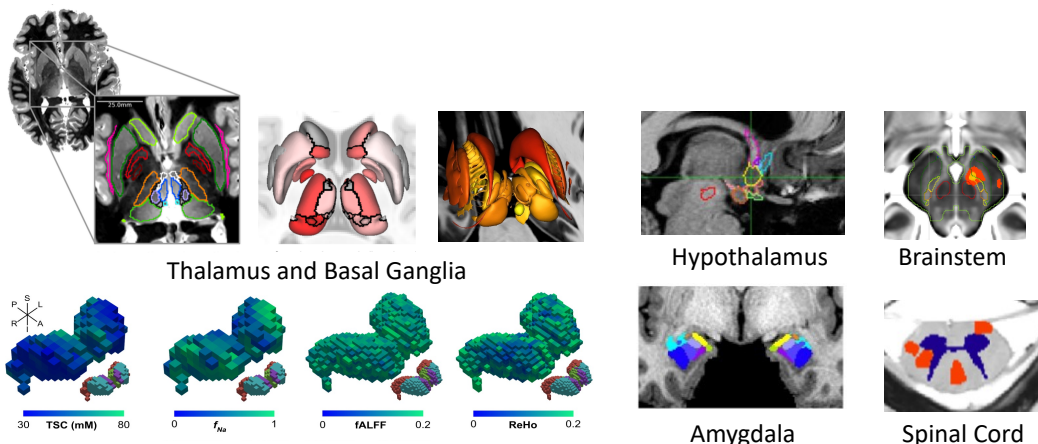
The seminar is followed by an Apéro to continue discussions

Revealing the Hidden Dimensions of Neurological Diseases Through 7T Multiparametric MRI

Prof. Dr. Maxime Guye

[CRMBM, Aix-Marseille University, France](https://www.crimbm.fr/)

To tackle unmet clinical needs in neurology, we must capture key pathophysiological processes that develop across challenging spatial and biological scales. This presentation explores how 7T MRI can reveal some of these hidden dimensions of central nervous system pathology by combining high spatial resolution with complementary multiparametric information. We will focus on small and anatomically challenging structures, including subcortical nuclei – potentially involved not only in neurodegenerative diseases but also in epilepsy – as well as the spinal cord, where inflammatory and neurodegenerative changes can remain elusive at lower field strengths. We will also move beyond macroscopic structural abnormalities to probe microstructural, ionic, metabolic, and hemodynamic alterations, providing complementary insights into the mechanisms underlying neurological diseases. Through applications in epilepsy and neurodegenerative disorders, these approaches will illustrate the potential of 7T multiparametric MRI to bridge scales and provide a more comprehensive view of disease biology, with potential implications for patient management.



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<https://www.tic-sitem.ch/tic-seminars>

