



Tuesday, July 11, 2023, 11:30 hrs
Seminar Room C402

Guest Lecture

Dr Daniel Papp

NeuroPoly Lab, Institute of Biomedical Engineering,
Polytechnique Montréal, Montreal, QC,
Canada

B1+ shimming for the cervical spinal cord at 7T (and B0 shimming at 3T)

Several Parallel Transmit (pTx), capable coils have become available at 7T in the last few years. With pTx comes the ability to shape the excitation field to our needs. However, while pTx applications have seen great uptake in brain and body imaging, their use for the spinal cord has been limited so far. In this talk, we will demonstrate the feasibility of designing and deploying Universal Pulses for the cervical spinal cord at 7T. We will also show the first results in subject-specific B1+ shimming for the c-spine, using a dedicated Shimming Toolbox developed in our lab. Both approaches allow us to improve the signal homogeneity and thus deliver better image contrast for high-field spinal cord imaging. Finally, we will demonstrate the utility of the Shimming Toolbox for dynamic B0 field corrections in the cervical spine at clinical field strengths.

This talk will be given in a joint guest lecture session with Dr Robert Barry.