

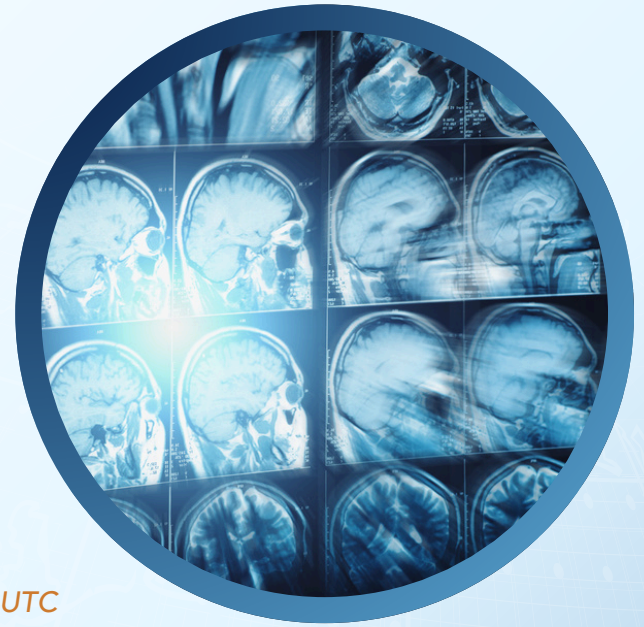
ISMRM WORKSHOP ON Motion Correction in MR



03-06 September 2024



Hôtel Château Laurier
Québec City, QC, Canada



Extended Abstract Submission Deadline: 21 June 2024 | 23:59 UTC

OVERVIEW

Motion during MRI is an ongoing problem but also presents an opportunity to characterize dynamic processes or utilize this information in other applications and methods. This workshop will cover advances in motion detection, prospective and retrospective corrections, registration, motion modeling, image reconstruction techniques handling motion, and deep learning solutions within this context. Possible themes include: tracking (optical, field cameras, navigators), fetal imaging, neurological motion, motion modeling for therapy planning, signal modeling (for fingerprinting or multi-parametric imaging), motion as an opportunity (cardiac, bowel motility, speech and swallowing, fetal motion, motor experiments, and fMRI), and data-driven/deep learning techniques to identify, characterize, or utilize motion.

EDUCATIONAL OBJECTIVES

- Explain the underlying causes, challenges, and pitfalls of motion artifacts in MRI;
- List the methods currently applied to prevent and correct for motion effects in (i) clinical MRI and (ii) research;
- Describe current work performed to develop new motion detection, prevention and correction methods, and the feasibility of a clinical translation;
- Examine hands-on experiences of available motion correction techniques, and;
- Identify the potentials and challenges of machine learning for motion detection and correction and future research directions.

TARGET AUDIENCE

- New MR scientists who would like to get hands-on experience and a good introduction to various motion correction techniques;
- Experienced MR scientists currently developing motion correction techniques and interested in alternative solutions and ongoing discussions about motion correction solutions; and
- Clinicians/radiographers interested in applying the latest correction methods to solve their motion problems.

ORGANIZING COMMITTEE

Co-Chairs: Thomas Küstner, Ph.D. & Bruno Madore, Ph.D.

Committee: Andrea Dell'Orso, (R); Thomas Ernst, Ph.D.; Haikun Qi, Ph.D.; M. Dylan Tisdall, Ph.D.; Andre Jan van der Kouwe, Ph.D.; Calder D. Sheagren, B.Sc. (*Trainee Observer*)

