

CDMRI'15

MICCAI 2015 WORKSHOP ON
COMPUTATIONAL DIFFUSION MRI

October 9th 2015, Munich, Germany



CALL FOR PAPERS

Over the last decade interest in diffusion MRI has exploded. The technique provides a unique insight into the microstructure of living tissue and enables in-vivo connectivity mapping of the brain. Microstructural changes are often the earliest signs of disease or tissue regeneration, as well as being manifestation of physiological processes in normal tissue functioning. Tractography and connectivity mapping give fundamental new insights in neuroscience and neuroanatomy. The variety of clinical applications is expanding rapidly and includes detection of lesions and damaged tissue, prognosis of functional impairment and neurosurgical planning.

Computational techniques are key to the continued success and development of diffusion MRI and to its widespread transfer into the clinic. New processing methods are essential for addressing issues at each stage of the diffusion MRI pipeline: acquisition, reconstruction, modeling and model fitting, image processing, fiber tracking, connectivity mapping, visualization, group studies and inference. The workshop will give a snapshot of the current state of the art.

WORKSHOP TOPICS

Full-length papers are invited in (but not limited to) the following areas:

- Acquisition protocol design
- Open-source software and data sources
- High angular resolution and general q-space sampling techniques
- Biophysical models
- Numerical simulation of diffusion process
- Tissue microstructure imaging
- Tractography and connectivity mapping
- Network analysis
- Registration, segmentation, and classification
- Multimodality modeling of diffusion and functional or genetic data
- Visualization
- Validation
- Post-processing
- Group studies and statistical analysis
- Clinical applications

Papers accepted at the main conference may not be double-submitted to CDMRI'15. The workshop also provides a forum for full-length papers on, and live demos of, software packages that support the complex diffusion MRI processing pipeline.

ORGANIZERS

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IMPORTANT DATES

June 17th, 2015:
Paper submission

July 15th, 2015:
Notification of acceptance

August 5th, 2015:
Camera-Ready Papers

October 9th, 2015:
Workshop

INVITED SPEAKERS

Valerij Kiselev
University Medical Center
Freiburg, Germany

Lauren O'Donnell
Harvard Medical School, USA

PROGRAM

Paper Presentations:
8-12 oral presentations with ample time for questions; a few posters may be accepted.

WEBSITE

<http://cmic.cs.ucl.ac.uk/cdmri15/>