

# CDMRI'14

MICCAI 2014 WORKSHOP ON  
COMPUTATIONAL DIFFUSION MRI

September 18th 2014, Boston, USA



## CALL FOR PAPERS

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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.

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, group studies and inference. The workshop will give a snapshot of the current state of the art.

## WORKSHOP TOPICS

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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, functional or genetic data
- Visualization
- Validation and Post-processing
- Clinical Group studies and statistical analysis

Papers accepted at the main conference may not be double-submitted to CDMRI'14.

## ORGANIZERS

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Gemma Nedjati-Gilani, Ph.D.  
Lauren O'Donnell, Ph.D.  
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University College London  
Harvard Medical School  
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## IMPORTANT DATES

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**June 3rd, 2014:**

Paper submission

**July 3rd, 2014:**

Notification of acceptance

**July 24th, 2014:**

Camera-ready Papers

**September 18th, 2014:**

Workshop

## INVITED SPEAKERS

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**Carl-Fredrik Westin**

Harvard Medical School, USA

## PROGRAM

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**Paper Presentations:**

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

## CHALLENGE

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This year, we are also holding a "Sparse Reconstruction Challenge for dMRI" (SPARC dMRI) to allow the community to test their algorithms on a physical phantom data. Visit

<http://projects.iq.harvard.edu/sparcdmri/challenge>

## WEBSITE

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<http://cmic.cs.ucl.ac.uk/cdmri14>