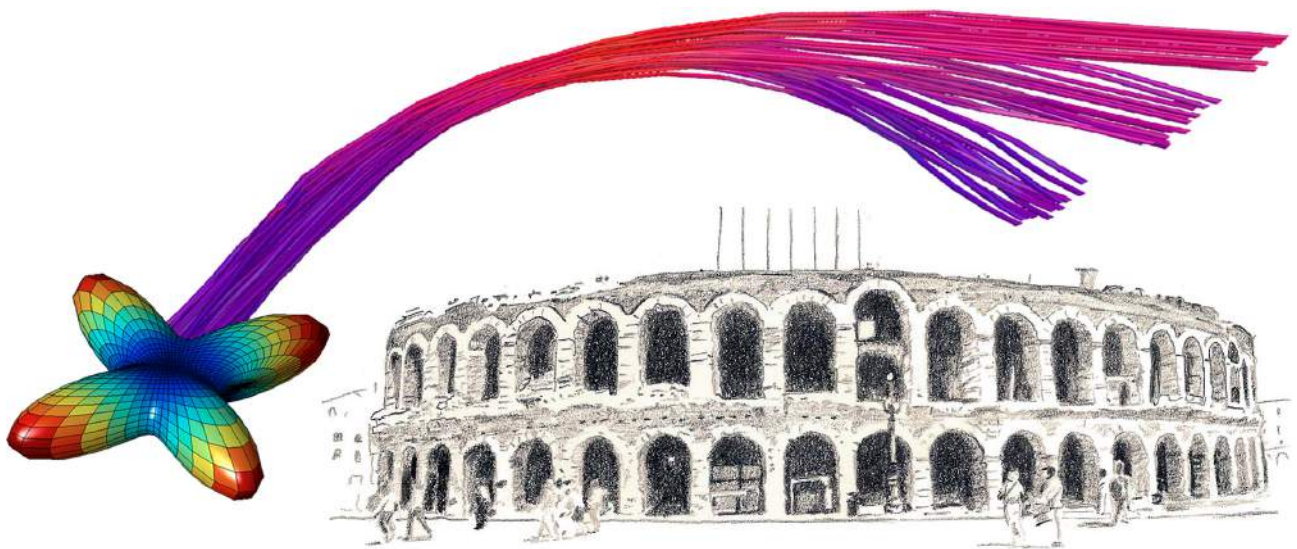# VERONA
DIFFUSION WORKSHOP

Friday May 16th, 2014

University of Verona, Italy
Department of Computer Science
Sala verde

MOTIVATION

The main purpose of the workshop is to gather researchers studying similar topics in the field of diffusion MRI for promoting and disseminating the activities of each group. The meeting is meant to boost further existing synergies and exchange knowledge that would not be possible at distance.

The participation is limited to a few number of scientists that have been selected by conjugating excellence in science to closeness in research interests and approach. The workshop allows to gain further in-depth knowledge in the field of diffusion MRI and its international orientation will also generate true added value to the scientific community.

ORGANIZING COMMITTEE

The workshop is organized as a collaboration of the following institutions:

- GLORIA MENEGAZ
  - *Computer Science department, University of Verona, Italy*
  - http://profs.sci.univr.it/~menegaz/

- MAXIME DESCOTEAUX
  - *Sherbrooke Connectivity Imaging Lab (SCIL), Université de Sherbrooke, Canada*
  - http://scil.dinf.usherbrooke.ca

- ALESSANDRO DADUCCI
  - *Signal Processing Laboratory (LTS5), EPFL, Switzerland*
  - http://people.epfl.ch/Alessandro.Daducci

PARTICIPANTS

University of Verona 🇮🇹

Prof.	Gloria Menegaz	Prof.	Pasquina Marzola
Dr.	Andrès Mendez	Dr.	Amy Lin
Dr.	Silvia Storti	Dr.	Kenneth Ricciardi
Mr.	Mauro Zucchelli	Mr.	Vinay Shukla
Miss	Seheresh Khan	Mr.	Stefano Tambalo

Sherbrooke Connectivity Imaging Lab (SCIL), Université de Sherbrooke 🇨🇦

Prof.	Maxime Descoteaux	Dr.	Eleftherios Garyfallidis
Mr.	Gabriel Girard	Mr.	Marc-Alexandre Côté
Mr.	Michael Paquette	Mr.	Jean-Christophe Houde

Signal Processing Laboratory (LTS5), EPFL 🇨🇭

Prof.	Jean-Philippe Thiran	Dr.	Alessandro Daducci
Miss	Anna Auria	Miss	Alessandra Griffa
Miss	Alia Lemkaddem		

Section of Biomedical Image Analysis (SBIA), University of Pennsylvania 🇺🇸

Prof.	Ragini Verma	Dr.	Emmanuel Caruyer

CIBERSAM/FIDMAG 🇪🇸

Mr.	Erick Jorge Canales-Rodríguez

Computational Radiology Laboratory, Harvard Medical School 🇺🇸

Dr.	Benoit Scherrer

Athena Project-Team, INRIA 🇫🇷

Dr.	Aurobrata Ghosh	Mr.	Rutger Fick
Mr.	Marco Pizzolato		

Centro de Investigación en Matemáticas A.C. (CIMAT) 🇲🇽

Dr.	Alonso Ramirez-Manzanares	Dr.	Mariano Rivera

School of Medicine, Temple University 🇺🇸

Prof.	Feroze Mohamed	Mr.	Devon Middleton

AGENDA

09.30 – 09.55   Arrival, coffee and croissants

09.55 – 10.00   Welcome and Opening
Gloria Menegaz

10.00 – 10.10   **"Neuroimaging @ University of Verona"**
Gloria Menegaz

10.10 – 10.20   **"Assessment of tissue microstructure by continuous models"**
Mauro Zucchelli

10.20 – 10.30   **"Diffusion MRI for presurgery planning and optimization"**
Kenneth Ricciardi

10.30 – 10.40   **"DTI in animal models of disease"**
Pasquina Marzola

10.40 – 10.50   **"The Signal Processing Lab at EPFL"**
Jean-Philippe Thiran

10.50 – 11.00   **"Non-local ℓ_0 regularisation for fODF reconstruction"**
Anna Auria-Rasclosa

11.00 – 11.10   **"Global tractography with embedded anatomical priors"**
Alia Lemkaddem

11.10 – 11.20   **"COMMIT: Convex Optimization Modeling for Micro-structure Informed Tractography"**
Alessandro Daducci

11.20 – 11.35   **"Introduction to the SCIL activities"**
Maxime Descoteaux

11.35 – 11.40   **"The end of local reconstruction? A tractometer evaluation"**
Jean-Christophe Houde

11.40 – 11.45   **"Dos and Donts of DSI - the end of DSI?"**
Michael Paquette

11.45 – 11.50   **"Reducing the length bias in tractography using anatomical priors"**
Gabriel Girard

11.50 – 11.55   **"Bundle analytics"**
Eleftherios Garyfallidis

11.55 – 12.00   **"An interactive tool for fiber clustering"**
Marc-Alexandre Côté

12.00 – 13.30   Lunch break

13.30 – 13.40	**"On Analyzing with Connectomes"** *Ragini Verma*
13.40 – 13.55	**"Create realistic diffusion MRI phantoms with Phantomas: overview and tutorial"** *Emmanuel Caruyer*
13.55 – 14.05	**"Activities at the CIMAT - University of Guanajuato"** *Mariano Rivera-Meraz*
14.05 – 14.20	**"Mathematical models on Diffusion Weighted MRI"** *Mariano Rivera-Meraz*
14.20 – 14.35	**"Athena Project Team & Rotation Invariants as Building Blocks for HARDI Biomarkers"** *Aurobrata Ghosh*
14.35 – 14.45	**"Towards improved signal reconstruction using a Laplacian regularized SHORE basis and retrieval of microstructural biomarkers: preliminary results"** *Rutger Fick*
14.45 – 15.00	Coffee break
15.00 – 15.15	**"Robust and unbiased model-based spherical deconvolution of multichannel diffusion MRI data"** *Erick Jorge Canales-Rodriguez*
15.15 – 15.25	**"Activities at the Computational Radiology Laboratory - Harvard Medical School"** *Benoit Scherrer*
15.25 – 15.40	**"Characterization of the brain microstructure with Diffusion Compartment Imaging (DCI)"** *Benoit Scherrer*
15.40 – 15.55	**"Pediatric Spinal Cord Diffusion Tensor Imaging: Normals and Spinal Cord Injury"** *Feroze Mohamed*
15.55 – 16.05	**"Post-processing considerations for spinal cord DTI"** *Devon Middleton*
16.05 – 16.55	Discussion
16.55 – 17.00	Closing *Gloria Menegaz*

DIRECTIONS

From *Verona Porta Nuova* train station, take the bus number 21 or 22 from platform B in direction *Policlinico Borgo Roma*. There is a bus every 10–15 minutes.

Once you arrive at the bus stop (hospital), simply follow the directions to *Facoltá di scienze MM.FF.NN.* which is 5 minutes away.