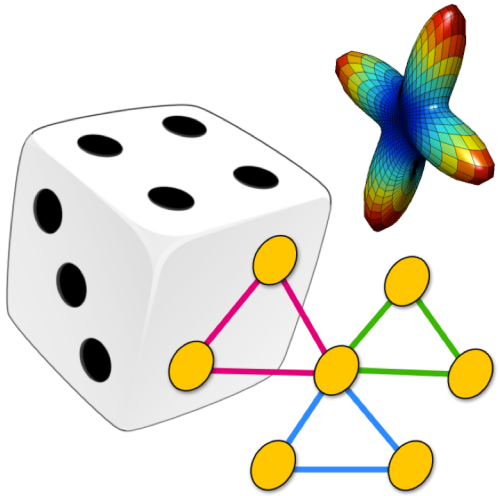

Scientific computing in Magnetic Resonance Imaging

Simona Schiavi
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Computer Science Department, Univerisity of Verona

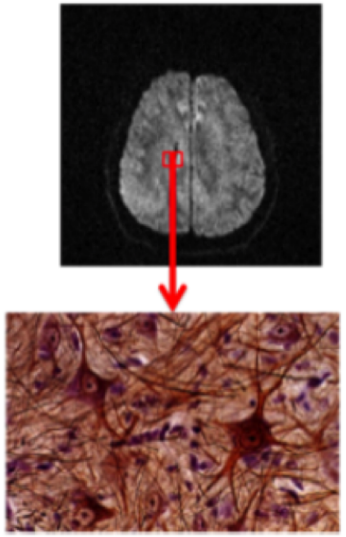
About me

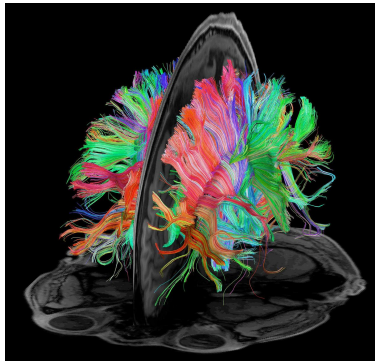
❖ Background

- ➢ M.Sc. in *Applied Mathematics* (Genoa)
- ➢ Ph.D. in *Applied Mathematics to Medicine* (Paris)
- ➢ Post-Doc on diffusion MRI application to Multiple Sclerosis (San Martino Hospital, Genoa)
- ➢ Visiting Post-Doc (Mont Sinai Hospital, New York)
- ➢ Post-Doc on developing Multimodal Microstructure Informed Tractography

❖ Research Interests

- ➢ Diffusion MRI microstructural modelling
- ➢ Microstructure Informed Tractography
- ➢ Applications to clinical studies





❖ Contact

- ➢ simona.schiavi@univr.it (Room 164a)

Course schedule

- May 31st, 8:30-10:30, alpha: Introduction to python
- June 07th, 8:30-10:30, alpha: How to obtain RM images and python lab (FFT)
- June 10th, 10:30-12:30, H: Bloch Torrey equation and homogenization techniques
- June 11th, 8:30-10:30, gamma: solution of Bloch Torrey equations in simple 2D geometry in FreeFem
- June 12th, 14:30-15:30, F: Numerical Convex Optimization applied to diffusion MRI