

# International Workshop on Biomathematics and Biomechanics

20-23 November 2009, Tozeur (Tunisia)

## Schedule

### Friday 20 November

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8h-8h30, Opening

1. 8h30-9h30, H. Tom Banks

Title: Estimation of Cell Proliferation Dynamics using CFSE Data

2. 9h30-10h, V. Calvez

Title: Collective motion of bacteria.

10h-10h30, Break

3. 10h30-11h, S. Boujena

Title: Variational reduction for the transport equation in a plants growth model.

4. 11h-11h30, M. Doumic

Title: Mathematical Models for Prion Proliferation and protein polymerization.

5. 11h30-12h, S. Mirrahimi

Title: Asymptotic dynamics of a population density under selection-mutation.

6. 12h-12h30, N. Nouaili

Title: A Liouville theorem for a heat equation and applications for quenching.

12h30, Lunch

7. 14h30-15h30, Y. Maday

Title:

8. 15h30-16h, F. Plouraboué

Title: Blood flow evaluation through highly complex micro-vascular networks.

16h-16h30, Break

9. 16h30-17h, S. Avril

Title: Inverse methods for characterizing the mechanical behaviour of human arteries in vitro

10. 17h30-18h, A. Raoult

Title: Recent developments in atherosclerosis modelling.

11. 18h-18h30, V. Milisik

Title: Blood-flow modelling and simulations along and through a braided multi-layer mettalic stent.

## Saturday 21st November

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1. 8h30-9h30, R. Krause

Title: Simulation Techniques for Complex and Heterogeneous Models in Biomechanics.

2. 9h30-10h, S. Sevestre

Title: 3d features for connectivity and regularity characterization of cortical bone canals.

10h-10h30, Break

3. 10h30-11h, N. Zemzemi

Title: Decoupled time-marching schemes in computational cardiac electrophysiology and ECG numerical simulation

4. 11h-11h30, M. Boulakia

Title: Study of the cardiac electrical activity.

5. 11h30-12h30, M. Moakher

Title: Mathematical Problems in Diffusion-Weighted Magnetic Resonance Imaging of the Brain

12h30, Lunch

## Sunday 22nd November

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1. 8h30-9h30, J. Leblond

Title: EEG inverse source problems and best rational approximation.

2. 9h30-10h, J. Henry

Title: Analysis of Synchronization in a Neural Population.

10h-10h30, Break

3. 10h30-11h, M. Mahjoub.

Title: Point sources location from missing boundary data : An application to epilepsy.

4. 11h-11h30, L. Dumas

Title: Towards a numerical reconstruction of blood flow from echotracking measurements

5. **11h30-12h30, B. Perthame**

Title: Analysis of PDE models for molecular motors.

**12h30, Lunch**

## Monday 23rd November

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1. **8h30-9h30, J. Maddocks**

Title: Linear Elasticity and DNA

2. 9h30-10, Slimane

Title:

**10h-10h30, Break**

3. 10h30-11h, Boulila

Title:

4. 11h-11h30, Clairambault

Title: Cell proliferation, circadian rhythm, tumour growth and cancer chronotherapeutics

5. **11h30-12h30, C. Lobry**

Title: Mathematical models of competition in a chemostat with slowly varying flow rate.

**12h30 Closing and lunch**