Curriculum Vitae and publications

Name: Mauroy
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Position: Researcher in the CNRS (French National Scientific Research Center), CR 1

Laboratory: Laboratoire J.A. Dieudonné, Parc Valrose, 06108 Nice Cedex 02, France

Career:

1997-2001: student of the « Ecole Normale Supérieure » of Cachan (ENS Cachan), BSc and MSc in mathematics
2000: « Agrégation » of Mathematics (national competitive exam for the recruitment of high school teachers)
2000-2004: - PhD thesis in the CMLA at the ENS Cachan, directed by B. Sapoval and L. Desvillettes, « Hydrodynamic in the lungs, interplay between flows and geometries » defended on July 5th 2004. - Teachings at the ENS Cachan (tutorials for Master students, training for the “agrégation” of mathematics)
2004-2005: - Post-doc CNRS in the laboratory J.L. Lions in University Paris VI. - Teachings at the ENS Cachan (tutorials for Master students, training for the “agrégation” of mathematics).
2005-2010: - CNRS Researcher in laboratory MSC in University Paris VII. - Teaching at the ENS Cachan
2005-2006: tutorials for Master students, training for the “agrégation” of mathematics
2006-2010: course for Master students (M2), training for the “agrégation” of mathematics
Sept. 2010-….: CNRS Researcher in laboratory LJAD in University Nice Sophia-Antipolis.

Other professional experiences and responsibilities:

- member of the selection comity for a position of “Maître de Conférence” in Paris V in 2009.
- member of the scientific committee of the GDR 2760 since summer 2008.
- since September 2008, co-direction of the PhD student B. Moreau (MSC, Paris 7) with P. Dantan (MSC, Paris 7).
- since September 2008, participation of the supervision of the PhD student P. Bokov (MSC, Paris 7), defence predicted on October 2009).
- from June 2007 to October 2008, participation to the supervision of the PhD student Y. Privat (IECN Nancy) and member of his PhD thesis jury (defended on 2008, the 21st of October).
- Introduction of mathematics to children of an elementary school (under the framework of the “science feast”, organised by the CNRS)
- Realisation of posters on “what are mathematics?” for the science museum “Palais de la découverte” in Paris, in collaboration with C. Baranger, L. Baudouin and V. Roussier.
**Awards:**

*Sept. 2004:* Award from the French College of Pneumologist Professors (“Collège des Professeurs de Pneumologie”).


**Publications:**

16- *Electrokinetic Motion of a Deformable Particle: Dielectrophoretic Effect*, Y. Ai, B. Mauroy, A. Sharma and S. Qian, submitted.


Conferences:

15- Participation (oral) to the “Journées de la Matière Condensée”, Troyes, August 2010, *Etude numérique 2D d’un modèle de globule rouge dans un canal*.


13- Participation (oral) to the European Society for Evolutionary Biology, Turin (Italy), August 2009, *Don’t fall off the adaptation cliff! When asymmetrical fitness costs select for suboptimal traits*.


7- Participation (oral) to the congress SMAI 2005, Evian, France, May 2005, *Sensibility of dichotomical trees, application to the lungs*.


5- Invitation to the conference “Practical Applications of Fractals”, Trieste, Italy, November 2004, *The danger of an optimal bronchial tree as a consequence of fractal modelling of the lung*.

4- Invitation to the congress “Modélisations physico-numérique pour les fluides, les particules et le rayonnement - Confrontation modèles physiques et modèles numériques”, Cargèse, France, October 2004, *Hydrodynamics in the lungs, relations between flows and geometries*.

3- Invitation to the Fourth International Symposium, Fractals in Biology and Medicine, Ascona, Swiss, March 2004, *3D Hydronamics in the upper human bronchial tree: interplay between geometry and flow distribution*.

2- Participation (oral) to the European Respiratory Society, Vienne, October 2003, *Asymmetry of inspiratory and expiratory fluid dynamics in a branched model of the lung*.