

Short CURRICULUM VITAE: Scientific Activity

David LACOSTE

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born on december 22nd 1971 in Montpellier (France),
CNRS researcher in the Laboratoire de Physico-Chimie Théorique,
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EDUCATION

1996 **Université Joseph Fourier, Grenoble**, Ph.D. in Physics
Thesis entitled *Light scattering in magneto and chiral media*.
1994 **Ecole Normale Supérieure**, DEA in Quantum Physics
1992 Undergraduate at **Ecole Normale Supérieure**, Paris

EMPLOYMENT

Jun 2005 – present **CNRS**, Chargé de Recherches CR1 (junior scientist)
Jan 2002 – Jun 2005 **CNRS**, Chargé de Recherches CR2 (junior scientist)
Jan 2000 – Jan 2002 **University of Pennsylvania**, Philadelphia, Postdoctoral Fellow
Advisor: T. Lubensky. My research focused on the following topics:
Phase separation in magnetic colloids, light scattering in chiral liquid crystals and phase transitions in lyotropic nematic gels.

RESEARCH

Research Interests:

Theoretical soft condensed matter, physics-biology interface, out-of-equilibrium statistical physics.
Recent work include studies of non-equilibrium fluctuations of molecular motors and of force generation by actin filaments, models of active biomimetic membranes. The work on actin filaments, molecular motors and active membranes is done in collaboration with JF. Joanny and P. Bassereau from Curie Institute.
Former research interests focused on multiple light scattering in biological media.

FIVE MOST SIGNIFICANT PUBLICATIONS IN LAST FIVE YEARS

1. *Non-equilibrium fluctuations and mechanochemical couplings of a molecular motor*, A. W. C. Lau, D. Lacoste, K. Mallick, Phys. Rev. Lett., **99**, 158102 (2007).
2. *Fluctuations of a driven membrane in an electrolyte*, D. Lacoste, M. Cosentino Lagomarsino and JF. Joanny, Europhys. Lett., **70**, 418 (2007).
3. *Dynamics of active membrane with internal noise*, D. Lacoste and A. Lau, Europhys. Lett., **70**, 418 (2005).
4. *Fluctuation spectrum of fluid membranes coupled to an elastic meshwork: jump of the effective surface tension at the mesh size*, JB. Fournier, D. Lacoste and E. Raphaël, Phys. Rev. Lett., **92**, 018102 (2004).
5. *Field-induced structures in miscible ferrofluid suspensions with and without latex spheres*, M. Islam, D. Lacoste, K. Lin, T. Lubensky and A. Yodh, Phys. Rev. E, **67**, 021402 (2003).