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RESUME

Main research interests

- Nature of the disorder driven transition in random field Ising magnets.

- Properties of statistical fluctuations in the critical regime of correlated systems and self organized phenomena.

- de Haas-van Alphen effect at high magnetic fields in low temperature organic conductors.

- Vortex dynamics in superfluid Helium 4 and vortex transport in the mixed phase of thin superconducting films.

- Grassmann techniques applied to interface models. Random matrices for disordered systems.

Diploma and cursus

Present position (sept 2005) : Research Associate for one year at the LIFR, Moscou.

1999-2005 Research Associate (CNRS) at the Laboratory of Theoretical Physics, University Louis Pasteur, Strasbourg.

1998-2000 :Postdoctoral position at the Physics Department of the Washington State University, Seattle, USA. Supervisor: D.J. Thouless. Research activity: vortex dynamics in superfluid Helium 4.

1992-1996 : PhD in Statistical Physics at the Laboratory of Theoretical Physics, ENS-LAPP, Ecole Normale Supérieure de Lyon, FRANCE. Supervisor: Peter C.W. Holdsworth. Subject: "Some aspects of the phase transition in the random field Ising model".

1995 : National Military Service at the Laboratory of Quantum Physics, University Paul Sabatier, Toulouse. Research activity: de Haas-van Alphen oscillations and magnetic breakdown in 2D organic conductors. In collaboration with Timothy Ziman, Miguel Gusmao and Jean Bellissard.

1991-92 : Diploma of Extensive Studies (DEA). Subject:"Statistical Physics and Non Linear Phenomena." Student of the Ecole Normale Supérieure de Lyon.

Other interests in Physics

Spin glasses, random walks, conformal invariance applied to Ising systems, quantum transitions in correlated systems. Programming: Fortran mainly and also C. Languages: French and English fluently.

Recent publications

[Ref. 1] Maxime Clusel and Jean-Yves Fortin, *1D action and partition function for the 2D Ising model with a boundary magnetic field*, J. Phys. A: Math. Gen. **38** No 13, 2849-2871 (1 April 2005)

[Ref. 2] Jean-Yves Fortin, *Asymptotic behaviour of the density of states on a random lattice*, J. Phys. A: Math. Gen. **38** No 5, L57-L65 (4 February 2005)

[Ref. 3] Jean-Yves Fortin, Emmanuel Perez and Alain Audouard, *Analytical treatment of the de Haas-van Alphen frequency combination due to chemical potential oscillations in an idealized two-band Fermi liquid*, Phys. Rev. B **71**, 155101 (2005)

[Ref. 4] Jean-Yves Fortin, Emmanuel Perez and Alain Audouard, *Magnetic oscillations and frequency mixing in a two-band conductor*, Physica B: Condensed Matter, **346-347**, 373-376 (2004)

[Ref. 5] Maxime Clusel, Jean-Yves Fortin, and Peter C. W. Holdsworth, *Criterion for universality-class-independent critical fluctuations: Example of the two-dimensional Ising model*, Phys. Rev. E **70**, 046112 (2004)

[Ref. 6] L. Ghenim, J.-Y. Fortin, G. Wen, X. Zhang, C. Baraduc and J.-C. Villegier, *Transport and vortex pinning in micron size superconducting Nb films*, Phys. Rev. B **69**, 064513 (2004)