



A workshop under the Thematic Trimester on "Conformal Field Theory and Applications" at the Institut Henri Poincaré, 5 September - 16 December 2011.

Context

For the past fifty years we have classified states of matter by their broken symmetries. This so-called Landau paradigm identifies phases by their local order parameters: for example, describing a ferromagnet in terms of its local magnetization, or a superfluid in terms of its local quantum phase-order parameter.

However, in the last few years it has become clear that there are condensed matter systems which have so-called topological order which is beyond this classic Landau description. Theses systems are instead sensitive to topology: the topology of the manifold that they live on, and the topology space-time knots formed by the motion of their excitations. Rather remarkably, the deep mathematical structure of these topological states of matter is well described by conformal field theories and their related topological quantum field theories.



CFT, Topology and Information

Organised by: P. Fendley, J.L. Jacobsen, N. Read, H. Saleur, V. Schomerus, and S. Simon

Invited speakers

E. Ardonne (Nordita), A. Bernevig (Princeton), J.-S. Caux (Amsterdam), F. Costantino (Strasbourg), J. Dubail (Yale), B. Estienne (Amsterdam), M. Freedman (Santa Barbara), L. Funar (Grenoble), H. Hansson (Stockholm), Y. Ikhlef (Geneva), T. Jolicoeur (Orsay), G. Misguich (Saclay), K. Schoutens (Amsterdam), G. Sierra (Madrid), J. Slingerland (Maynooth), Z. Wang (Santa Barbara)

Programme coordinated by the Centre Émile Borel of the IHP. Registration on http://www.ihp.fr Participation of postdocs and Ph.D. students is strongly encouraged. For further information, contact <u>acfta@ihp.jussieu.fr</u> Scientific programme on http://www.phys.ens.fr/~jacobsen/acfta

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