

Seminario

Conjunto Núcleo Milenio MESCYD / Modelamiento Estocástico

Speaker

Avelio Sepúlveda
Universite de Lyon

Title: The Ising model from the eyes of the Gaussian free field.

Abstract: The Ising model may be one of the most studied objects of statistical Physics. In recent years, it was shown that a proper renormalisation of a planar Ising model converges to a universal field: the continuous magnetisation field. This field is not a function but a Schwartz distribution, furthermore its statistics are not Gaussian. In this talk, we will study the properties of the Wick product of two independent magnetisation fields and show that they have the same law as a certain trigonometric function of the GFF. We will show how this correspondence allows us to find new formulas for the n -point correlation function of the Ising model with Dobrushin boundary condition and how it allows us to study the geometric properties of the interfaces of the continuous XOR-Ising model.

Martes 03 de septiembre a las 16:00 hrs. Sala de Multimedia, Sexto Piso, Torre Norte, Beauchef 851.