Bologna Workshop on:
CFT AND INTEGRABLE MODELS
and their applications from gauge/gravity dualities to statistical mechanics and quantum information

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Conformal field theory at the edge of Quantum Hall droplets

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I discuss several aspects related to the edge behavior of 2d integer quantum Hall droplets of arbitrary shapes, and its relation to two-dimensional Coulomb gases at a specific inverse temperature.
Both systems can be mapped onto free fermions, with single particle wave functions which can be determined exactly in the limit of large particle number. It is well known that the two problems can be described by a simple conformal field theory, but I will discuss subtle differences between their correlation functions. If time permits I will also discuss how such edge modes can affect entanglement scaling.

Primary author: STÉPHAN, Jean-Marie (Institut Camille Jordan, CNRS)

Presenter: STÉPHAN, Jean-Marie (Institut Camille Jordan, CNRS)

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