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# Mathematics Colloquium at Jacobs University Bremen

VINCENT BEFFARA

(Université de Lyon)

will speak on

*Conformally Invariant Random Processes*

**Date:** Monday, December 3, 2007

**Time:** 17:15

**Place:** Lecture Hall Research II, Jacobs University

**Abstract:**

The study of scaling limits has long been of interest to mathematicians and physicists; in the case of statistical physics models, taken at their critical point at which the correlation length becomes infinite, one expects the limit to be non-trivial. In two dimensions, the principle known as “universality” leads to the belief that the scaling limit enjoys additional properties — namely, that it is invariant under conformal transformations. In 1999, Oded Schramm introduced a new stochastic process which he called SLE (for Stochastic Loewner Evolution), which under relatively mild hypotheses is the only possible conformally invariant scaling limit for such models; since then, convergence has been proved in some cases, but most remain open.

The goal of the talk is to give a general presentation of the topic and known results, and if time allows of some of the techniques used to derive conformal invariance.

**Colloquium Tea** at ca. 16:45 in the Tea Room of Research II, close to the lecture hall. Everybody is welcome!