Monday 6 May 2019 – at 4:30 p.m.
Seminar Room “-1” – Department of Mathematics

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Causal fermion systems and quantum field theory

Abstract:
The theory of causal fermion systems is an approach to describe fundamental physics. It gives quantum mechanics, general relativity and quantum field theory as limiting cases and is therefore a candidate for a unified physical theory. From the mathematical perspective, causal fermion systems provide a general framework for describing and analyzing non-smooth geometries. The dynamics is described by the so-called causal action principle.
The aim of the talk is to give a simple introduction, with an emphasis on conservation laws (surface layer integrals) and the connection to quantum field theory.

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