

Quantalic fields

Begin: Tuesday, 13 February 2018

Every Tuesday and Thursday, 09:45 - 11:15, room 7.527

The seminar is open-ended and starts with an introductory lecture. Quantales were introduced by Mulvey to classify operator algebras and formalize quantum logic. They have been applied in various other topics. We will use them to capture the essence of the Riemann-Roch theorem. In the first part, we introduce a type of quantale where RR can be described and easily proved.

The second part starts with the observation that every function field is given by a quantale. Then it proceeds with the proof that such quantales are in one-to-one correspondence with RR quantales. The latter quantale is self-dual, a fact which implies classical Serre duality.

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