Julius-Maximilians-
UNIVERSITÄT
WÜRZBURG

MUΦX
Lehrstuhl

Announcement

Seminar on Deformation Quantization and Geometry

10.07.2026 at 14:00 s.t.

Seminarroom SE 31

Lennart Obster (Universidade de Coimbra)

Fat extensions and core extensions

Lie group extensions show up in many interesting places. Classes of examples include the universal covers of Lie groups, semidirect products and central extensions. Lie groupoids are naturally extended by bundles of Lie groups, i.e. family of Lie groups. Extensions of this form produce groupoids whose isotropy groups are extended, but whose orbit foliation remains intact. Fat extensions are groupoids extended by a bundle of Lie groups whose elements are homotopy data of a two-term complex (with "homotopy composition"). The jet groupoid of a Lie groupoid fits into such a fat extension, and this data can be viewed as the adjoint representation. Core extensions are a related class of extensions that come with some extra data reminiscent of the data of a crossed module of Lie group(oid)s. Crossed modules are in fact core extensions, but the extension is trivial. In the talk, we will introduce fat extensions and core extensions, and we focus on relating these notions to PB-groupoids (as introduced by Cattafi and Garmendia) and core diagrams (as introduced by Brown, Jotz, Mackenzie).

Invited by Madeleine Jotz