

Abstract:

Higher Differential Geometry is a relatively new area of mathematics, which investigates differential-geometric structures of a higher-categorical flavor. Examples are stacks, bundle gerbes, Lie groupoids or principal bundles for categorical groups. The higher-categorical nature of these objects shows up by the fact that their automorphisms themselves have automorphisms, and that these higher-order automorphisms encode important information. In the last decades, it turned out that such objects naturally appear in various areas of geometry, such as index theory, gauge theory, tangential structures, loop spaces, as well as in mathematical physics. In particular, Higher Differential Geometry is a key ingredient of Functorial Field Theory, a recent new approach to understand quantum field theories from a general foundational point of view. This Minisymposium aims at bringing together researchers working on different aspects of Higher Differential Geometry and Functorial Field Theory.