

Higher Categories for the Working Mathematician



Monday, 27 July 2026 - Friday, 31 July 2026

Georg-August-Universität Göttingen, Mathematisches Institut

Scientific Programme

An introduction to stable ∞ -categories and spectra (Rune Haugseng)

This lecture series will give an introduction to spectra and their tensor product, focusing on categorical aspects of the ∞ -category of spectra, as well as the broader context of stable ∞ -categories. It will mainly be based on work of Lurie and Gepner-Groth-Nikolaus.

$(\infty,1)$ -categories and beyond (Viktoriya Ozornova)

In this lecture series, we want to build basic language for the use of $(\infty,1)$ -categories and also (∞,n) -categories. both in other talks and in mathematical 'real life'. In a model, a lot of this was done by Joyal, Lurie, Riehl and Verity, whereas a model-independent approach is currently being developed by Cisinski, Cnossen, Nguyen and Walde.

An introduction to higher principal bundles and their applications (Christian Saemann)

This lecture series introduces structures in higher differential geometry with a focus on applications in mathematical and high-energy physics. The main goal is to define higher principal bundles with an interesting notion of connection and to discuss several applications of these structures.

(∞,n) -categories in action (Claudia Scheimbauer, Walker Stern)