

Kolokviální přednáška se koná ve středu **20. dubna 2016, v 16:00 v posluchárně M1**

John Denis Bourke, PhD.

Higher Groupoids

Abstract:

Groupoids lie between groups and categories. Extending the fundamental group construction, each topological space gives rise to a fundamental groupoid of points and paths. There are higher fundamental groups (the homotopy groups) and, correspondingly, higher dimensional groupoids. These are well understood up to dimension three but not beyond: in particular, various definitions of infinity-groupoid have been given but the relationship between the different definitions remains poorly understood.

One of the first definitions of infinity-groupoid was proposed by Alexander Grothendieck who, in a famous letter to Daniel Quillen, used it to formulate the so-called homotopy hypothesis, still unproven. I will tell the story of Grothendieck's infinity groupoids and discuss some recent work on these structures, including my own.