



# TOPOLOGY SEMINAR

## Bimodules of spaces?

By

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**Abstract:** If  $X$  and  $Y$  are algebraic objects like monoids, groups, rings etc., we define bimodules to carry a left action from  $X$  and a right action for  $Y$ , and typically organize them in a double category. We will entertain the idea of a bimodule in the case where  $X$  and  $Y$  are simplicial sets (and general spaces or CW-complexes). We will draw the analogy from the special case of categories, where bimodules have various interpretations and homotopical meaning. In particular representable bimodules are mapping cylinders for categories. Because of the lack of algebraic structure bimodules of spaces do not tensor. Time permitting we will discuss a remedy for this issue.

**Date:** October 14, 2019 Monday

**Time:** 13:40 – 14:40

**Place:** SA141 Mathematics Seminar Room

\* Tea and cookies will be served after the talk. All are most cordially invited.