Speaker: Shai Haran

**Title:** The geometry of generalized rings

**Abstract:** A new language for geometry without addition will be presented. In this language arithmetic and geometry look much more alike. For the experts: "Non additive geometry," a review of the development of the theory of non additive geometry, of the compactification of  $\operatorname{spec}(\mathbb{Z})$ , of the arithmetical surface  $\operatorname{spec}(Z) \times \operatorname{spec}(Z)$ , and of Quillen's homotopical algebra as non additive homological algebra.

**Title for the RTG Seminar:** "Addition," and why we have to do without it

**Abstract:** Explaining the problematics of addition as part of the language of geometry.