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THE HONG KONG UNIVERSITY OF SCIENCE & TECHNOLOGY

Department of Mathematics

ALGEBRA AND GEOMETRY SEMINAR

Higher Segal spaces and algebraic structures

by

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Abstract

In this talk, I will introduce the 2-Segal conditions of Dyckerhoff and Kapranov, describing both the algebraic and geometric intuitions which lead to the 2-Segal conditions. I will then give an overview of how the algebraic intuition can be extended to classify various algebraic structures in (higher) categories of spans. I will additionally explain how the geometric intuition can be used to provide state-sum-style invariants of surfaces. Time permitting, I will then discuss work in progress on higher cyclic operads, inspired by intuitions which arise from the algebraic characterization of 2-Segal objects.

Date : 01 May 2024 (Wednesday)

Time : 4:30pm – 5:30pm

Venue : Room 3598 (Lifts 27/28)

All are Welcome!