

Algebra & Geometry Seminar

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Category theory for algebraic patterns

ABSTRACT

This talk is about the approach to ∞ -categorical algebra via the framework of algebraic patterns introduced by Chu and Haugseng. Many homotopy coherent algebraic structures may be described as weak Segal fibrations (henceforth called algebrads) for an algebraic pattern. Examples of algebrads include ∞ -operads (and equivariant notions) and virtual n -iterated ∞ -categories. I will briefly discuss these examples, and, in particular, motivate why the latter example is useful to study lax phenomena in higher category theory. A wide range of aspects of ∞ -categorical algebra may be developed in the generality of algebrads for algebraic patterns. In the talk, I aim to discuss Day convolution and presheaf constructions. The part on Day convolution is joint work with Blom and Loubaton, and the other material covered is joint work-in-progress with Loubaton.

DATE / TIME

Wed, Nov 4, 2026
04:00 PM

VENUE

Room 5564 (Lifts 27-28), Academic Building
HKUST, Clear Water Bay, Hong Kong
researchseminars.org/talk/HKUST-AG/97



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