

## Sophie d'Espalungue

*IRIF, France*

**Title:** Towards an internal construction of meaning

**Abstract:** I will share ideas underlying an internal approach I am developing to address the notion of meaning in mathematical language. I'll outline some expected benefits and explore how the syntax-semantics and analytic-synthetic dichotomies would fit into this framework.

The idea is to organise mathematical objects and structures into a nested hierarchy, each level internalising the level below. The fundamental instance corresponds to the hierarchy of  $n$ -categories (proof of true, true, truth values, sets, categories, etc.)

Given that this hierarchy includes the level of truth values, this approach further seeks to internalise the process of definition by formulating it at that very level, blurring the line between syntax and semantics. In this framework, no term is primitive: each object is defined as an element of an object at the next level up, built inductively from the levels below.

The aim is to explore how meaning can emerge internally from the act of definition itself. My goal in this talk is to present this perspective, clarify intuitions, and invite discussion on its mathematical and philosophical implications.