

# GRADUATE SEMINAR

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## Operads of Quantum Field Theory

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**November 3, 2021**

**2:30 pm**

**University of Regina**

<https://uregina-ca.zoom.us/j/94125367372>

### **Abstract:**

Quantum field theory is the field of physics which studies particles and their interactions. Despite its immense success at describing the natural world, at present there is no single unified notion of quantum field theory. Instead, we have distinct quantum field *theories*, which each can be applied within their own regime, but are difficult to relate to one another. In recent decades, mathematical structures known as operads have been discovered underlying many quantum field theories, lending hope that the operadic picture may provide a pathway to unifying these theories. In this talk we will present and compare several flavours of operads and the ways in which they appear in quantum field theory.

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