



THE HONG KONG UNIVERSITY OF SCIENCE & TECHNOLOGY

Department of Mathematics

***MATHEMATICS COLLOQUIUM***

**Derived Fourier analysis**

By

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*Academia Sinica*

Abstract

I will discuss incarnations of the Fourier transform in algebraic geometry and topology. Like its prototype, these "sheafy" or categorified forms of Fourier analysis have proven unreasonably effective in applications. After giving an overview of the sheaf-theoretic Fourier transform, I will explain a new "derived" version and some concrete problems in enumerative geometry and number theory this abstract piece of machinery has proven useful for so far.

**Date : 27 October 2023 (Fri)**

**Time : 3:00pm – 4:00pm**

**Venue : Lecture Theater F (Lifts 25/26)**

*All Are Welcome!*