The Hong Kong University of Science and Technology

Department of Mathematics

<u>Seminar on Geometry</u>

Augmentations and sheaves for knot conormals

By

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<u>Abstract</u>

Knot invariants can be defined using Legendrian isotopy invariants of the knot conormal. There are two types of invariants raised in this way: one is the knot contact differential graded algebra together with augmentations associated to this dga, and the other one is the category of simple sheaves microsupported along the knot conormal. Nadler-Zaslow correspondence suggests a connection between the two types of invariants. Moreover, augmentations specialized to "Q=1" have been understood through KCH representations.

I will present a classification result of simple sheaves, and relate it to KCH representations and two-variable augmentation polynomials. I will also present a Radon transform for sheaf categories, and explain how it corresponds to the specialization of Q on the sheaf side.

Date : *Wednesday, 21 February 2018*

Time: *10:30 a.m. - 11:30 a.m.*

Venue: *Room 4475, Academic Building (near Lifts 25&26), HKUST*

All are welcome!