



Department of Mathematics  
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# Seminar

## *Secondary Upsilon invariants of knots*

*Prof. Se-Goo KIM*  
*Kyung Hee University*

### Abstract

Several well known knot concordance invariants are briefly presented. One of them is the knot invariant Upsilon, defined by Ozsvath, Stipsicz, and Szabo, that induces a homomorphism from the smooth knot concordance group to the group of piecewise linear functions on the interval  $[0,2]$ . We define a set of related secondary invariants, each of which assigns to a knot a piecewise linear function on  $[0,2]$ . These secondary invariants provide bounds on the genus and concordance genus of knots. Examples of knots for which Upsilon vanishes but which are detected by these secondary invariants are presented. This is a joint work with Chuck Livingston.

**Date :** February 3, 2017 (Friday)  
**Time :** 3:00pm – 4:00pm  
**Venue :** Room 219, Lady Shaw Building,  
The Chinese University of Hong Kong

*All are Welcome*