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# TRANSVERSE AND LEGENDRIAN KNOTS VIA GRIDS

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## Abstract

The combinatorial version of HFK, called Grid Homology, is defined by Manolescu-Ozsvath-Sarkar using toroidal grid diagrams in 3-sphere. I will introduce the grid representation of knots followed by the main construction of Grid Homology. Considering 3-sphere with standard contact structure, I will continue to talk about Legendrian and transverse knots via grid diagrams and what kind of information can be extracted in this setup. If time permits, I would like to present an example regarding transverse non-simplicity problem that can show the power and efficiency of this combinatorial approach.

**Date :** Thursday, July 25, 2019

**Time:** 11:00

**Place:** IMBM Seminar Room, Boğaziçi University South Campus