Unramified Variants of Motivic Multiple Zeta Values

Jianqiang Zhao
The Bishop's School, La Jolla, CA 92037, USA.

Abstract

In this talk we shall consider a few variants of the motivic multiple zeta values of level two by restricting the summation indices in the definition of multiple zeta values to some fixed parity patterns. These include Hoffman's multiple t-values, Kaneko and Tsumura's multiple T-values, and the multiple S-values studied previously by Prof. Ce XU and the speaker. We will explain how to use Brown and Glanois's descent theory to determine some ramified and unramified families of motivic versions of these values. Assuming Grothendieck's period conjecture, our results partially confirm a conjecture of Kaneko and Tsumura about when multiple T-values can be expressed as a rational linear combination of multiple zeta values (i.e., unramified) if their depth is less than four. We will propose some unsolved problems at the end of the talk. This is a joint work with Prof. C. Xu.