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**Speaker:** Daniil Rudenko  
University of Chicago

Monday, April 23, 2018

4:30 PM

258 Hurley Hall

**Title:** Classical polylogarithms and cluster algebras

**Abstract:**

Classical polylogarithms have been studied extensively since pioneering works of Euler and Abel. It is known that they satisfy lots of functional equations, but in weight  $>4$  these equations are not known yet. Even in weight 4 they were first found using heavy computer-assisted computations. The main goal of the talk is to explain a conceptual proof of the depth conjecture in weight 4, leading to the functional equations. Our approach is based on the use of cluster algebras. The talk is based on joint work with A. Goncharov.