

## A semi-canonical reduction for periods of Kontsevich-Zagier

Abstract: Introduced by M. Kontsevich and D. Zagier in 2001, *periods* are complex numbers whose the real and imaginary parts are values of absolutely convergent integrals of  $\mathbb{Q}$ -rational functions over real  $\mathbb{Q}$ -semi-algebraic domains both defined by rational coefficients. The **Kontsevich-Zagier period conjecture** affirms that any polynomial relation between periods can be obtained by linear relations between their integral representations, expressed by classical rules of integral calculus. In this talk, we present a *semi-canonical reduction* for periods using desingularization, which allows us to develop a **geometrical approach** for periods and their related problems.