

On algebraic independence of solutions for systems of algebraic Mahler functional equations

01.06**Hiroshi Ogawara***(Kumamoto University, Japan)***Time:** Wednesday 24.07., 11:00 - 11:30, Room AM

Abstract: Many studies of functional equations of Mahler type have been conducted for algebraic independence of their solutions and algebraic independence of their special values. In this talk, we give criteria for algebraic independence of solutions for a new class of systems of algebraic Mahler functional equations. As an application, we show algebraic independence of the solutions of infinite product forms. We will speak of algebraic independence of special values of our solutions and asymptotic analysis of Mahler functions by using perturbation methods.