

THE UNIVERSITY



OF HONG KONG

*Institute of Mathematical Research
Department of Mathematics*

GEOMETRY SEMINAR

The Ax-Schanuel theorem for the j -function

Dr. Jacob Tsimerman
University of Toronto, Canada

Abstract

The Ax-Schanuel theorem is a powerful result in functional transcendence which describes ‘all the algebraic interactions’ of the exponential function, and has proven to be a powerful tool in various number theoretic and algebraic settings. We shall describe a generalization of this result to the automorphic setting – in particular the modular j -function – and how one can use model theoretic tools such as o -minimality to attack such transcendental questions. This is joint work with Jonathan Pila.

Date: February 16, 2015 (Tuesday)

Time: 2:00 – 3:00pm

Place: Room 210, Run Run Shaw Bldg., HKU

All are welcome