The Hong Kong Polytechnic University
Department of Applied Mathematics

Colloquium

On

Verified Error Bounds for Real Solutions of Positive-dimensional Polynomial Systems

by

Professor Zhi Lihong
Key Laboratory of Mathematics Mechanization
Academy of Mathematics & System Sciences
Chinese Academy of Sciences

Abstract

In this talk, I will introduce two algorithms for verifying the existence of real solutions of positive-dimensional polynomial systems. The first one is based on the critical point method and the homotopy continuation method. It targets for verifying the existence of real root on each connected component of an algebraic variety defined by polynomial equations. The second one is based on the low-rank moment matrix completion method and aims for verifying the existence of at least one real roots on the algebraic variety.

Date : 9 Dec, 2013 (Monday)
Time : 2:30 p.m. – 3:30 p.m.
Venue : HJ610, The Hong Kong Polytechnic University

*** * * ALL ARE WELCOME * * ***