

**The Hong Kong Polytechnic University
Department of Applied Mathematics**

Colloquium Series on Young Scholars in Optimization and Data Science

Polyhedral homotopy method for Nash equilibrium problem

By

**Dr. Kisun LEE
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Abstract

In this talk, we discuss the problem of finding generalized Nash equilibria (GNE) in the viewpoint of sparse polynomials. To obtain optimality conditions for GNE, we consider the Karush-Kuhn-Tucker (KKT) system using the Lagrange multiplier. We discuss that if all objectives and constraints polynomials are generic, the number of solutions of the KKT system equals its mixed volume, and so the polyhedral homotopy method can be optimal for finding GNEs. Lastly, results for numerical experiments will be given.



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Date: 22 April 2022 (Friday)

Time: 10:00-11:00 (Hong Kong Standard Time GMT +8)

Venue: Online Talk via Zoom (Meeting ID: 956 3290 0197)

Speaker: Dr. Kisun Lee, University of California San Diego

Host: Dr. Xindong Tang, The Hong Kong Polytechnic University

Click to join:

<https://polyu.zoom.us/j/95632900197?pwd=NzJucUdFaDV3QiswQ1h6L1FYWThsUT09>

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

For enrolment, please send your name and email to wai-yan.moon@polyu.edu.hk on or before 21 April 2022