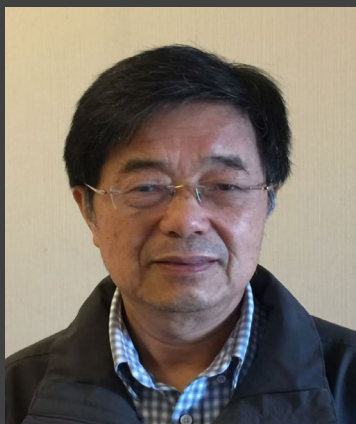




Mathematics & Mathematics Education Seminar



Date: 27 Nov 2024
Time: 1430 – 1530
Venue: MME Journal
Room



An Institute of



Application of Combinatorial Nullstellensatz

Seminar Abstract:

The Combinatorial Nullstellensatz gives a sufficient condition for a polynomial $P(x_1, x_2, \dots, x_n) \in F[x_1, x_2, \dots, x_n]$ to have a non-zero point in a given grid $S_1 \times S_2 \times \dots \times S_n$, where each S_i is a finite subset of F . Many combinatorial problems can be stated as the existence of a non-zero point of a polynomial in a certain grid, and hence have the potential of applying Combinatorial Nullstellensatz. This talk explains some applications of Combinatorial Nullstellensatz to graph coloring and edge weighting problems.

Biography:

Professor Xuding Zhu received Ph.D. Degree from The University of Calgary in 1991. He worked at Simon Fraser University in Canada and University of Bielefeld in Germany as Postdoctoral fellow, at National Sun Yat-sen University in Taiwan as Associate Professor, Professor, and Xiwan Chair Professor. He is now a chair professor at Zhejiang Normal University. His main research interest is in graph theory. He published over 300 research papers, and serves (or served) at editorial board of J. Graph Theory, European J. Combinatorics, SIAM J. Discrete Math., Discrete Mathematics, Electronic J. Combinatorics, Taiwanese J. Mathematics, Bulletin of Academia Sinica, Contribution to Discrete Mathematics, Indian Journal on Discrete Mathematics and Discussiones Mathematicae Graph Theory.