## Combinatorics Seminar

## Stability and applications of quadrilaterals

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**Abstract:** A famous theorem of Furedi states that for any integer  $q \ge 15$ , any  $C_4$ -free graph on  $q^2 + q + 1$  vertices has at most  $q(q + 1)^2/2$  edges. It is well-known that this bound is tight for infinitely many integers q, by polarity graphs constructed from finite projective planes. In this talk, we will present a stability result of Furedi's theorem and then discuss its applications on extremal numbers of  $C_4$ . Joint work with Jialin He and Tianchi Yang.

Monday, September 30, 2019, 4:00 pm Mathematics and Science Center: MSC E406

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