VENKATA RAGHU TEJ PANTANGI, University of Regina
Strength of some EKR-type results.

The classical Erdos-Ko-Rado (EKR) theorem and its variants can be translated into characterizing maximum co-cliques of graphs in Association schemes. For instance, the classical Erdős-Ko-Rado characterizes maximum co-cliques in the Kneser graph. Given a graph G, by G_p, we denote the random subgraph of G in which edges appear independently, each with a probability p. In this talk, we consider the following question: for which probabilities is the independence number of G_p equal to that of G? Bollabas-Narayanan-Raigorodskii investigated the independence numbers of random subgraphs of the Kneser graph. In this talk, we will investigate the independence numbers of random subgraphs of (i) the derangement graph on permutations; and (ii) the perfect matching graphs. The derangement graph is associated with the EKR type result on permutations and the perfect matching graph is associated with EKR type result on perfect matchings. This is joint work with the members of the PIMS Collaborative Research Group on Movement and Symmetry in graphs.