BUSHRA RAJA, Toronto Metropoiltan University
Weak 3-Coloring of Resolvable 4-Cycle System

A weak k-coloring of a resolvable m-cycle system $\mathcal{S}$ of order v (that is, a C_m-factorization of K_v) is an assignment of k colors to its vertices such that no m-cycle in any 2-factor is monochromatic; that is, every m-cycle receives at least two distinct colors. The weak chromatic number of $\mathcal{S}$ is the minimum number of colors k for which $\mathcal{S}$ admits a weak k-coloring.

While there has been substantial research on colorings of m-cycle systems (that is, C_m-decompositions of K_v), relatively little attention has been given to weak colorings of resolvable m-cycle systems. In this talk, we consider weak 3-colorings of resolvable 4-cycle systems.

This is joint work with Dr. Peter Danziger and Dr. Andrea Burgess.