Discrete Mathematics Seminar
Illinois State University

2:00–2:50 pm, December 3

Speaker: Stacie Baumann, Auburn University

Equitable \((s, p)\)-edge-colorings

The focus of the talk is on (not necessarily proper) \(s\)-edge-colorings of \(K_\nu\) in which, for all \(u \in V(K_\nu)\), the edges incident with \(u\) are colored using exactly \(p\) colors. In the spirit of proper edge-colorings, here such \((s, p)\)-edge-colorings are required to be equitable: the edges at each vertex are shared evenly among \(p\) colors. Here, the structure of equitable \((s, p)\)-edge-colorings is addressed, finding the possible sizes of various color classes. Results concerning equitable \((s, p)\)-block-colorings of \(C_4\)-decompositions of \(K_\nu - F\) follow as corollaries.