

Institut f. Analysis und Computational Number Theory (Math. A)

Colloquium on Graph Theory - Erinnerung

Donnerstag, 15.1.2015, 14:15 Uhr

Seminarraum C 208, 2. Stock, Steyrergasse 30, TU Graz

PROF. DR. T. DOSLIC, DR. S. MAJSTOROVIC
(Croatia)

Prof. Dr. Tomislav Doslic, Zagreb

Title: **On some structural and enumerative aspects of maximal matchings**

Abstract: A matching M of a graph G is maximum if no other matching in G has more edges than M ; a matching M is maximal if no other matching of G contains M as a proper subset. Maximal matchings are much less researched and less understood than the maximum ones. We present results on some structural and enumerative properties of maximal matchings in several classes of chemically relevant graphs.

Dr. Snjezana Majstorovic, Osijek

Title: **Indivisible graphs**

Abstract: In the study of complex networks, community structure refers to the occurrence of groups of nodes in a network that are more densely connected internally than with the rest of the network. One of the most popular community detection methods is the Newman's spectral modularity maximization algorithm, which divides a graph into two communities based on the signs of the principal eigenvector of its modularity matrix in the case that the modularity matrix has positive largest eigenvalue. Newman defined a graph to be indivisible if its modularity matrix has no positive eigenvalues. In this lecture, a characterization of indivisible graphs is given.

R.Tichy, S.Wagner