



Algebra and Number Theory Seminar

Title: On Commuting Graphs

Speaker: Polona Oblak (University of Ljubljana, Slovenia)

Date: Mon 20th September 2010 at 4:00PM

Location: Mathematical Sciences Seminar Room

Abstract: The commuting graph $G(S)$ of a semigroup (or a semiring) S is the graph, whose vertex set is the set of all noncentral elements of S and $x-y$ is an edge in $G(S)$ if $xy=yx$ and x is not equal to y . The commuting graphs are an illustrative way of describing centralizers of elements in certain algebraic structures. In the talk, we introduce commuting graphs and give some recent results on diameters of commuting graphs of different algebraic structures. The main part of the talk will be concentrating on commuting graphs of matrices over rings and semirings.