

**IMIA Operator Algebra and Noncommutative Geometry Seminar**  
University of Wollongong

Title: K-theory for the tame graph  $C^*$ -algebra of a separated graph

Speaker: Pere Ara (Autonomous University of Barcelona)

Time and Date: 11am Monday, 10 November 2014

Location: Room 8.G25

Abstract: A separated graph is a pair  $(E, C)$ , where  $E$  is a directed graph and  $C$  is a certain partition of the set of edges  $E^1$  of  $E$ . We will review the definition of the graph  $C^*$ -algebra  $C^*(E, C)$ , which is due to Ken Goodearl and the presenter. This algebra has the disadvantage that the final projections of the partial isometries corresponding to the edges do not necessarily commute. This makes impossible to use some of the standard techniques of graph  $C^*$ -algebras in this setting. However, Ruy Exel and the presenter have introduced a new  $C^*$ -algebra, the tame graph  $C^*$ -algebra of the separated graph, denoted  $\mathcal{O}(E, C)$ , which satisfies the above mentioned property. In a recent investigation, Ruy Exel and the presenter have computed the K-theory of the algebra  $\mathcal{O}(E, C)$  for all the finitely separated graphs, that is, for all the separated graphs  $(E, C)$  such that each set  $X$  is finite.