Title: The path space of a directed graph

Speaker: Sam Webster (University of Wollongong)

Time and Date: 3:30pm, Tuesday April 19, 2011

Location: Room 1.G01

Abstract: We construct a locally compact Hausdorff topology on the path space of a directed graph $E$, and identify its boundary-path space $\partial E$ as the spectrum of a commutative sub-$C^*$-algebra $D_E$ of $C^*(E)$. We then show that $\partial E$ is homeomorphic to a subset of the infinite-path space of any desingularisation $F$ of $E$. Drinen and Tomforde showed that we can realise $C^*(E)$ as a full corner of $C^*(F)$, and we deduce that $D_E$ is isomorphic to a corner of $D_F$. Lastly, we show that this isomorphism implements the homeomorphism between the boundary-path spaces.