

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

Title: Noncommutative symmetries of  $C^*$ -algebras

Speaker: Alcides Buss (Universidade Federal de Santa Catarina, Brazil)

Time and Date: 3:30pm Thursday, 15 January 2015

Location: Room 39C.meeting room

Abstract: One of the most basic actions of a groupoid  $G$  is the action by translation on its arrow space  $G^1$ . This is a free proper action which has the unit space  $G^0$  as its orbit space. If  $G$  is (locally compact) Hausdorff, this induces an action of  $G$  on  $C_0(G^1)$  by isomorphisms whose crossed product is Morita equivalent to  $C_0(G^0)$ .

In this talk we explain how to construct noncommutative models for this basic action if  $G$  is not Hausdorff. This procedure gives rise to actions by Morita equivalences, that is, Fell bundles, which are not equivalent to actions by isomorphisms, but whose crossed products are still Morita equivalent to  $C_0(G^0)$ .

This talk is based on the preprint <http://arxiv.org/abs/1410.2051>, jointly with Ralf Meyer.