

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

Title: The bulk-edge correspondence of the quantum Hall effect in Kasprov theory

Speaker: Christopher Bourne (University of Wollongong and the Australian National University)

Time and Date: 3:30pm Thursday 22 January 2015

Location: Room 39C.meeting room

Abstract: The bulk-edge correspondence involves equating topological properties of the interior of a physical system with topological properties of its edge or boundary. In this talk, I will show how work by Kellendonk, Schulz-Baldes and others on the bulk-edge correspondence for the quantum Hall effect can be recast into the language of Kasparov modules and KK-theory. This makes the general method we use more flexible and potentially applicable to other physical systems. This is joint work with Alan Carey and Adam Rennie.