

## **Analysis Seminar**

Title: Order Continuity on Banach Lattices

Speaker: Ray Ryan (NUI Galway)

**Date:** Tue 19th May 2020 at 4:00PM

**Location**: (See abstract)

Abstract: In this short survey, we will look at the concepts of convergence and continuity in Banach lattices. On the real line, the topological and order structures coexist happily. In particular, they agree on what it means for a sequence to converge. In Banach lattices, this is not the case: order and norm convergence are no longer the same. This leads to different definitions of continuity for linear and multilinear mappings. Some operations, such as transposing and taking the absolute value, do not interact as one might expect until we factor in the role played by order continuity. We look at some of these phenomena and we explain the importance of spaces of continuous functions.

(Based on joint work with Chris Boyd and Nina Snigireva.)

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