University of Lethbridge

Department of Philosophy

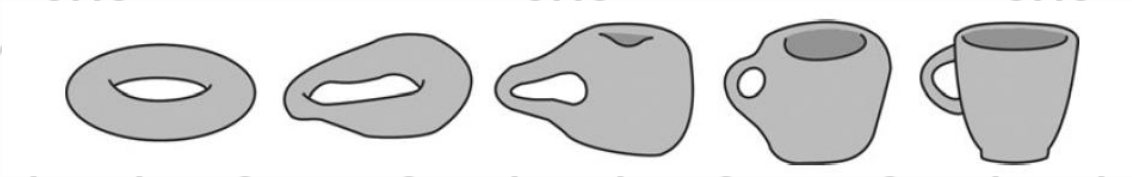
Virtual Colloquium

The Spectral Space of an Orthocomplemented Lattice

Joseph McDonald

Institute for Logic, Language, and Computation at the University of Amsterdam

This talk is about an interaction that occurs between point-set topology and lattice theory. Point-set topology is concerned with the set-theoretic constructions underlying abstract geometric concepts such as topological space, continuous function, connectedness, and compactness. Lattice theory is the study of various classes of ordered algebraic structures such as distributive lattices, Boolean algebras, orthocomplemented lattices, and their structure-preserving homomorphisms. I will present the basic ideas which underlie some new theorems that were recently proven by myself and Kentaro Yamamoto, which demonstrate that the class of orthocomplemented lattices and lattice homomorphisms is dually equivalent to a special subclass of topological spaces and continuous functions. This talk serves as a gentle introduction to our work and its surrounding subject matter, so no previous knowledge of these areas is required.



Temporal Coordinates: Friday, December 4, 2020, 3:00 MDT

Zoom Coordinates: https://uleth.zoom.us/j/91455470755

All are welcome!