Mathematics & Statistics Colloquium

When: Wednesday, September 3, 2:00 pm - 2:50 pm

Where: Lee Drain Building 400

Noncommutative retracts
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A subalgebra S of an algebra A is called a corner of A if there is an S-bimodule M contained in A such that $A = S + M$ (direct sum of S-bimodules). Of course the prime example is the Peirce corner $S = eAe$ associated with an idempotent e in A, but the above definition is more general and makes no reference to idempotents. In the first part of this presentation we will give a number of basic results about corners of general algebras and C^*-algebras, partly surveying [1]. In the second part we will be concerned with closed and self-adjoint corners of C^*-algebras that are complemented by ideals - a notion which we consider as a noncommutative analog of topological retracts.

[1] R. Pluta, Ranges of Bimodule Projections and Conditional Expectations, Cambridge Scholars Publishing, 2013.