WABASH
EXTRAMURAL MODERN ANALYSIS
SEMINAR

April 22

2:00 p.m.
at
Wabash College
in rooms 114 and 118 Baxter Hall

Times given are Eastern Time,
which is currently local time for Central Indiana and Ohio.

2:00–2:30	*Refreshments and conversation*
2:30–3:30	**Pairings for pseudodifferential symbols.**
	Alexander Gorokhovsky, University of Colorado Boulder
3:30–4:00	*More refreshments and conversation*
4:00–5:00	**Kadison's property for representations of amenable operator algebras**
	Raphael Clouatre, University of Manitoba
5:00–...	*Refreshments and farewells*

The purpose of Wabash Seminar talks is to present surveys of interest to all analysts, including graduate students and scholars working in areas far from the speaker's specialty. Come and meet your fellow analysts, learn what's going on, and spread the word.

Next Meeting: Miniconference IUPUI September 16-17, 2017

For further information call

Marius Dadarlat, Purdue University, (765) 494–1940
E–mail: mdd@math.purdue.edu
Web: http://www.math.purdue.edu/~mdd/Wabash/

Pairings for pseudodifferential symbols.

Alexander Gorokhovsky

We compare different constructions of cyclic cocycles for the algebra of complete symbols of pseudodifferential operators. Our comparison result leads to index-theoretic consequences and a construction of invariants of the algebraic K-theory of the algebra of pseudodifferential symbols. This is a joint work with H. Moscovici.

Kadison's property for representations of amenable operator algebras

Raphael Clouatre

An operator algebra is said to have *Kadison's property* if all its bounded representations are completely bounded. It is a long-standing open problem to determine whether this is satisfied by every C^*-algebra. On the other hand, due to work of Haagerup and Gifford, it is known that Kadison's property for C^*-algebras is equivalent to a weaker version of amenability, called the *total reduction property*.

In this talk, we investigate whether non self-adjoint operator algebras with the total reduction property necessarily satisfy Kadison's property. We obtain positive results in the case where either the domain or codomain of the representation is residually finite dimensional. We also explain why these facts are meaningful with regards to the general problem. Finally, we exhibit connections to the harder question of determining whether operator algebras with the total reduction property are necessarily similar to C^*-algebras.

This is joint work with Laurent Marcoux.