WABASH
EXTRAMURAL MODERN ANALYSIS
SEMINAR

April 13

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	**Uniform Roe coronas** *BRUNO DE MENDOCA BRAGA, York University*
3:30–4:00	*More refreshments and conversation*
4:00–5:00	**Graded C*-algebras and Twisted Groupoid C*-algebras** *ADAM FULLER, Ohio University*
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: September 21-22

For further information call

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Uniform Roe coronas

BRUNO DE MENDOCA BRAGA

Given a metric space X, the uniform Roe algebra of X is denoted by $\mathrm{C}^*_\mathrm{u}(\mathrm{X})$. Many authors have studied rigidity questions related to isomorphisms between uniform Roe algebras. In this work, we define uniform Roe coronas as the quotient of $\mathrm{C}^*_\mathrm{u}(\mathrm{X})$ by the ideal of compact operators, and we study the rigidity question for uniform Roe coronas. As it turned out, under some set theoretical assumptions, it is often the case that isomorphism between uniform Roe coronas implies coarse equivalence of the base metric spaces (this is a joint work with Ilijas Farah and Alessandro Vignati).

Graded C*-algebras and Twisted Groupoid C*-algebras

ADAM FULLER

Unital abelian C*-algebras are well understood. They are necessarily isomorphic to $C(X)$, the continuous functions on a compact Hausdorff space X. Studying the topological dynamics on X gives rise to the study of crossed product C*-algebras: a class of relatively well understood of non-abelian operator algebras constructed from a dynamical system. Turning the problem on its head you can ask: if A is a C*-algebra containing an abelian C*-algebra $D = C(X)$ to what extent does A determine dynamics on X, and when can A be recovered from this dynamics. Kumjian (1986), and then Renault (2008), showed that if D is a Cartan subalgebra of A then the groupoid structure of the dynamics A induces on X recovers A as a reduced C*-algebra of a groupoid twist. In this talk we will discuss a generalization of these results to when A is topologically graded by a discrete abelian group Γ, with D a Cartan subalgebra of A_0. This is joint work with Jon Brown, David Pitts and Sarah Reznikoff.