

WABASH EXTRAMURAL MODERN ANALYSIS SEMINAR

April 25

2:15 p.m.

at

Zoom Web Meeting

ID: 938-0456-6424, Password: 2357

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

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|------------------|---|
| 2:15–2:30 | <i>Conversation</i> |
| 2:30–3:30 | Amenability via ultrapower embeddings for tracial von Neumann algebras
<i>SCOTT ATKINSON, University of California Riverside</i> |
| 3:30–4:00 | <i>More conversation</i> |
| 4:00–5:00 | Holomorphic subalgebras of n-homogeneous C^*-algebras
<i>KATHRYN MCCORMICK, University of Minnesota</i> |
| 5:00–... | <i>Farewells</i> |

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: TBA

For further information contact

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Amenability via ultrapower embeddings for tracial von Neumann algebras

SCOTT ATKINSON

The separably acting hyperfinite/amenable II_1 factor R has the property that any two embeddings into its own ultrapower are unitarily equivalent. Jung showed in 2007 that the converse holds modulo the Connes Embedding Problem. In this talk we will discuss several recent results showing that amenability for tracial von Neumann algebras satisfying the Connes Embedding Problem can be characterized in similar terms where the codomain is an ultrapower other than $R^{\mathcal{U}}$ and/or unitary equivalence is weakened to "ucp-conjugacy" or automorphic equivalence. These considerations shed light on Popa's factorial relative commutant question and the "super McDuff" property for II_1 factors (i.e. the central sequence algebra is a nontrivial factor). This is based on joint work with Isaac Goldbring and Srivatsav Kunnawalkam Elayavalli.

Holomorphic subalgebras of n -homogeneous C^* -algebras

KATHRYN MCCORMICK

There is a long tradition of analyzing a C^* -algebra through some topological invariant. One such result is Tomiyama and Takesaki's 1961 proof that an n -homogeneous C^* -algebra is determined up to $*$ -isomorphism by an underlying continuous matrix bundle. Suppose that the base space of the bundle is a bordered Riemann surface with finitely many smooth boundary components. Then for each such n -homogeneous C^* -algebra, one can define a holomorphic subalgebra. We will describe a partial result towards classifying these subalgebras up to complete isometric isomorphism based on topological invariants.