WABASH
EXTRAMURAL MODERN ANALYSIS
SEMINAR

February 28

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   **Spectral triples for non-archimedean local fields**
SLAWOMIR KLIMEK, IUPUI

3:30–4:00   *More refreshments and conversation*

4:00–5:00   **The classification of subfactors: index 5 and beyond**
EMILY PETERS, Loyola University, Chicago

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: April 11

For further information call

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Spectral triples for non-archimedean local fields

SLAWOMIR KLIMEK

Motivated by heuristic analogies between Riemann surfaces and number fields, I will look at non-commutative geometry of non-archimedean local fields of characteristic zero, or equivalently finite extensions of the p-adic numbers. I will review the concept of a spectral triple and basic properties of local fields. Then I will discuss a construction of spectral triples for non-archimedean local fields that uses a tree obtained from coarse-grained approximation of the space, and the forward derivative on the tree. Finally I will indicate a number of desirable properties of such spectral triples. This is joint work with S. Rathnayake and also M. McBride and K. Sakai.

The classification of subfactors: index 5 and beyond

EMILY PETERS

The recent completion of the classification of subfactors of von Neumann algebras with index below 5 begs the question "how far can the classification go?" While there's evidence suggesting that extending the classification to index 6 is impossible, an upper limit of $3 + \sqrt{5} \approx 5.24$ may be possible. I'll talk about some results in this direction, including classification of subfactors with index exactly 5, and uniqueness of subfactors associated to certain principal graphs just above 5. This is joint work with Izumi, Morrison, Penneys and Snyder.