WABASH
EXTRAMURAL MODERN ANALYSIS
SEMINAR

April 10

2:00 p.m.

at

Wabash College

in rooms 114 and 118 Baxter Hall

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

2:00–2:30	*Refreshments and conversation*
2:30–3:30	**Weighted integral estimates, analysis and potential theory for higher order boundary problems** *SVITLANA MAYBORODA, Purdue University University*
3:30–4:00	*More refreshments and conversation*
4:00–5:00	**AH algebras with ideal property: exponential rank, reduction and classification** *GUIHUA GONG, University of Puerto Rico*
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: TBA

For further information call

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Weighted integral estimates, analysis and potential theory for higher order boundary problems

SVITLANA MAYBORODA

The theory of higher order elliptic equations is full of paradoxes and open problems. Contrary to Hadamard's conjecture, the positivity of the Green function may fail, and even the Miranda-Agmon maximum principle does not necessarily hold in non-smooth domains.

I will present some new analytic tools (weighted integral inequalities) which allowed us to obtain the sharp estimates on biharmonic and polyharmonic functions in rough domains. We will also discuss the extension of the Wiener criterion, capacity and potential to the context of higher order PDEs.

This is joint work with V. Maz'ya.

AH algebras with ideal property: exponential rank, reduction and classification

GUIHUA GONG

In this talk, I will talk about calculation of exponential rank of AH algebras with ideal property and with slow dimension growth. In the calculation, we use Morse Theory from differential geometry. The result has applications to the reduction theorem and classification theorem for this class of C*-algebras with very slow dimension growth. Part of the work are joint with C. Jiang, L. Li and C. Pasnicu.