

# Philadelphia Area Number Theory Seminar

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## Explicit Reciprocity Laws for Higher Local Fields

**Abstract:** In this talk we present a generalization of Kolyvagin's explicit reciprocity laws to higher local fields. This involves explicit formulas for the generalized Kummer pairing associated to an arbitrary formal group, in terms of multidimensional  $p$ -adic derivations, the logarithm of the formal group, the generalized trace and the norm on Milnor  $K$ -groups. In the specific case of a Lubin-Tate formal group, these formulas give a higher-dimensional version of the explicit reciprocity laws of Artin-Hasse, Iwasawa and Wiles.

Wednesday, July 27, 2016  
2:40–4:00PM

Bryn Mawr College  
Department of Mathematics  
Park Science Center **328**

Tea and refreshments at 2:20PM in Park 355