

# Philadelphia Area Number Theory Seminar

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## Partition asymptotics and the polylogarithm

**Abstract:** In 2015, Vaughn obtained asymptotic formulas for the number of partitions of an integer into squares. Gafni extended this to  $k$ th powers.

Here we obtain such formulas for the number of partitions into values of an arbitrary integer polynomial  $f$  subject to some mild hypotheses.

Our methods use an interplay of the circle method, the polylogarithm, and the Matsumoto-Weng zeta function. This is joint work with Nicolas Robles.

Wednesday, April 25, 2018

2:40 { 4:00 PM

Bryn Mawr College

Department of Mathematics

Park Science Center **328**

Tea and refreshments at 2:20PM in Park 339