Philadelphia Area Number Theory Seminar

Eva G. Goedhart
Bryn Mawr College

Diophantine Equations II:
New results via Diophantine approximation

Abstract: I will present my recent result that for a, b, k 2 $\mathbb{Z}^+$ with $k \geq 7$, the equation

$$(a^2x^k - 1)(b^2y^k - 1) = (abz^k - 1)^2$$

has no solutions in integers x, y, $z > 1$ with $a^2x^k \neq b^2y^k$. Key to the proof are standard results on continued fractions and a Diophantine approximation theorem due to Bennett.

Wednesday, October 8, 2014
2:40{4:00PM

Bryn Mawr College
Department of Mathematics
Park Science Center 328

Tea and refreshments at 2:20PM in Park 355