Philadelphia Area Number Theory Seminar

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Diophantine Equations I: New results via the modular approach

Abstract: After a brief overview of the modular approach to solving Diophantine equations, and a little history of the problem, I will prove that for p an odd prime, $\alpha \geq 1$, and β, $\gamma \geq 0$ integers, the equation $X^{2N} + 2^{2\alpha}5^{2\beta}p^{2\gamma} = Z^5$ has no solutions with N, X, $Z \in \mathbb{Z}^+$, $N > 1$, and $\gcd(X, Z) = 1$.

Wednesday, October 1, 2014
2:40–4:00PM

Bryn Mawr College
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Park Science Center **328**

Tea and refreshments at 2:20PM in Park 355