

# **COE-Mass weekly seminar series**

# THE DST-NRF CENTRE OF EXCELLENCE IN MATHEMATICAL AND STATISTICAL SCIENCES (CoE-MaSS) WOULD LIKE TO PRESENT A SEMINAR BY

# **Dr Alain Togbe**

(Mathematics Department, Purdue University North Central, Westville, USA)

"On the x-coordinates of Pell equations which are in some sequences"

# Friday, 20 May 2016 10h30-11h30

Broadcast live from: Videoconferencing Facility, 1st Floor Mathematical Sciences Building, Wits West Campus

#### How to connect to this seminar remotely:

You can connect remotely via Vidyo to this research seminar by clicking on this link: <u>http://wits-vc.tenet.ac.za/flex.html?roomdirect.html&key=y0SSOwFsvsidbzg4qFdWXvvQtyl</u> and downloading the Vidyo software before the seminar. You must please join in the virtual venue (called *"CoE Seminar Room (Wits)"* on Vidyo) strictly between **10h00-10h15**. No latecomers will be added.

#### Important videoconferencing netiquette:

Once the seminar commences, please mute your own microphone so that there is no feedback from your side into the virtual room. During the Q&A slot you can then unmute your microphone if you have a question to ask the speaker.



### Title:

On the *x*-coordinates of Pell equations which are in some sequences.

### Presenter:

Prof Alain Togbe, Mathematics Department, Purdue University North Central, Westville, USA; <a href="mailto:atogbe@pnw.edu">atogbe@pnw.edu</a>

# Abstract:

Abstract: For an integer  $d \ge 2$  which is not a square, we show that there is at most one value of the positive integer *x* participating in the Pell equations  $x^2 - dy^2 = \pm 1, \pm 4$  which is a sequence such as rep-digits, Fibonacci numbers, Lucas numbers, ... except for a few values of d.

(This talk is based on joint papers with F. Luca, A. Dossavi-Yovo, and B. Kafle).