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**Bir Kafle\*** (bkafle@pnw.edu), 1401 S. US 421, Westville, IN 46391, and **Florian Luca** and **Alain Togbe**. *On the  $x$ -coordinates of Pell equations which are Fibonacci numbers*. Preliminary report.

Let  $d > 1$  be a positive integer which is not a perfect square. Consider the Pell equation  $x^2 - dy^2 = \pm 4$ . All its positive integer solutions  $(x, y)$  are given by

$$\frac{x_n + y_n\sqrt{d}}{2} = \left( \frac{x_1 + y_1\sqrt{d}}{2} \right)^n,$$

for some positive integer  $n$ , where  $(x_1, y_1)$  is the smallest positive integer solution. In this talk, we will show that there is at most one value of the positive integer  $x$  participating in the above Pell equation which is a Fibonacci number, when  $d \geq 2$ . In case  $d = 2$ , and 5, we have exactly two values of  $x$  being members of the Fibonacci sequence.

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