1135-VS-3163 **Bir Kafle*** (`bkafle@pnw.edu`), 1401 S. U.S. 421, Westville, IN 46391, and **A. Togbé**, **F. Luca**, **A. Montejano** and **L. Szalay**. *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. Let $(x_n, y_n)_{n\geq 1}$ be the sequence of positive integer solutions (x, y) of the Pell equations $x^2 - dy^2 = \pm 1$. Let $\{F_m\}_{m\geq 0}$ be the sequence of Fibonacci numbers. In this talk, we explain when can x_n be a product of two Fibonacci numbers, which then reduces to the study of Diophantine equation

$$x_n \in \{F_m F_\ell\}. \tag{1}$$

We will show that the above equation has at most one solution n in positive integers, with a few exceptions in d. Our proofs use the linear forms in logarithms of algebraic numbers. (Received September 26, 2017)