

Exposé court

129 *On the solutions of the Diophantine equation $P_n \pm \frac{a(10^m-1)}{9} = k!$*

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Let $\{P_n\}_{n \geq 0}$ be the sequence of Pell numbers given by $P_0 = 0$, $P_1 = 1$ and

$$P_{n+1} = 2P_n + P_{n-1}, \quad \text{for all } n \geq 1.$$

In this talk, we use Baker's method and the reduction method to find all the solutions of the Diophantine equation

$$P_n \pm \frac{a(10^m-1)}{9} = k!,$$

in positive integer variables m, n, a, k , where P_n is the n th Pell number.

This is a joint work with K. N. Adédji, F. Luca.