1147-13-296 **Koji Nishida*** (nishida@math.s.chiba-u.ac.jp), Graduate School of Science, Chiba University, Japan. *On the symbolic Rees rings for Fermat ideals.*

Let $n \geq 3$ be an integer and $S = K[x, y, z]$ be the polynomial ring over a field K. We assume (i) $\operatorname{ch} K = 0$, or (ii) $\operatorname{ch} K = p > 0$ and $p \nmid n$. Let I be the ideal of S generated by $x(y^n - z^n)$, $y(z^n - x^n)$ and $z(x^n - y^n)$. If K has a primitive n-th root of unity θ, then I is the defining ideal of the following $n^2 + 3$ points in $\mathbb{P}^2_K$; $(1 : 0 : 0)$, $(0 : 1 : 0)$, $(0 : 0 : 1)$ and $(1 : \theta^i : \theta^j)$, where $i, j = 1, 2, \ldots, n$. It is known that the symbolic Rees ring of I is finitely generated. The purpose of this talk is to give another proof for this fact using Huneke's criterion on finite generation of symbolic Rees rings. (Received January 17, 2019)