1159-13-85 **Alessandra Costantini*** (alessanc@ucr.edu). *Cohen-Macaulay property of the fiber cone of a module.* Preliminary report.

Let R be a Noetherian local ring and let E be a finite R-module. The fiber cone of E is the graded algebra $\mathcal{F}(E)$ defined by tensoring the Rees algebra $\mathcal{R}(E)$ with the residue field of R. In 2003 Simis, Ulrich and Vasconcelos showed that the study of the Cohen-Macaulay property of the Rees algebra $\mathcal{R}(E)$ can be reduced to the case of Rees algebras of ideals, by means of the so called *generic Bourbaki ideals*. The Cohen-Macaulay property of Rees algebras and fiber cones are usually unrelated. However, in this talk I will show that sometimes generic Bourbaki ideals can effectively be used in order to study the Cohen-Macaulay property of the fiber cone $\mathcal{F}(E)$ as well. I will also provide classes of modules whose fiber cone is Cohen-Macaulay, generalizing results of Corso, Ghezzi, Polini and Ulrich and of Montano. (Received July 30, 2020)