1176-13-193   **Sema Gunturkun*** (`sgunturkun@amherst.edu`) and **Mel Hochster**. *Growth of the Hilbert function of ideals containing a regular sequence.* Preliminary report.

Famous Macaulay's theorem describes the growth of Hilbert functions of homogeneous ideals in $K[x\_1,\ldots, x\_n]$. Eisenbud, Green and Harris conjectured a finer bound on the Hilbert function so that it associates with the structure of the ideal such as the degrees of a regular sequence it contains. In this talk, we discuss the current state of this conjecture, and especially focus on the ideals containing a regular sequence of quadratic forms. This is a joint work with Mel Hochster. (Received January 23, 2022)