1083-13-50 **Laura Ghezzi*** (lghezzi@citytech.cuny.edu). *Hilbert coefficients of parameter ideals relative to a module.*

The set of the first Hilbert coefficients of parameter ideals relative to a module M over a Noetherian local ring codes for significant information about its structure.

We discuss noteworthy properties such as that of Cohen-Macaulayness, Buchsbaumness, and of having finitely generated local cohomology. In particular, Vasconcelos Conjecture on the vanishing of the first Hilbert coefficient $e_1(Q, M)$ is solved affirmatively, where Q is a parameter ideal of M.

This is joint work with S. Goto, J. Hong, K. Ozeki, T.T. Phuong, and W.V. Vasconcelos. (Received August 09, 2012)