1067-14-1472 **Brian Harbourne**, **Hal Schenck** and **Alexandra Seceleanu*** (asecele2@illinois.edu), Department of Mathematics, 1409 W. Green Street, Urbana, IL 61801. *Inverse systems, Gelfand-Tsetlin patterns and the weak Lefschetz property.*

We use the inverse system dictionary to connect ideals generated by powers of linear forms to ideals of fat points and show that failure of the weak Lefschetz property for ideals generated by powers of linear forms is connected to the geometry of the associated fat point scheme. Recent results of Sturmfels-Xu allow us to relate the weak Lefschetz property to Gelfand-Tsetlin patterns. (Received September 21, 2010)