1003-14-236  Laura Felicia Matusevich*, Department of Mathematics, University of Pennsylvania, 209 South 33rd Street, Philadelphia, PA 19104-6395, Ezra Miller, Department of Mathematics, University of Minnesota, and Uli Walther, Department of Mathematics, Purdue University. Holonomic ranks in parametric families.

I will discuss the behavior of the holonomic rank in a family of $D$-modules depending on parameters. As it turns out, rank is upper semicontinuous under mild hypotheses. Particular attention will be given to the case of $A$-hypergeometric $D$-modules, where much more detailed information can be obtained. (Received September 01, 2004)