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Xiping Zhang* (xzhang@math.fsu.edu), 1327 High Road, Apt T1, Tallahassee, FL 32304. *Chern Classes and Local Euler Obstruction of generic Determinantal Varieties.*

The (generic) determinantal variety is the projective variety consisting of m by n matrices with kernel dimension $\geq k$, which arises naturally from many aspects. In this talk I will give formulas of the local Euler obstruction functions, the sectional Euler characteristics and algorithms for the Chern-Mather/Chern-Schwartz-MacPherson classes of determinantal varieties.

The Formulas and algorithms are based on calculations of degrees of certain Chern classes of the universal bundles over Grassmannians. For low dimensions I use Macaulay2 to exhibit some examples, and formulate a conjecture concerning the symmetry and positivity of the Chern classes. (Received February 18, 2018)