

1086-00-1672      **Anna-Rose G Wolff\*** (awolff2@gmu.edu). *Support Vector Machines and the Exterior Point Method.*

Support Vector Machine (SVM) learns an unknown function by recognizing underlying patterns within large data sets. One of the goals of the SVM is to find the support vectors, or data points that contain the most important information about the unknown function. We develop an optimization algorithm for finding the support vectors based on an exterior-point method and data decomposition. (Received September 24, 2012)