

1046-M1-1312 **Mike P O'Leary*** (moleary@towson.edu), Department of Mathematics, Towson University,
Towson, MD 21252. *Determining an Optimal Search Area for a Serial Criminal.*

The geographic profiling problem in criminology is to determine a search area for an offender based on knowledge of the offenders crime locations. We describe a new mathematical method for this problem that is able to incorporate geographic and demographic features that influence the selection of a crime site and uses Bayesian methods to generate its predictions. We will present the software tool that we are developing for police agencies to solve this problem and give examples of its use. (Received September 15, 2008)