1014-T1-1720   **Mark Parker*** (`mparker@carroll.edu`), Carroll College, Department of Math, Engineering, and CS, Helena, MT 59625. *Open Ended Explorations in Optimization.* Preliminary report.

MA 421: Mathematical Optimization, Applications, and Analysis is a required course in our mathematics program at Carroll College. The course is designed to provide students with a strong theoretical foundation in mathematical programming techniques, as well as to provide them the opportunity to develop modeling and analysis skills. In this talk, we will focus on open ended projects used in the Fall 2004 and 2005 offerings that helped students gain insight into global optimization. Students were given global optimization test bed problems that they were asked to explore. They were told to use Excel's Solver, Mathematica, Matlab, and hand analysis to develop a map of convergence to different local optima. I will discuss the educational goals, test functions, and student results. (Received September 28, 2005)