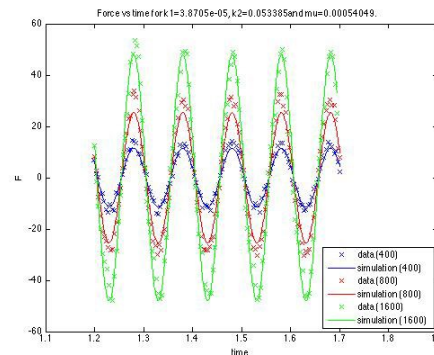
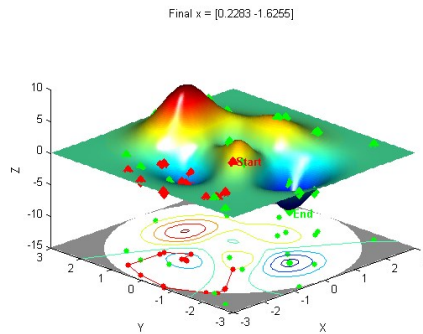


Department of Mathematics

Spring 2016 Colloquium Series



“Optimization inspired by biology: parameter fitting using the genetic algorithm”

Dr. Bori Mazzag,
Humboldt State University Mathematics Department

Thursday, January 28, 2016
Behavioral and Social Sciences Building Room 166, 4 p.m.

Some of the most interesting (and challenging) applied mathematics problems can be phrased as optimization questions. Most calculus students are familiar with problems about finding the dimensions of a fence of a given length enclosing the largest area but they may not have heard about using optimization in air traffic control or predicting protein folding. Various optimization algorithms exist. A relatively new method (developed in the 1970's), called “genetic algorithm (GA)” is inspired by the biological idea of natural selection. In this talk, Dr. Mazzag will describe the GA method and demonstrate its use in finding parameters that minimize the error between data and the solution of a differential equation.

Bori Mazzag got her undergraduate degree in Mathematics from UC Santa Cruz and her PhD in Applied Mathematics from UC Davis. Her main research and educational interest is in mathematical modeling, especially modeling problems from biology. She enjoys mentoring student researchers.

For a complete abstract, go to <http://www.humboldt.edu/math/news-and-events/math-colloquium>

***We invite you to the Pre-colloquium Tea on the third floor of the BSS
building at 3:30 on Thursday.***