

Project for SYDE 422 - Machine Intelligence

Project Title:	A New Opposition-based Search Algorithm
Project Description:	Opposition-based learning is centered around the notion of “opposite”, as determined by a transformation of some objective function $f(x_1, \dots, x_n)$ to another function $\check{f}(x_1, \dots, x_n)$. If we assume a minimization problem it can be proven that $\mathbf{E}[\check{f}] \leq \mathbf{E}[f]$. This project will involve an implementation of a new stochastic search algorithm inherently implied in this process. The new algorithm will be submitted to various experiments aimed at determining its efficacy to solving minimization/maximization problems (probably benchmark functions, but feel free to suggest more practical applications). Time permitting, a comparison to at least one other stochastic search will also be carried out.
Deliverables:	Source code (well documented!), program results and a report outlining the findings.
Deadline:	April 20, 2007
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