Stochastic Search Algorithms

Holger H. Hoos

Topics in Artificial Intelligence –

CPSC532D:
General Information

Webpage: http://www.cs.ubc.ca/labs/beta/Courses/CPSC532D-02

Time: Tue 13:00-14:30, Thu 13:00-14:30 (conflicts?)

Resources:

- Holger's brains – pick it up.
- New textbook by Hoos and Stutzle on SLS (partial drafts).
- G-Lab (http://www.cs.ubc.ca/labs/beta),
- Box in the CICS Reading Room,
- Course webpage,
- Coursewebpage,
Module 7: Search Space Analysis
Module 6: Empirical Analysis of Stochastic Search Algorithms
Module 5: Generalised Local Search Machines
Module 4: Population-based STL Algorithms
Module 3: Hybrid STL Algorithms
Module 2: „Simple“ STL Algorithms
Module 1: Introduction

Part I: Foundations and Basics
Module 1: SAT and Constraint Satisfaction

Module 2: The Travelling Salesperson Problem

Module 3: MaxSAT and MaxCSP

Module 4: Other Combinatorial Problems

Module 5: Scheduling Problems

Part 2: Applications
Final Grades are determined from the following:

- **Course Project** (reports and presentation) – ca. 60%
- **Discussion** (each student presents a paper in class and leads discussion on it) – ca. 15%
- **Homework Assignments** (simple problems and questions; approx. one every 2–3 modules) – ca. 25%
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Course Project

First or second week of April: project presentations

02/04 students submit short project proposals
03/01 students submit short progress report
03/29 students submit final report

Timetable: