

Mike Trienis
130 28st N.E
Salmon Arm, BC

(250) 832-3898 (home)
Trienism@gmail.com

Education

- **University of British Columbia** Kelowna, BC
Bachelor of Science - Computer Science & Mathematics Sep. 2001 - Apr. 2006
– Concentration: database manipulation, data mining, and modeling.
- **University of British Columbia** Kelowna, BC
Master of Science - Interdisciplinary Studies May. 2006 - Dec. 2007
– Concentration: numerical optimization in the area of convex analysis.

Work Experience

- **UBC Okanagan - Computer Science Department** Kelowna, BC
Teaching Assistant (Java Programming, Data Structures) Sep. 2007 - Dec. 2007
– Assisted students with lab work.
- **UBC Okanagan - Math & Science Center** Kelowna, BC
Peer Tutor (Computer Science, Mathematics) Sep. 2006 - Apr. 2007
– Peer tutored math and computer science.
- **UBC Okanagan - Engineering Department** Kelowna, BC
Teaching Assistant (Calculus) Sep. 2005 - Apr. 2006
– Marked students' calculus assignments and conducted maple tutorials.
- **OUC - Computer Science Department** Kelowna, BC
Teaching Assistant (Java Programming) Jan. 2004 - Apr. 2004
– Assisted students with lab work.
- **Canadian Employment Services** Kelowna, BC
Contract Web Developer May. 2004 - Sep. 2004
– Modeled and implemented a database using MySQL and PHP.

General Skills

Applications: Maple, Scilab, Eclipse, PHPadmin, Dreamweaver, EasyPHP, MS-Office, WinEdt, OPL Studio, CPLEX, SVN Server & client.

Languages: C, Java, Scilab, Matlab, Javascript, JSP, PHP, SQL, HTML, XML, Latex.

Operating Systems: MS-Windows (98/2000/XP/VISTA), Mac OS-X, Solaris, Linux (Ubuntu).

Database: MySQL, Oracle.

Miscellaneous: Excellent problem solving, troubleshooting and debugging skills.

Specialized Skills

Network Flows: Shortest path problem (label-setting, label-correcting), All pairs shortest path problem, (Floyd-Warshall's algorithm), maximum flow problem (preflow-push, augmenting path, capacity scaling algorithms), minimum cost flow problem (cost scaling, network simplex algorithms).

Continuous Optimization: Karush-Kuhn-Tucker theorem, iterative methods.

Convex Optimization and Non-smooth Analysis: Separation and support properties of convex sets; polar, tangent, and normal cones; Fenchel conjugation; subgradient calculus for convex functions; Fenchel duality for convex optimization problems; algorithms for non-differentiable optimization; non-smooth analysis and optimization for non-convex objects.

Linear Programming: Duality theory of linear programming problems, the simplex algorithm, solution of primal and dual problems, sensitivity analysis.

Optimization Techniques: Gradient descent, steepest descent, subgradient method, simplex method, bundle methods, Newton's method, quasi-Newton's method, interior point methods, conjugate gradient method, line search, cutting-plane method, branch and bound, branch and cut.

Large Scale Optimization: Grid computing, profiling.

Publications and Thesis

"**How to transform one convex function continuously into another**", H. H. Bauschke, Y. Lucet, and M. Trienis, Accepted for publication in SIAM Review. University of British Columbia, July 2006.

"**The piecewise linear-quadratic model for computational convex analysis**", Y. Lucet, H. H. Bauschke, and M. Trienis. Accepted for publication in Computational Optimization and Applications. University of British Columbia, July 2006.

"**Computational Convex Analysis: From Continuous Deformation to Finite Convex Integration**", Michael J. Trienis. Submitted for publication. University of British Columbia, December 2007.

Main Projects

2006 - 2007 Implemented several algorithms which are used to compute multiple convex operations.

2005 - 2006 Modeled and optimized a course-schedule for students attending medical school.

2005 - 2006 Developed a java application used to stream audio, video and play media files.

2004 - 2005 Designed and developed a php driven website which includes database functionality.

Seminars

- **International Conference on Continuous Optimization.** Hamilton, McMaster University
Conference Aug. 2007
 - Presented a publication with contributions from my thesis.
 - Learned about experimental mathematics and large scale optimization.
- **West Coast Optimization Meeting.** Seattle, University of Washington
Conference Apr. 2006 & Apr. 2007
 - Attended an optimization conference.
- **Optimization, Convex Analysis and Nonsmooth Analysis.** Kelowna, UBC Okanagan
Seminar Sep. 2006 - Apr. 2007
 - Presented a variety of optimization topics in the field of convex analysis.

References

Available upon request.