

**SUMMARY OF SKILLS**

- Strong analytical bent. Creative problem solver. Effective engineer & research scientist.
- Excellent interpersonal skills. Popular and effective leader.
- Effective writer, presenter and communicator. Excellent teacher and salesman.
- Proven client relationship manager in Canada, US and Europe.
- Strong designer, analyst, and programmer in several languages on several platforms.
- Expert in efficient implementation of computer languages.
- Expert system performance analyst.

**EXPERIENCE**

*PhD. Student*, 1999 - 2008, Department of Computer Science, University of Toronto • New organization and implementation of a Java virtual machine that identifies & translates traces to optimize interpretation and simplify just in time (JIT) compilation • Supervised by Professor Angela Demke-Brown.

*Vice President*, Immersant, 1999-2000 • Internet Technology and Services Manager • Director of technical development and responsible for several of Immersant's largest and most technically challenging projects • Drove sales by leveraging Bowne brand and existing engineering capability to acquire several new Fortune 500 clients.

*Partner*, Mountain Lake Software Corp, 1994-1999 • One of three managing partners of Internet engineering company • Negotiated, sold and managed delivery of several million dollar software development efforts • Grew to profitable thirty person engineering boutique specializing in server-side Java finance applications • Sold to Bowne Internet Solutions 1999 and merged with several other companies.

*Product Leader*, Alias Research Inc, 1991-1994 • Team Leader, StudioPaint • Product leader of two-dimensional modeler and paint box application • Delivered first release of application for designers by worked closely with US automotive clients.

*Staff Development Analyst*, 1990 – 1991, IBM Canada • Team leader of TOBEY optimizer project • Led a large team charged with optimizing the code generated for C++, C, Fortran, Ada and Pascal compilers for IBM's RISC System/6000 family of workstations.

*Development Analyst*, 1987 – 1991, IBM Canada • Compiler Developer – Global Register Allocation • Built a register allocation pass that used a graph coloring heuristic to assign hardware registers to symbolic program values • First industrial application of graph coloring register allocator.

*Consultant*, SWS Systems, 1984 – 1987 • Wet-behind-ears UNIX programmer • Various clients including NASA Ames Research Station, SoftQuad, a Toronto-based software startup, University of Toronto Department of Physics.

*Systems Administrator*, 1983 – 4, University of Toronto • Departmental unix sysadmin.

**EDUCATION**

Doctorate of Computer Science, (Systems), University of Toronto, 1999-2008,

Master of Applied Science, Industrial Engineering (Human Factors Engineering), University of Toronto, 1984

Bachelor of Applied Science, Engineering Science (Computer Option), University of Toronto, 1983

## **AWARDS**

IBM Center for Advanced Studies Fellowship, 2003

IBM Outstanding Technical Achievement Award, 1990

University of Toronto Open Scholarship, 1984

## **PUBLICATIONS**

Mathew Zaleski, Kevin Stoodley, Angela Demke-Brown, "YETI: a gradually extensible trace interpreter", In Proceedings of the 3rd international conference on Virtual execution environments, 2007.

Ben Vitale and Mathew Zaleski, "Alternative dispatch techniques for the Tcl VM Interpreter", presented at TCL 2005.

Mathew Zaleski, Marc Berndl, Angela Demke-Brown, " Mixed Mode Execution with Context Threading", presented at CASCON 2005.

Marc Berndl, Benjamin Vitale, Mathew Zaleski, Angela Demke-Brown, Context Threading: A Flexible and Efficient Dispatch Technique for Virtual Machine Interpreters, In Proceedings of the Third Annual IEEE/ACM International Symposium on Code Generation and Optimization (CGO), March 2005.

K. Obrien, B. Hay, J. Minish, H. Schaffer, B Schloss, A.Shepherd and M. Zaleski, "Advanced Compiler Technology for the RISC System/6000", IBM RISC System/6000 Technology, IBM Corp, 1990.

J. M. Zaleski and Penny Sanderson, "Hitts' Law? A Test of the Relationship Between Information Load and Movement Precision", Proceedings of the 21st Annual NASA University Conference on Manual Control, Columbus, Ohio, 1986.

R. Lawson, A. Naiman, D. Slocombe and M. Zaleski, "Geritol for Old Programs or Troff has a lot of Life in it", USENIX Conference Proceedings, 1985.

See <http://www.cs.toronto.edu/~matz/pubs.html>