



Mario O. Bourgoin
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Personal

Citizenships United States (Naturalized December 1999), Canada
Languages Fluent in English and French

Education

Ph.D. Mathematics, Brandeis University, May 2004
Thesis: Immersed Curves and Links in Orientable Thickenings
Advisor: Jerome Levine
S.M. Media Arts and Sciences, Massachusetts Institute of Technology, May 1990
Thesis: Using LEGO Robots to Explore Dynamics
Advisor: Seymour Papert
B.Sc. Biology, University of Ottawa

Employment

2005-Present Brandeis University, Lecturer. Instructor for undergraduate classes at all levels. Course coordinator for first year calculus. Mentor beginning instructors.
2004-2005 Lesley University, Assistant Professor. Instructor for mathematics classes at all levels. Develop new curriculum offerings.
1999-2004 Brandeis University, Instructor. Instructor for the main calculus sequence. Assisted in teaching upper-level classes. Mentored beginning instructors.
1999 Tellabs Research Center, Research Associate. Created and applied fiber optic network (SONET) layout optimization software.
1994-1997 Dun&Bradstreet. Senior Scientist. Created data mining methods and algorithms for relational databases. Designed visual business interfaces for data mining software. Applied data mining methods to the credit scoring of businesses, find synergies in health-care data, and automate the evaluation of corporate bonds.
1990-1994 Thinking Machines Corporation. Senior Scientist. Created data mining methods. Applied data mining methods to credit card data for cross-marketing. Designed *Lisp compiler for the CM-5 supercomputer. Researched the creation of reactive planning agents for air traffic control.

- 1985-1990 Massachusetts Institute of Technology. Research Assistant. Studied enhancing children's learning of activity planning through programming Lego robots. Researched the effects of a high-density of networked computers on classroom and school dynamics.
- 1983-1985 Logo Computer Systems. Senior Designer/Developer. Created LOGO graphic programming system for all Z80 processor-based personal computers. Managed a team of three developers.
- 1979-1983 Services Convertto-Braille. Assistant Director of Research. Created computerized portable braille embosser with graphic capabilities. Managed an electronics technician. Created microprocessor-based level 2 English braille encoding system.

Fellowships

- 2003 Summer research fellowship at Brandeis University.
- 2002 Summer teaching fellowship at Brandeis University.
- 2000 Summer study fellowship at Brandeis University.
- 1999-2004 Fellowship at Brandeis University.
- 1988-1990 Fellowship at the Massachusetts Institute of Technology.

Teaching Experience

- Brandeis University Introduction to Statistics, Pre-Calculus, Calculus I&II, Multivariate Calculus, Linear Algebra, Probability, Mathematical Statistics, Differential Equations, Analysis I&II
- Lesley University Quantitative Reasoning, Introduction to Statistics, Abstract Algebra

Professional Activities

- 2002-2003 Member of the Mathematics Graduate Student Council.
- 1999-Present Member of the American Mathematical Society.

References

Ruth Charney (charney@brandeis.edu), Kiyoshi Igusa (igusa@brandeis.edu), Susan Parker (parker@brandeis.edu), Daniel Ruberman (ruberman@brandeis.edu).