

EDUCATION

University of Michigan Educational Studies Master's with Secondary Teaching Certificate	Ann Arbor, MI June, 2013
University of Michigan PhD Industrial & Operations Engineering	Ann Arbor, MI May, 1990
University of Michigan M.S. Mathematics	Ann Arbor, MI December, 1982
University of Michigan B.S.E. Industrial & Operations Engineering	Ann Arbor, MI December, 1982

EMPLOYMENT

Quant Placement Director, University of Michigan • Work with masters students in the Quantitative Finance and Risk Management program, helping them secure the internship and full-time positions. Helps students develop computational finance skills and web presence.	March 2016-present
FlexTech High School, Brighton, MI • Taught physics, calculus, and computer science in a blended, project-based learning environment. Developed virtual labs for physics, math, and computer science, with materials online at http://mrbenson.org . Created new, engaging math courses to reengage upper level students and help them fulfill graduation requirements.	August 2013-August 2015
Web services lead, RiskMetrics Group, NYC and Ann Arbor • Developed REST-based web service in Java, still in active development.	2008-2010
Project Lead, RiskMetrics Group, NYC and Ann Arbor • Led team that built Portfolio Pilot, a richly interactive Java-based desktop app that helps investors better understand the effects of changing their portfolio allocation.	2006-2008
Head of Education, RiskMetrics Group, Ann Arbor, MI • Created and taught highly regarded 3-5 day risk management workshops for employees, taught around the world. • Students worked in pairs, hands-on, creating their own models of financial markets. • Adapted employee workshops for clients, and taught in the US, Europe, and Asia.	2004-2006
Adjunct Professor, Financial Engineering, U of M, Ann Arbor • Created and taught a graduate course in market and credit risk analysis (IOE 591) targeted at Master's in Financial Engineering students.	2004-2005
CreditManager Lead Developer, RiskMetrics Group, Ann Arbor • Opened Ann Arbor office of RiskMetrics Group. Led the development of CreditServer 1.0, moving our credit risk analytics onto the web. Still in active development.	2000-2004

Market Analytics Lead Developer, RiskMetrics Group, NYC 1998-2000

- Lead developer of market simulation and pricing analytics. Led the development of RiskServer 1.0, moving our market risk analytics inside a Java wrapper, and onto the web. Introduced XML-based representations of queries and results. Still in active development.

Risk Manager, Greenwich Capital Markets, Greenwich, CT 1997-1998

- Analyzed and monitored market risk profile for relative value trading book.

Credit Risk Analytics Lead Developer, RiskMetrics Group, NYC 1998-2000

- Lead developer of credit risk analytics based on CreditMetrics methodology.

Development lead, JPMorgan, New York City 1994-1997

- Led team developing market risk aggregation system that produced the renowned daily 4:15 report for top management. Involved automatically gathering portfolio data from 100+ sources across the firm. Lead analytics development for CreditManager 1.0, a desktop application sold to JPMorgan clients.

Consultant with Arbor Intelligent Systems, Dearborn, MI 1992-1994

- Smalltalk developer at Ford Motor Company. Developed formal system for describing vehicle features in the GPLUS product description system. Replaced complex, ambiguous textual vehicle descriptions with more easily understood and consistent vehicle definitions.

EDUCATION SERVICE

U of M School of Education Ambassador 2013-present

- Talk to prospective education students about the education program at the University of Michigan (http://www.soe.umich.edu/people/profile/benson_peter/).

U of M's School of Ed 4T Virtual Conference May 2015

- Presented closing keynote address *Learning to Code and Coding to Learn* about my experience teaching programming to high school students.

U of M's School of Ed 4T Virtual Conference May 2013

- Presented *Learning from Scratch*, a workshop for teachers who are interested in using Scratch in their classroom. Scratch is a student-friendly computer programming environment, and can be used with K-12 students across the curriculum.

W.K. Kellogg Foundation Woodrow Wilson Teaching Fellowship 2012

- Selected to be a STEM teaching fellow in high-need Michigan secondary schools. Fellowship includes lifelong membership in the Woodrow Wilson Fellows network.

RESEARCH

- “Distribution of Defaults in a Credit Basket”, RiskMetrics Journal, 2005, pp 19-23, 1997.
- “A general approach to calculating VaR without volatilities and correlations”, with Peter Zangari, RiskMetrics Monitor, 2nd Quarter, pp 19-23, 1997.
- “Optimal Solution Approximation for Infinite Positive-definite Quadratic Programming”, with Robert L. Smith, I.E. Schochetmann, and James C. Bean, Journal of Optimization Theory and Applications, 85, pp 235-248, 1995.
- “Optimal Solution Characterization for Infinite Positive Semi-definite Quadratic Programming,” with Robert L. Smith, I.E. Schochetmann, and James C. Bean, Applied Mathematics Letters, Vol. 7, pp 65-67, 1994.
- “A Calculus for Infinite Horizon Optimization,” PhD dissertation, 1990.

PATENT

- US Patent US 8,924,274. For and method of providing portfolio risk information to investors without revealing position information. See <http://1.usa.gov/1w1tVV7>.

MILITARY EXPERIENCE

Fighter Pilot, Michigan Air National Guard, Mt. Clemens, MI 1985-1991

- Flew F-4s and F-16s at Selfridge ANGB in active air defense role for NORAD. Intercepted TU-95 Bear bombers off the US coast.

UPT, Fighter Lead-in, F-4 RTU 1983-1985

- Class 84-07 at Williams AFB, AZ. In F-4 training Kingsley Field, OR, developed F-4 radar system training simulator subsequently used for training all USAF F-4 fighter-interceptor aircrews. Chief instructor of intercept training: “ it changes the way we do business.”