Peter S. Benson

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EDUCATION

University of Michigan **Ann Arbor, MI**
Educational Studies Master's with Secondary Teaching Certificate June, 2013

University of Michigan **Ann Arbor, MI**
PhD Industrial & Operations Engineering May, 1990

University of Michigan **Ann Arbor, MI**
M.S. Mathematics December, 1982

University of Michigan **Ann Arbor, MI**
B.S.E. Industrial & Operations Engineering December, 1982

EMPLOYMENT

Quant Placement Directory, University of Michigan **March 2016-present**

- 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.

FlexTech High School, Brighton, MI **August 2013-August 2015**

- 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.

Web services lead, RiskMetrics Group, NYC and Ann Arbor **2008-2010**

- Developed REST-based web service in Java, still in active development as of 2014.

Project Lead, RiskMetrics Group, NYC and Ann Arbor **2006-2008**

- Led a team of six that built Portfolio Pilot, a Java-based desktop application to help investors better understand the effects of changing their portfolio allocation.

Head of Education, RiskMetrics Group, Ann Arbor, MI **2004-2006**

- 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 the employee workshops for clients, and taught in the US, Europe, and Asia.

Adjunct Professor, Financial Engineering, U of M, Ann Arbor **2004-2005**

- Created and taught a graduate course in market and credit risk analysis (IOE 591) targeted at Master’s in Financial Engineering students.

CreditManager Lead Developer, RiskMetrics Group, Ann Arbor 2000-2004
- 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.

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 that developed Pyramid, a 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. The objective was to replace complex, ambiguous textual vehicle descriptions with more easily understood and consistent vehicle definitions.

EDUCATION SERVICE

U of M School of Education Ambassador currently
- 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. At F-4 training in Oregon, I developed an F-4 radar system training simulator that was subsequently used for training fighter-interceptor aircrews at all USAF F-4 training units. My chief instructor of intercept training said it "changes the way we do business."