
Thomas J. Vitolo

Associate

Synapse Energy Economics

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PROFESSIONAL EXPERIENCE

Synapse Energy Economics Inc., Cambridge, MA. Associate, April 2011–present.

Performs consulting, conducts research, and assists in writing testimony and reports on a wide range of issues relating to electric utilities, energy efficiency, electricity transmission and generation, consumer advocacy, environmental policy and compliance, and air emissions.

Jointown Group Co., Ltd., Wuhan, China. System Engineer Intern, Summer 2007.

Developed and implemented a modified (s,S) inventory management scheme for over 20,000 warehoused pharmaceutical products, resulting in more orders filled, lower carrying costs, and a reduction in the frequency of product expiration.

MIT Lincoln Laboratory, Division 6, Group 65, Lexington, MA. Research Assistant, 2003–2006.

Designed algorithm and implemented software to create autonomous wireless point-to-point topologies for aerial, land-based, and nautical vehicles as part of an Optical & RF Combined Link Experiment (ORCLE) funded by Defense Advanced Research Projects Agency (DARPA).

EDUCATION

Boston University, Boston, MA, Ph.D. Systems Engineering, 2011.

Developed algorithms to discover degree constrained minimum spanning trees in sparsely connected graphs.

Dublin City University, Dublin, Ireland, MS Financial and Industrial Mathematics, 2001.

Researched partial differential equations modeling fluid flow over an erodible bed.

North Carolina State University, Raleigh, North Carolina, BS Applied Mathematics, *Summa Cum Laude*, 2000; BS Computer Science, *Summa Cum Laude*, 1999; BS Economics, *Summa Cum Laude*, 1998.

ADDITIONAL EXPERIENCE

Teaching Experience: Graduate Teaching Fellow, Boston University College of Engineering, *Introduction to Engineering Computation*, 2009; Guest Lecturer, Boston University Department of Systems Engineering, *Case Studies in Inventory Management*, 2007-2008; Guest Lecturer,

Boston University Department of Systems Engineering, Solving Linear Programs with CPLEX, 2003-2008.

Government Service: *Constable*, Brookline, MA, 2010-present; *Town Meeting Member*, Brookline, MA, 2007-present; *Bicycle Advisory Committee Member*, Brookline, MA, 2007-present.

PUBLICATIONS

R. Hornby, D. White, T. Vitolo, T. Comings, and K. Takahashi. "Potential Impacts of a Renewable and Energy Efficiency Portfolio Standard in Kentucky." Prepared for Mountain Association for Community Economic Development, and The Kentucky Sustainable Energy Alliance, January 12, 2012.

G. Keith, Biewald B., Hausman, E., Takahashi, K., Vitolo, T.J., Comings, T., and Knight, P., "Toward a Sustainable Future for the U.S. Power Sector: Beyond Business as Usual 2011." Prepared for the Civil Society Institute, November 16, 2011.

T.J. Vitolo, Hu, J.Q., Servi L., and Mehta, V., Topology Formulation Algorithms for Wireless Networks with Reconfigurable Directional Links. Proceedings of the IEEE Military Communications Conference, 2005.

PRESENTATIONS AND POSTER SESSIONS

T.J. Vitolo, "RPS in the USA: The Present Impact and Future Possibilities of Renewable Portfolio Standards in America," Boston University Energy Club Seminar Series, 2009.

T.J. Vitolo, "An ILP Approach to Spanning Tree Problems on Incomplete Graphs with Heterogeneous Degree Constraints," INFORMS Annual Meeting, 2007.

T.J. Vitolo, "Topology Design and Traffic Routing for Wireless Networks with Node-Based Topological Constraints," Boston University CISE Seminar Series, 2004.

OTHER INFORMATION

Fellowships and Scholarships: National Science Foundation IGERT Fellowship, 2006-2008; National Science Foundation GK-12 Fellowship, 2002-2003; Mitchell Scholarship, 2000-2001; Park Scholarship, 1996-2000.

Affiliations: Center for Computation Science, Boston University, 2006-2010; Center for Information and Systems Engineering, Boston University, 2002-2010.

Computer Applications and Programming: Microsoft Office, LATEX, Fortran, C, C++, perl, MATLAB, CPLEX

Resume dated May 2012.