Barrett W. Thomas

Dept. of Management Sciences Tippie College of Business University of Iowa Iowa City, IA 52242-1000 Phone: (319) 335-0938 Fax: (319) 335-0297 barrett-thomas@uiowa.edu

EDUCATION

Ph.D., University of Michigan, Ann Arbor, MI, 2002 **Industrial and Operations Engineering**

Dissertation: "Anticipatory Route Selection Problems" Advisor: Chelsea C. White III

M.S., University of Michigan, Ann Arbor, MI, 1999 **Industrial and Operations Engineering**

B.A., Grinnell College, Grinnell, IA, 1996 **Double Major in Mathematics and Economics**

cum laude in Economics, Phi Beta Kappa

HONORS:

Rackham Fellow, University of Michigan, 1997 - 2002

Graduate Assistant in Areas of National Needs Fellow, 1999 - 2002

Trustee Scholarship, Grinnell College, 1993 – 1997

Hewlett Overseas Internship Grant, Grinnell College, 1995

ACADEMIC EXPERIENCE

Assistant Professor Dept. of Management Sciences, University of Iowa, Iowa City, IA 2002 – present

COURSES TAUGHT:

University of Iowa

06K:100 Operations Management

06N:216 Data and Decisions

06N:229 Operations Management

06K:292 Supply Chain Management

06K:293 Seminar in Lean Practices

06K:294 Rapid Continuous Improvement

STUDENT SUPERVISION

Students Currently being Advised

Hui Chen, Department of Management Sciences (co-advisor with Ann Campbell)

Justin Goodson, Department of Management Sciences (co-advisor with Jeffrey Ohlmann)

Nick Leifker, Department of Management Sciences (co-advisor with Ann Campbell)

Emanuele Manni, Dipartimento di Ingegneria dell'Innovazione, University of Lecce, Lecce, Italy (co-advisor with Gianpaolo Ghiani)

Thaddeus Sim, Department of Management Sciences (co-advisor with Timothy Lowe)

Ph.D. Candidacy Committee

Thaddeus Sim, "The Hub Covering Flow Problem and the Stochastic *p*-Hub Center Problem," Department of Management Sciences, 2006.

Lifang Wu, Department of Management Sciences, 2003.

Yuan Gan. "Clustering Algorithms for Data and Knowledge Exploration." Department of Mechanical and Industrial Engineering, 2002.

Ph.D. Dissertation Committee

Li Zhang. "The *p*-Hub Center Allocation Problem and the *q*-Upgrading Arc Problem." Applied Mathematical and Computational Sciences, July 2004.

Lifang Wu. "Essays on Product Variety Management." Department of Management Sciences, June 2004.

Yuan Gan. "Clustering Algorithms for Data and Knowledge Exploration." Department of Mechanical and Industrial Engineering, August 2003.

SERVICE

Department of Management Sciences

Member, Graduate Student Committee, 2003 – present.

Co-coordinator of the departmental Ph.D. seminar series, 2002 – 2003.

College of Business

Co-founder and co-coordinator of the Tippie College of Business Speaker Series in Transportation, 2003 – present.

Member, MBA Core Committee, 2002 – 2004.

Professional

Editor, Institute for Operations Research and Management Sciences (INFORMS) Transportation Science and Logistics Society Newsletter, 2007 - present

Representative, INFORMS Subdivision Council from INFORMS Transportation and Logistics Society, 2007 - present

Associate Editor, Infor: Canadian Journal of Operational Research and Information Processing, June 2004 – May 2007

Secretary/Treasurer, INFORMS Transportation and Logistics Society, 2006

Lean Aerospace Initiative Lean Academy Quality Module Revision Committee, Chair, Spring 2006

Lean Aerospace Initiative Lean Academy Day 2 Curriculum Revision Committee, Fall 2005

INFORMS Transportation/Logistics Section Cluster co-Chairman, Denver, 2004

Sponsored Session Chairman, INFORMS, Atlanta, 2003 and San Francisco, 2005

New Technology in the Learning Environment Workshop, University of Iowa, summer 2003

Invited Session Chairman, INFORMS, San Jose, 2002

Referee for Operations Research, Transportation Science, Manufacturing and Service Operations Management, IEEE Transactions on Intelligent Transportation Systems, IEEE Transactions on Systems, Man, and Cybernetics, European Journal of Operational Research, Operations Research Letters

Member of INFORMS

Member Lean Aerospace Initiative Lean Academy Instructor Team

Affiliate Member, Sloan Industry Studies Program

Board Memberships

Trustee, Grinnell College, 2005 - present

GRANTS

University of Iowa Council on Teaching Instructional Improvement Award, \$3500, co-PI

UI Foundation Midwest Resource, University of Iowa, \$7500, 2006 - 2008, co-PI

UI Foundation Midwest Resources, University of Iowa, \$2500, 2005, co-PI

Old Gold Summer Fellowship, University of Iowa, 2004, \$6000

UI Foundation Midwest Resources, University of Iowa, \$2000, 2004, co-PI

UI Foundation Midwest Resources, University of Iowa, \$1800, 2003, co-PI

Old Gold Summer Fellowship, University of Iowa, 2003, \$6000

New Technology in the Learning Environment Grant, University of Iowa, 2003, \$2000

MidAmerican Energy Research Award, University of Iowa, 2003, \$900, co-PI

PUBLICATIONS

Published or To Appear in Peer-Reviewed Journals

"Probabilistic Traveling Salesman Problem with Deadlines." *Transportation Science*, to appear. (with Ann M. Campbell)

"Waiting Strategies for Anticipating Service Requests at Known Customer Locations." *Transportation Science*, to appear.

"A Compressed Annealing Approach to the Traveling Salesman Problem with Time Windows." *INFORMS Journal on Computing*, to appear. (with Jeffrey Ohlmann)

"Dynamic and Stochastic Shortest Path Problem with Anticipation." *European Journal of Operational Research*, 2007:176(2), 836-854. (with Chelsea C. White III)

"Anticipatory Route Selection." *Transportation Science* 2006:38(4), 473 - 487. (with Chelsea C. White III)

Submitted for publication

"Advances and Challenges in A Priori Routing." To *The Vehicle Routing Problem: Latest Advances and Challenges*. Edited by Bruce Golden, Raghu Raghavan, and Edward Wasil. Springer, August 2007. (with Ann M. Campbell)

Conference Proceedings

"Vehicle Routing when Future Service Requests are Anticipated." *Proceedings of the Intelligent Vehicle Symposium 2001*, IEEE, 2001. (with Chelsea C. White III)

Other

"Anticipatory Route Selection Problems." Ph.D. Thesis. University of Michigan, 2002.

"Developing Trace Routes to Better Accommodate Routing Air Packages On Trace." Technical Report. United Parcel Service, 2001.

"The Vehicle Routing Problem with A Priori Routes and Premium Stops." Technical Report. United Parcel Service, 2000.

Working Papers

"Solution Approaches to the Probabilistic Traveling Salesman Problem with Deadlines." January 2007. (with Ann Campbell)

"Minimax Violation Tree Problems." January 2007. (with Hui Chen, Ann Campbell, and Arie Tamir)

"Minisum Violation Tree Problems." January 2007. (with Hui Chen and Ann Campbell)

"Route Design for Lean Manufacturing Systems." January 2007. (with Jeffrey Ohlmann and Michael J. Fry)

"Vehicle Routing Problem with Multiple Trips." Fall 2006. (with Justin Goodson and Jeffrey Ohlmann)

"The Orienteering Problem with Stochastic Travel Times." Summer 2006. (with Ann M. Campbell and Michel Gendreau)

"Analysis of Compressed Annealing with Multiple Penalty Multipliers." Winter 2006. (with Jeffrey Ohlmann)

PRESENTATIONS

"Waiting Strategies for Anticipating Requests from Known Customer Locations." Invited Presentation. Department of Mechanical and Industrial Engineering, University of Iowa, Iowa City, Iowa, January 2007.

"Waiting Strategies for Anticipating Requests from Known Customer Locations." Invited Presentation. Department of Quantitative Analysis and Operations Management, University of Cincinnati, Cincinnati, Ohio, November 2006.

"Solution Approaches to the Probabilistic Traveling Salesman Problem with Deadlines." Sponsored Session. INFORMS, Pittsburgh, PA, November 2006.

"Lean Academy: Using Rockwell Collins as a Real-time Case Study." Sponsored Session. INFORMS, Pittsburgh, PA, November 2006.

"Probabilistic Traveling Salesman Problem with Deadlines." Invited Presentation. Dipartimento di Matematica "Ennio De Giorgio," University of Lecce, Lecce, Italy, October 2006.

"Waiting Strategies for Anticipating Requests from Known Customer Locations." Invited Presentation. Dipartimento di Matematica "Ennio De Giorgio," University of Lecce, Lecce, Italy, October 2006.

"Waiting Strategies for Anticipating Requests from Known Customer Locations." Odysseus: Third International Workshop on Freight Transportation and Logistics, Altea, Spain, May 2006.

"How Can a Blacksmith Help UPS and FedEx Save Money?" Grinnell College, February 2006.

"Real-time Heuristics for Anticipating Customer Service Requests from Known Customer Locations." Sponsored Presentation. INFORMS, San Francisco, CA, November 2005.

"Waiting Strategies for Anticipating Service Requests at Known Customer Locations." Invited Presentation. 17th Triennial Conference of the International Federation of Operational Research Societies, Honolulu, HI, July 2005.

"The Probabilistic Traveling Salesman Problem with Deadlines." United Parcel Service, Timonium, Maryland, September 2005. (with Ann Campbell)

"New Directions in Time-Constrained Routing." Invited Presentation. Department of Mechanical and Industrial Engineering, University of Iowa, November 11, 2004.

"Probabilistic Traveling Salesman Problem with Deadlines." Invited Presentation. Department of Industrial Engineering and Management Sciences, Northwestern University, November 9, 2004.

"New Directions in Time-Constrained Routing." Invited Presentation. Department of Engineering Management, University of Missouri-Rolla, November 5, 2004.

"Waiting Strategies for Anticipating Service Requests at Known Customer Locations." Sponsored Presentation. INFORMS, Denver, CO, October 2004.

"A Compressed Annealing Approach to the Traveling Salesman Problem with Time Windows." Sponsored Presentation. CORS/INFORMS, Banff, Alberta, Canada, May 2004.

"A Compressed Annealing Approach to the Traveling Salesman Problem with Time Windows." United Parcel Service, Timonium, Maryland, January 2004.

"A Compressed Annealing Approach to the Traveling Salesman Problem with Time Windows." Sponsored Presentation. INFORMS, Atlanta, GA, October 2003.

"Dynamic and Stochastic Shortest Path Problem with Anticipation." Invited Presentation. INFORMS, San Jose, CA, November 2002.

"Anticipatory Route Selection." Invited Presentation. NSF Workshop on Real-time Logistics, Long Beach, CA, April 2002.

"Anticipatory Route Selection." Schneider Logistics, Inc., December 2001.

"Probabilistic Traveling Salesman Problem with Time Windows." Invited Presentation. INFORMS, Miami, FL, November 2001.

"A Comparison of Anticipatory and Reactive Routing Policies." Invited Presentation. INFORMS, Miami, FL, November 2001.

"Developing Trace Routes to Better Accommodate Routing Air Packages On Trace." United Parcel Service, July 2001.

"The Vehicle Routing Problem with A Priori Routes and Time Windows." United Parcel Service, August 2000.

"Anticipatory Tour Selection." Invited Presentation. INFORMS, Salt Lake City, UT, May 2000.