

STACEY MUMBOWER

Clinical Assistant Professor of Management Science
Director, Center for Applied Business Analytics
Darla Moore School of Business • University of South Carolina
1014 Greene Street • Columbia, SC 29208
stacey.mumbower@moore.sc.edu • 803-777-2941

Education

Georgia Institute of Technology, Atlanta, GA

Ph.D. in Civil Engineering, concentration in Transportation Systems 2013
Dissertation: “Extracting Airline and Passenger Behavior from Online Distribution Channels:
Applications using Online Pricing and Seat Map” (advised by Dr. Laurie A. Garrow)
M.S. in Statistics, School of Industrial and Systems Engineering 2012

Valdosta State University, Valdosta, GA

B.A. in Mathematics, Magna Cum Laude 2005
Research: “Using well-known probability density functions to evaluate certain integrals in calculus”

Employment

University of South Carolina	Aug 2015-Present
Clinical Assistant Professor of Management Science Director, Center for Applied Business Analytics Darla Moore School of Business	
Research Assistant Professor of Management Science Darla Moore School of Business	Aug 2014-Aug 2015
Centers for Disease Control and Prevention	2013-2014
Prevention Effectiveness Fellow Division of Domestic HIV/AIDS Prevention	
Georgia Institute of Technology	2008-2013
Graduate Research Assistant School of Civil and Environmental Engineering	
Georgia Department of Transportation	2005-2008
Multiple positions in transportation data/statistics and transportation planning	

Research

I. Refereed Journal Articles

1. **Mumbower, S.**, Garrow, L.A. and Newman, J.P. (2015) Investigating airline customers' premium coach seat purchases and implications for optimal pricing strategies. *Transportation Research Part A: Policy and Practice*. 73: 53-69. DOI:10.1016/j.tra.2014.12.008
2. **Mumbower, S.** and Garrow, L.A. (2014). Data set: Online pricing data for multiple U.S. carriers. *Manufacturing & Service Operations Management*. 16(2): 198–203.
<http://dx.doi.org/10.1287/msom.2013.0466>

3. **Mumbower, S.**, Garrow, L.A. and Higgins, M.J. (2014). Estimating flight-level price elasticities using online airline data: A First Step towards integrating pricing, demand, and revenue optimization. *Transportation Research Part A: Policy and Practice*. 66: 196–212. DOI:10.1016/j.tra.2014.05.003
4. Garrow, L.A., Hotle, S. and **Mumbower, S.** (2012). Assessment of product debundling trends in the U.S. airline industry: Customer service and public policy implications. *Transportation Research Part A: Policy and Practice*. 46(2): 255–268. DOI:10.1016/j.tra.2011.09.009
5. Garrow, L.A., Kressner, J. and **Mumbower, S.** (2011). Is increasing airline denied boarding compensation limits the answer?: A review of factors that contribute to denied boardings. *Journal of Air Transport Management*. 17(5): 271–277. DOI:10.1016/j.jairtraman.2011.03.002
6. **Mumbower, S.** and Garrow, L.A. (2010). Using online data to explore competitive airline pricing policies: A case study approach. *Transportation Research Record: Journal of the Transportation Research Board*. 2184: 1–12. DOI:10.3141/2184-01
7. **Pittman, S.** and Lazari, A. (2006). Using well-known probability density functions to evaluate certain integrals in calculus. *Georgia Journal of Science*. 64(2): 91–102. (published under maiden name Pittman)

II. Other Refereed Material and Book Chapters

1. Garrow, L.A., Hotle, S. and **Mumbower, S.** (2013). Flipped classroom: Investigating student learning and attitudes in a switched-role interactive environment. *OR/MS Today, Issues in Education*. 40(4): 10. <https://www.informs.org/ORMS-Today/Public-Articles/August-Volume-40-Number-4>
2. Garrow, L.A., Hotle, S. and **Mumbower, S.** (2014). Air Travel. *SAGE Encyclopedia of Transportation: Social Science and Policy*. Ed. M. Garrett. pp. 46-48. <http://dx.doi.org/10.4135/9781483346526.n18>
3. Garrow, L.A., Hotle, S. and **Mumbower, S.** (2014). Airline Fares. *SAGE Encyclopedia of Transportation: Social Science and Policy*. Ed. M. Garrett. pp. 78-79. <http://dx.doi.org/10.4135/9781483346526.n30>
4. Garrow, L.A., Hotle, S. and **Mumbower, S.** (2014). Airline Service Quality. *SAGE Encyclopedia of Transportation: Social Science and Policy*. Ed. M. Garrett. pp. 100-102. <http://dx.doi.org/10.4135/9781483346526.n37>

III. Conference Proceedings

1. **Mumbower, S.**, Fox, T., Huang, T., Jiang, X., and Waller, A.F. Predicting wait-time of radiation patients for scheduled treatments. *Proceedings of the 7th INFORMS Workshop on Data Mining and Health Informatics*. Phoenix, AZ. Oct. 13, 2012.
2. Luken, B. and **Mumbower, S.** Engaging Transportation Engineering Activities for Middle School and High School Students. *Conference Proceedings of the American Society for Engineering Education Annual Conference and Exposition*. Louisville, KY. June 20-23, 2010.
3. **Mumbower, S.** and Garrow, L.A. Using online data to explore competitive airline pricing policies. *Proceedings of the 4th International Conference on Research in Air Transportation*. Budapest, Hungary. June 1-4, 2010.

Conference Presentations

1. Garrow, L., Mumbower, S. and Higgins, M. (March, 2015). Estimating flight-level price elasticities using online airline data. Presented at the 56th Annual Transportation Research Forum, Atlanta, GA.

2. Garrow, L., Mumbower, S. and Newman, J. (October, 2013). Investigating airline customers' premium coach seat purchases and implications for optimal pricing. Presented at the national meeting of the Institute of Operations Research and the Management Sciences, Minneapolis, MN.
3. Mumbower, S., Garrow, L. and Higgins, M. (October, 2013). Estimating flight-level price elasticities using online airline data. Presented at the national meeting of the Institute of Operations Research and the Management Sciences, Minneapolis, MN.
4. Garrow, L., Mumbower, S. and Higgins, M. (August, 2013). Estimating flight-level price elasticities using online airline data: A first step towards integrating pricing, demand, and revenue optimization. Presented at the 53rd Annual Airline Group of the International Federation of Operational Research Societies, Amsterdam, the Netherlands.
5. Mumbower, S., Garrow, L. and Newman, J. (June, 2013). Investigating airline customers' premium coach seat purchases and implications for optimal pricing. Presented at the mid-year meeting of the Institute of Operations Research and the Management Sciences Revenue Management and Pricing Conference, Atlanta, GA.
6. Mumbower, S., Garrow, L. and Newman, J. (May, 2013). Investigating airline customers' premium coach seat purchases and implications for optimal pricing. Presented at the Revenue Management Study Group Meeting of the Airline Group of the International Federation of Operational Research Societies, Miami, FL.
7. Hotle, S., Mumbower, S. and Garrow, L. (March, 2013). Investigating student learning and attitudes in a flipped classroom. Poster presented at Celebrate Teaching Day, Center for Excellence in Teaching and Learning, Georgia Institute of Technology, Atlanta, GA.
8. Hotle, S., Mumbower, S. and Garrow, L. (February, 2013). Investigating student learning and attitudes in a flipped classroom. Poster presented at the 20th Georgia Conference on College and University Teaching. Center for Excellence in Teaching and Learning, Kennesaw State University, Kennesaw, GA.
9. Mumbower, S., Garrow, L. and Newman, J. (January, 2013). Factors that influence airline passenger premium coach seat purchases. Presented at the Eisenhower Innovative Doctoral Research Showcase of the 92nd Annual Meeting of the Transportation Research Board, Washington, D.C.
10. Mumbower, S., Fox, T., Huang, T., Jiang, X. and Waller, A.F. (October, 2012). Predicting wait-time of radiation patients for scheduled treatments. Presented in the Patient Flow Modeling Session of the Workshop on Data Mining and Health Informatics at the national meeting of the Institute of Operations Research and the Management Sciences. Phoenix, AZ.
11. Mumbower, S. and Garrow, L. (October, 2012). Controlling for price endogeneity in airline passenger itinerary choice models. Presented at the national meeting of the Institute of Operations Research and the Management Sciences, Phoenix, AZ.
12. Mumbower, S. and Garrow, L. (October, 2012). Which customers are paying to reserve extra legroom seats ... and should airlines be charging higher seat fees? Presented at the 52nd Annual Meeting of the Airline Group of the International Federation of Operational Research Societies, Scottsdale, AZ.
13. Mumbower, S. and Garrow, L. (November, 2011). Using online seat map and pricing data to model air passenger itinerary choice. Presented at the national meeting of the Institute of Operations Research and the Management Sciences, Charlotte, NC.
14. Mumbower, S. and Garrow, L. (October, 2011). Using online seat map and pricing data to model air passenger itinerary choice. Presented at the 7th Annual Revenue Management and Price Optimization Conference. Atlanta, GA.
15. Mumbower, S. and Garrow, L. (June, 2010). Using online data to explore competitive airline pricing policies. Presented at the 4th International Conference on Research in Air Transportation (ICRAT), Budapest, Hungary.

16. Mumbower, S. and Garrow, L. (January, 2010). Using online data to explore competitive airline pricing policies. Presented at the Aviation Economics and Forecasting Committee (AV040) Meeting at the 89th Annual Meeting of the Transportation Research Board, Washington, D.C.

Teaching

I. Courses Taught

<i>Sem/Year</i>	<i>Course</i>	<i>Course Name</i>	<i>Credits/ Num Sections</i>
S 2016	BADM 700	SAS Analytics and Data Mining Project Class ¹	3/ 1
S 2016	MGSC 291	Statistics for Business and Economics	3/ 2
F 2015	BADM 790	Capstone Consulting Project	3/ 1
F 2015	MGSC 291	Statistics for Business and Economics	3/ 1
Su 2015	DMSB 712	Quantitative Methods in Business	3/ 1
F 2014	MGSC 395	Operations Management	3/ 1

¹ Project based on SAS Analytics Shootout 2016: *An Aging Population*

III. Online Talks

1. Garrow, L.A. and Mumbower, S. (2009). Low cost worlds and the airline industry, in Yeoman, I. (ed.), *Practical Pricing and Revenue Management: Fundamentals and Practical Applications, The Marketing & Management Collection*, Henry Stewart Talks Ltd, London. <http://hstalks.com/?t=MM0932577-Garrow>

IV. Workshops

The following workshops were given at University of South Carolina, Columbia:

1. Pre-Semester Workshops on SAS[®] and Stata, Aug. 17-19 2015
2. Overview of Free Analytics Resources for Academics, Mar. 27, 2015
3. Data Cleaning 101 using SAS[®] Studio, Oct. 3, 2014
4. Getting Started with SAS[®] OnDemand: SAS Studio, Sep. 19, 2014
5. Pre-Semester Workshops on SAS[®] (Base and Enterprise Guide) and Stata, Aug. 18-20, 2014

University Service

- Business Analytics Curriculum Committee, Aug. 2015 - Present
- Faculty Advisor, Business Analytics Club (student organization), Mar. 2015-Present

Awards and Scholarships

- Presidential Fellowship, Georgia Tech, 2009-13
- **National Science Foundation Graduate Research Fellowship**, 2009-12
- Dwight D. Eisenhower Transportation Fellowship, 2009, 2012
- Helene M. Overly Memorial Scholarship, Society of Women Engineers, 2012
- Travel scholarship from conference sponsors to present research at the International Conference on Research in Air Transportation in Budapest, Hungary. June 2010.
- Mundy Global Learning Experience Travel Program. \$4,000 travel scholarship to Cairo, Luxor, and Dubai to compare transportation and land-use patterns. March 18-28, 2010.
- Eno Fellow, Rodney Slater Award, 2009 (**One of 20 national recipients** chosen to participate in the 17th Annual Eno Leadership Development Conference in Washington, D.C.)

- Graduate Research Award Program on Public-Sector Aviation Issues Graduate Research Award Program on Public-Sector Aviation Issues, \$10,000 research scholarship sponsored by the Federal Aviation Administration and administered by the Airport Cooperative Research Program of the Transportation Research Board (**One of 10 national recipients**), 2008-2009
- Gordon W. Schultz Travel Demand Modeling Graduate Fellowship, 2008-09
- Georgia HOPE Scholarship (full tuition as undergraduate), 2001-05

Other

- Placed in top 10% (125 out of 1762 teams worldwide), Homesite Quote Conversion Data Mining Competition on Kaggle.com, “Which customers will purchase a quoted insurance plan?” Nov 2015-Feb 2016. www.kaggle.com/mumbower
- Certified Predictive Modeler Using SAS® Enterprise Miner 7, March 2015.