

Adam J. Fleischhacker

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Current Position

- 2015 - Present **Associate Professor of Operations Management**
University of Delaware - Alfred Lerner College of Business & Economics, Newark, DE
Department of Business Administration
Affiliated Faculty - Institute for Financial Services Analytics (2013 – Present)
- ◆ J.P. Morgan Chase Faculty Fellow (2017 – present)
 - ◆ J.P. Morgan Chase Scholar (2014 – 2016)
- 2009 - 2015 **Assistant Professor of Operations Management - Univ. of Delaware**

Education

- 2009 **Ph.D. in Supply Chain Management**
Department of Supply Chain Management & Marketing Sciences
Rutgers University – School of Business Newark and New Brunswick, Newark, NJ
Dissertation: *An Investigation of Clinical Trial Supply Chains*
- 1998 **Master of Business Administration**
William E. Simon Graduate School of Business Administration
University of Rochester, Rochester, NY
- 1996 **Bachelor of Science in Mechanical Engineering**
State University of New York at Buffalo, Buffalo, NY

Research Interests:

Bayesian Business Analytics, Visual Interfaces to Probabilistic Programming, Valuing Data, Valuing Information and Uncertainty Reduction, Data Visualization, Supply Chain Visualization

Scholarship:

Research Papers – Published

Fleischhacker, A., O. Ghonima, T. Schumacher. Bayesian Survival Analysis for US Concrete Highway Bridge Decks. Forthcoming in *ASCE Journal of Infrastructure Systems*.

Ji, X., Y-L. Tsai, **A. Fleischhacker** (2019). A uniqueness-driven similarity measure for automated competitor identification. *International Journal of Applied Decision Sciences*, **12**(2) pp.179-204.

Ghonima, O., Schumacher, T., Unnikrishnan, A., and **Fleischhacker, A.** (2018). Advancing Bridge Technology, Task 10: Statistical Analysis and Modeling of US Concrete Highway Bridge Deck Performance - Internal Final Report. Portland State University Library. URL: https://pdxscholar.library.pdx.edu/cengin_fac/443.

Fleischhacker, A., O. Ghonima, T. Schumacher. Federal Highway Administration (FHWA). (2018). "Performance of Concrete Highway Bridge Decks using Nationwide Condition Data." FHWA-HIF-18-082. Washington, DC: FHWA.
<https://www.fhwa.dot.gov/bridge/concrete/hif18028.pdf>

Fleischhacker, A., P. Fok. (2015) An Entropy Based Methodology for Valuation of Demand Uncertainty Reduction. *Decision Sciences*, **46**(6) pp. 1165-1198.

Chen, W., **A. Fleischhacker**, M. Katehakis. (2015) Dynamic Pricing and Channel Preference in a Dual Channel Environment. *Naval Research Logistics*, **62**(7) pp. 531-549.

Fleischhacker, A., Ninh, A., Y. Zhao. (2015) Inventory Positioning in Global Clinical Trial Supply Chains. *Production & Operations Management*, **24**(6) pp. 991-1011.

Fleischhacker, A., B. Chen, H. Kher, M. Mazal, B. Pfender. (2015) Capacity Planning in the Presence of Sequence Dependent Setups at Astra Zeneca Pharmaceuticals. *Interfaces*, **45**(3).

Fleischhacker, A., P. Fok. (2015) On the Relationship Between Entropy, Demand Uncertainty, and Expected Loss. *European Journal of Operational Research*, **245**(2) pp. 623-628.

Fleischhacker, A., Y. Zhao. (2013). Contract Development and Manufacturing Costs During Clinical Development of a New Drug. *Applied Clinical Trials Online*, August 5, 2013.

Fleischhacker, A., Y. Zhao. (2013). Balancing Learning and Economies of Scale for Adaptive Clinical Trials. *Operations Research for Health Care*, **2**(3) pp. 42-51.

Fleischhacker, A., Y. Zhao. (2011). Planning for Demand Failure: A Dynamic Lot Size Model for Clinical Trial Supply Chains. *European Journal of Operational Research* **211**(3) pp. 496 - 506.

Research Grants and Collaborative Research Contracts

"Decision Analytics & Visualization Course Development," University of Delaware MBA Curriculum Grant, \$5,000, 2016.

"DNREC Process Improvement Learning Solutions - Analytics and Visualization at DNREC," Delaware Department of Natural Resources, \$142,134, 2016. (Co-Principal Investigator)

"Decision Analytics and Visualization," University of Delaware – MBA Curriculum Grant, \$5,000, 2016.

"Analytics and Visualizations for Coordinating the Supply Chain," Agilent Technologies, \$50,000, 2014-2015. (Principal Investigator)

"Formulation Capacity Modeling in the Presence of Sequence Dependent Setups," AstraZeneca Pharmaceuticals, \$30,000, 2013. (Co-Principal Investigator w/ B. Chen and H. Kher)

"Using Metrics for Continual Improvement in Application Delivery," JP Morgan Chase, \$120,000, 2012. (Principal Investigator w/ B. Chen and H. Kher)

"The Inventory-Time Tradeoff for Clinical Trial Supply Chains," University of Delaware – General University Research Grant, \$6,000, 2014.

Manuscripts

Faraji, Z., A. Fleischhacker. Overstatement of Firm Diversification effect on Bankruptcy Risk Reduction. Accepted for publication in *Intl. Journal of Applied Decision Sciences*.

Fleischhacker, A., P. Fok, M. Madiman, N. Wu. The Expected Value of Demand Data: A Tractable EVSI Calculation Leveraging A Dirichlet Prior. Preparing reject and resubmit for *Management Science*.

Han, Q., A. Fleischhacker, P. Fok. First Passage Times in Clinical Trial Supply Chains with Stockouts.

Books

Fleischhacker, A. (2019). *Working Draft*. The Business Analyst's Guide to Business Analytics. Draft available here: <http://causact.updog.co>

Computer Packages

Fleischhacker, A. CAUSACT: R Package for accelerating Bayesian business analytics. See <https://github.com/flyaflya/causact/>.

Recent Conference Presentations (By Year, By Topic)

- 2019 "Bayesian Business Analytics for Supply Chain Insight". POMS 2019 Annual Conference. Invited. Washington, DC.
- 2017 "A Uniqueness Driven Similarity Measure" (with Xin Ji)
INFORMS Data Science Workshop. Accepted for Poster and Abbreviated Presentation.
- "Valuing Demand Sample Information Prior to Its Collection"
INFORMS Annual Conference. Houston, TX.
- 2016 "Combining Data And Weakly Informative Priors To Make Better Decisions Faster"
INFORMS Annual Conference (*invited speaker*). Nashville, TN. November 15, 2016.
- 2015 "Valuing Data: A Closed Form Solution for the Expected Value of Sample Information"
 - ◆ INFORMS Annual Conference (*invited speaker*). Philadelphia, PA. November 1, 2015.
- 2014 "Sustainability: Trends Impacting Supply Chains"
 - ◆ Delaware Bio, Pennsylvania Bio, and Bio New Jersey - Supply Chain Summit - September 9, 2014
- "Entropy Based Methodology for Valuation of Uncertainty Reduction"
 - ◆ INFORMS Annual Conference (*invited speaker*). San Francisco, CA. November 10, 2014.
- "Modeling Uncertainty in Supply Chain Decision Making"
 - ◆ University of Delaware's Department of Mathematical Sciences Probability Seminar. Newark, DE. October 20, 2014
- "Entropy Based Valuation of Demand Uncertainty Reduction"
 - ◆ Advances in Decision Analysis Conference. Georgetown University, Washington D.C.

Awards & Honors

- 2019 MBA Teaching Award Recipient – Honorable Mention (2nd most votes by MBA class)
- 2017 MBA Teaching Award Recipient – Honorable Mention (2nd most votes by MBA class)
- 2016 Selected to be a JPMC Faculty Fellow (2.5yr appointment).
- University of Delaware *MBA Teaching Award* nominee.
- University of Delaware *Excellence in Teaching* award nominee.
- University of Delaware *Excellence in Undergraduate Advising and Mentoring* nominee.
- Subject of article: “A networked business faculty for a changing business world” (see <http://lerner.udel.edu/associate-professor-adam-fleischhacker/>)
- 2015 Outstanding Scholarship Award – Department of Business Administration
- University of Delaware *Excellence in Teaching* award nominee.
- 2014 Appointed as one of three J.P. Morgan Chase Scholars - Provides recognition for past and continued efforts in launching the Ph.D. program in Financial Services Analytics.
- University of Delaware *Excellence in Teaching* award nominee.
- Identified as one of 21 faculty members who can effectively communicate the Lerner College identity and points of differentiation.
- Awarded General University Research grant (\$6,000) for work on “The Inventory-Time Tradeoff Curve for Clinical Trial Supply Chains.”
- 2013 Secured collaboration agreement between University of Delaware and AstraZeneca. Topic: “Formulation Capacity Modeling.”
- Active contributor, as member of Ph.D. in Financial Services Analytics curriculum committee, in securing \$17 million of funding for program from J.P. Morgan Chase.
- 2012 Secured collaboration agreement between University of Delaware and JP Morgan Chase. Topic: “Using Metrics for Continuous Improvement in Application Delivery Processes”.
- 2010 Recruited and mentored 2nd place team at annual Rutgers MBA Supply Chain Case Competition.
- 2008 Awarded summer research grant from the Blanche & Irwin Lerner Center for Pharmaceutical Management Studies.
- 2007 Awarded summer research grant from Rutgers’ Research Resources Committee.
- 2007 Obtained highest achievable teaching effectiveness rating as instructor for Production & Operations Management
- 1999 Sole recipient of i2 Technologies’ Rising Star Award.
- 1998 William E. Simon Graduate School of Business merit scholarship recipient.
- 1992 State University of New York at Buffalo merit scholarship recipient (University Honors Program).

Professional Experience

- 2016 **Co-Principal Investigator**– Department of Natural Resources, Dover, DE
Working with department employees on how to use data analytics and visualization for monitoring of air and water quality in the state of Delaware.
- 2014 - 2015 **Principal Investigator**– Agilent Technologies, Wilmington, DE
Managing joint research project on using analytics and visualization for continuous improvement in supply chain performance. Also, using optimization to minimize stock picking times in a warehouse.
- 2013 **Co-Principal Investigator**– AstraZeneca Pharmaceuticals, Newark, DE
Co-managing joint research project on production scheduling with sequence-dependent changeovers.
- 2012 - 2013 **Principal Investigator**– JP Morgan Chase Newark, DE
Managing joint research project on using metrics for continuous improvement in application delivery processes.
- 2004 - 2005 **Founder & Consultant** - Category Captain Services Inc., Lake Hopatcong, NJ
Founded an analytical methods and business process consulting firm to create operational efficiencies through management of products at the category level.
 - ◆ *Highlight:* Modeled the use of data and analytics in the grocery supply chain to help a leading business intelligence software company secure a partnership with a leading marketing firm.
- 2001 - 2004 **Director of Front Office Solutions** - World Fuel Services Inc., Edison, NJ
Managed internal and outside software development teams across multiple sites/countries. Collaborated with management users in developing business processes to improve front office operations and streamline fuel supply chains.
 - ◆ *Highlight:* Delivered web-based front-office system launched in 17 international offices, integrated with Oracle ERP, and transacting over \$1B annually.
- 2000 - 2001 **Director of Product Management** – TransportEdge Inc., Parsippany, NJ
Promoted from within to craft new marketing strategy for financially challenged B2B Internet start-up.
 - ◆ *Highlight:* Championed TransportEdge’s metamorphosis from public B2B marketplace to Internet enabled trading software provider leading to company being sold to World Fuel Services Corporation.
- 1998 - 2000 **Product Manager, Demand Management** – i2 Technologies, Inc. Parsippany, NJ
Ensured i2’s software could support demand planning best practices from the consumer goods and retail industries.
 - ◆ *Highlight:* Redesigned i2’s Promotion Planning product leading to product’s first five customers.

Teaching Experience (by Course Title)

BUAD345/621 (listed as BUAD867) – Decision Analytics & Visualization

- ◆ *Spring 2019 (Analytics Certificate @ JPMorgan): Teaching Eval. 4.98 / 5.0*
- ◆ *Spring 2019 (Undergrad): Teaching Eval. 4.63 / 5.0*
- ◆ *Spring 2016 (MBA): Teaching Eval. 4.64 / 5.0*

FSAN850 – Probabilistic Graphical Models Research Seminar

- ◆ *Spring 2016 (Ph.D.): Teaching Eval. n/a*

FSAN830 – Business Process Innovation

- ◆ *Spring 2017 (Ph.D.): Teaching Eval. n/a*
- ◆ *Spring 2017 (Ph.D.): Teaching Eval. 4.97 / 5.0*
- ◆ *Spring 2015 (Ph.D.): Co-taught with Harry Wang. Teaching Eval. n/a*

BUAD306 – Operations Management (Honors)

- ◆ *Fall 2017 (Undergrad): Teaching Eval. 4.2 / 5.0*

BUAD267 – Business Analytics (Experimental Course)

- ◆ *Spring 2015 (Undergrad): Teaching Eval. 4.40 / 5.0*

BUAD820 - Data Analysis for Business – University of Delaware

- ◆ *Spring 2014 (MBA): Teaching Eval. 4.92 / 5.0*
- ◆ *Spring 2014 (MBA): Teaching Eval. 4.75 / 5.0*
- ◆ *Fall 2013 (MBA): Teaching Eval. 4.67 / 5.0*
- ◆ *Spring 2013 (MBA): Teaching Eval. 4.44 / 5.0*
- ◆ *Fall 2012 (MBA@Astra Zeneca): Teaching Eval. 4.52 / 5.0*
- ◆ *Fall 2012 (MBA): Teaching Eval. 4.59 / 5.0*
- ◆ *Spring 2011 (MBA): Teaching Eval. 4.47 / 5.0*
- ◆ *Fall 2010 (MBA@Astra Zeneca): Teaching Eval. 4.60 / 5.0*
- ◆ *Spring 2010 (MBA): Teaching Eval. 4.53 / 5.0*
- ◆ *Fall 2009 (MBA @Astra Zeneca): Teaching Eval. (less than 5 responses)*

Independent Study Courses – University of Delaware

- ◆ *Spring 2017 (MBA): Business Analytics Capstone. Teaching Eval. 5.0 / 5.0*
- ◆ *Spring 2015 (MBA): Production Scheduling Optimization.*
- ◆ *Fall 2014 (MBA): Analytics using R.*
- ◆ *Winter 2012 (MBA): Applied Forecasting in Uncertain Environments.*
- ◆ *Fall 2010 (MBA): Business Process Design for Information Advantage*
- ◆ *Summer 2010 (MBA): Six Sigma*

BUAD831 - Operations Management – University of Delaware

- ◆ *Fall 2018 (MBA): Teaching Eval. 4.69 / 5.0*
- ◆ *Fall 2017 (MBA): Teaching Eval. 4.73 / 5.0*
- ◆ *Fall 2016 (MBA): Teaching Eval. 4.68 / 5.0*
- ◆ *Fall 2015 (MBA): Teaching Eval. 4.62 / 5.0*
- ◆ *Fall 2014 (MBA): Teaching Eval. 4.77 / 5.0*
- ◆ *Fall 2014 (MBA@Astra Zeneca): Teaching Eval. 4.16 / 5.0*
- ◆ *Spring 2011 (MBA@Astra Zeneca): Teaching Eval. 4.71 / 5.0*
- ◆ *Fall 2010 (MBA): Teaching Eval. 4.69 / 5.0*

BUAD448 - Decision Support Systems for Operations Management

- ◆ *Spring 2013 (Undergrad): Teaching Eval. 4.78 / 5.0*
- ◆ *Spring 2012 (Undergrad): Teaching Eval. 4.67 / 5.0*
- ◆ *Spring 2012 (Undergrad): Teaching Eval. 4.59 / 5.0*
- ◆ *Spring 2010 (Undergrad): Teaching Eval. 4.21 / 5.0*

Other Recent Professional Activities (by year)

2019

Helped propose and shepherd the new Business Analytics undergraduate major to be launched in Fall 2020.

Member of *Production and Operations Management* Editorial Board.

Reviewer, *Production and Operations Management, European Journal of Operational Research.*

- Ph.D. advisor in Financial Services Analytics for Negin Faraji, Chuan Cai, and Rose Nguyen.
- 2018 Primary advisor for first Ph.D. graduate, Xin Ji, of Financial Services Analytics program.
- Contributions to `greta` package.
Contributions made to R `BOOKDOWN` package to fix bugs.
- Member of *Production and Operations Management* Editorial Board.
- Reviewer, *Production and Operations Management*, *European Journal of Operational Research*.
- 2017 Member of *Production and Operations Management* Editorial Board.
- Reviewer, *Production and Operations Management*, *European Journal of Operational Research*.
- 2016 Senior Thesis Advisor – Alexander Daniels. McNair Scholar.
- Master's Thesis Committee Member – Madelyn Houser “Predicting credit portfolio default risk using the Vasicek asymptotic single risk factor (ASRF) model”
- Launched new Business Analytics courses and programs (undergrad minor), MBA concentration, MBA major) to be launched in Fall 2016.
- Member of *Production and Operations Management* Editorial Board.
- Reviewer, *Production and Operations Management*, *European Journal of Operational Research*.
- Gained approval from the Faculty Senate for new Business Analytics minor (undergrad) and new MBA curriculum (major and concentration) in Business Analytics.
- Assisted in organizing 4th Annual IFSA Conference - 'Disruptive Innovations in Financial Services'
- 2015 McNair Scholar - Advisor
- Designed and shepherded new Business Analytics programs (undergrad minor, MBA minor, MBA major) to be launched in Fall 2016.
- Appointed to *Production and Operations Management* Editorial Board.
- Reviewer, *Production and Operations Management*, *European Journal of Operational Research*, *Management Science*, *Annals of Operations Research*, *Natural Sciences and Engineering Research Council of Canada*, and the *Journal of Organizational Computing and Electronic Commerce*.
- 2014 Member, Curriculum Committee for PH.D. in Financial Services Analytics.
Successfully achieved new academic program approval (since 2013).
- Ph.D. Committee Member for Omar Ghonima. Dissertation: Advancing Steel and Concrete Bridge Technology to Improve Infrastructure Performance.
(Dept. of Civil Engineering – Univ. of Delaware)