



## **Dr. Nichalin S. Summerfield**

University of Massachusetts Lowell  
Operations and Information Systems  
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### **Education**

PhD, Operations Management, The University of Arizona, December 2010.

MS, Management Information Systems, The University of Arizona, May 2005.

BEng, Electrical Engineering, SIIT - Thammasat University, February 1998.

### **Academic Appointments**

Assistant Professor - Department of Operations & Information Systems	September 2016 - Present
Director of Undergraduate Student Success – OIS Department	January 2023 - Present
University of Massachusetts Lowell.	

Lecturer - Department of Decision and Information Sciences	September 2012 - August 2016
University of Massachusetts Dartmouth.	

Adjunct Lecturer - Department of Management Information Systems	January 2011 - December 2011
The University of Arizona.	

### **Professional Appointments**

Software Engineer (Part-Time), Lunar and Planetary Lab,	January 2004 - July 2005
The University of Arizona.	

Management Consultant, Accenture, Bangkok, Thailand.	July 1998 - July 2003
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### **Awards and Honors**

#### **Scholarship/Research**

Runner-up - DSI Regional Best Paper Award, Decision Sciences Institute (DSI). (November 2021).

Best Application of Theory Paper Award, Northeast Decision Sciences Institute (NEDSI). (March 2021).

CCB Research Award, Charlton College of Business, UMass Dartmouth. (2015).

Dean's Research Award, Eller College of Management, The University of Arizona. (2009).

#### **Teaching**

Department's Teaching Excellence Award, Operations & Information Systems Department, UMass Lowell. (May 2022).

Department's Teaching Excellence Award, Operations & Information Systems Department, UMass Lowell. (May 2018).

Thomas J. Higginson Awards for Excellence in Teaching, Charlton College of Business, UMass Dartmouth. (2016).

Provost's Best Practices Awards for Innovative Use of Technology, UMass Dartmouth. (2015).

Dean's Teaching Award, Eller College of Management, The University of Arizona. (2009).

James F. LaSalle Award for Teaching Excellence, Eller College of Management, The University of Arizona. (2009).

Dean's Teaching Award, Eller College of Management, The University of Arizona. (2008).

## RESEARCH

### Grants

Fontem, B. (Principal), **Summerfield, N.** (Co-Principal), " Poll Worker Assignment and Voting Machine Allocation across Electoral Precincts," Sponsored by Internal Seed Funding Program, University of Massachusetts Lowell, \$10,938. (September 2024 - May 2025).

Chen, D. (Principal), **Summerfield, N.** (Co-Principal), Deokar, A. (Co-Principal), "Leverage Data Analytics and Game Theory to Study Complex Urban Transportation," Sponsored by Internal Seed Funding Program, University of Massachusetts Lowell, \$10,000.00. (July 2017 - July 2019).

Oztekin, A. (Principal), Knight, M. (Co-Principal), **Summerfield, N.** (Supporting), Evans, K. (Supporting), Lee, S. E. (Supporting), Ackerson, L. K. (Supporting), "A Holistic Data Analytic Modeling of Health Outcomes for Different Vulnerable Risk Groups," Sponsored by IDEA Leadership Fund, University of Massachusetts Lowell. (May 1, 2018 - May 1, 2019).

Knight, M. (Principal), Evans, K. (Co-Principal), **Summerfield, N.** (Co-Principal), Abdallah, L. M. (Co-Principal), Oztekin, A. (Supporting), Kronrod, A. (Supporting), "The CARE Act: Processes Affecting the Community/Caregiver Perspective of Caring for Older Adults," Sponsored by Manning School of Business and the Zuckerberg College of Health Sciences, University of Massachusetts Lowell, \$4,000.00. (February 2018 - February 2019).

### Refereed Journal Articles

Nasir, M., Summerfield, N., Simsek, S., Oztekin, A. (in press). An Interpretable Machine Learning Methodology to Generate Interaction Effect Hypotheses from Complex Datasets. To appear in *Decision Sciences*.

Ahmed, A., Deokar, A., Lee, H. C. B., Summerfield, N. (2024). The role of commitment in online reputation systems: An empirical study of express delivery promise in an e-commerce platform. *Decision Support Systems*, 176, 114061.

Nasir, M., Summerfield, N., Carreiro, S., Berlowitz, D., Oztekin, A. (2024). A Machine Learning Approach for Diagnostic and Prognostic Predictions, Key Risk Factors & Interactions. *Health Services and Outcomes Research Methodology*.

- Nasir, M., Summerfield, N., Oztekin, A., Knight, M., Ackerson, L. K., Carreiro, S. (2021). Machine Learning-based Outcome Prediction and Novel Hypotheses Generation for Substance Use Disorder Treatment. *Journal of the American Medical Informatics Association*.
- Summerfield, N., Deokar, A., Xu, M., Zhu, W. (2021). Should drivers cooperate? Performance evaluation of cooperative navigation on simulated road networks using network DEA. *Journal of the Operational Research Society*, 72(5), 1042-1057.
- Nasir, M., Summerfield, N., Dag, A., Oztekin, A. (2020). A Service Analytic Approach to Studying Patient No-Shows. *Service Business*, 14(2), 287–313.
- Summerfield, N. S., Dror, M., Cohen, M. A. (2015). City streets parking enforcement inspection decisions: The Chinese postman's perspective. *European Journal of Operational Research*, 242(1), 149-160.
- Summerfield, N. S., Dror, M. (2013). Biform game: Reflection as a stochastic programming problem. *International Journal of Production Economics*, 142(1), 124-129.
- Summerfield, N. S., Dror, M. (2012). Stochastic programming for decentralized newsvendor with transshipment. *International Journal of Production Economics*, 137(2), 292-303.
- Suakkaphong, N., Dror, M. (2011). Managing decentralized inventory and transshipment. *TOP - Journal of the Spanish Society of Statistics and Operations Research*, 19(2), 480-506.
- Suakkaphong, N., Zhang, Z., Chen, H. (2011). Disease named entity recognition using semisupervised learning and conditional random fields. *Journal of the American Society for Information Science and Technology*, 62(4), 727-737.
- Netcharussaeng, N., Suakkaphong, N., Tungthangthum, A., Chintrakulchai, P. (1999). Database for Student Registration System At SIIT. *Thammasat International Journal of Science and Technology*, 4(1), 19-26.

## Working in Progress

- "Qualitative analysis of hospital discharge at Lowell General Hospital"  
with K. Evans, L. Abdallah, and M. Knight
- "Poll Worker Assignment and Voting Machine Allocation across Electoral Precincts"  
with B. Fontem
- "Development of Risk Assessment for Mobile Banking"  
With J. Wei and I. Mahmud

## Conference Presentations

- Summerfield, N. (Presenter), Nasir, M., Oztekin, A., 2021 Decision Sciences Institute Annual Conference, "Machine Learning-based Dropout Prediction in Patients with Substance Use and Mental Health Disorder," Virtual. (November 2021).
- Nasir, M. (Presenter), Summerfield, N., Simsek, S., Oztekin, A., 2021 Decision Sciences Institute Annual Conference, "Simple Interaction Finding Technique (SIFT) – A Simple Methodology to Generate Novel Hypotheses from Complex Datasets," Virtual. (November 2021).

- Nasir, M. (Presenter), Summerfield, N., Simsek, S., Oztekin, A., 2021 INFORMS Annual Meeting, "Simple Interaction Finding Technique (SIFT) – A Simple Methodology to Generate Novel Hypotheses from Complex Datasets," Virtual. (October 2021).
- Nasir, M. (Presenter), Summerfield, N., Simsek, S., Oztekin, A., The third annual conference of the New England Associations for Information Systems (NEAIS), "Simple Interaction Finding Technique (SIFT) – A Simple Methodology to Generate Novel Hypotheses from Complex Datasets." (October 2021).
- Nasir, M. (Presenter), Summerfield, N., Simsek, S., Oztekin, A., 2021 Northeast Decision Sciences Institute Annual Conference, "Simple Interaction Finding Technique (SIFT) – A Simple Methodology to Generate Novel Hypotheses from Complex Datasets." (March 2021).
- Oztekin, A. (Presenter), Nasir, M., Summerfield, N., 2019 Decision Sciences Institute Annual Conference, "A Close Look Into The Substance Epidemic and Substance Use Disorder Problem: A Holistic Data Analytics Approach," New Orleans, LA. (November 2019).
- Summerfield, N. (Presenter), Abdallah, L. M., Evans, K. (Presenter), Knight, M. (Presenter), LGH Research and Quality Fair, "Discharging Patients: A Successful Complex and Multidisciplinary Effort," Lowell General Hospital, Lowell, MA. (October 2019).
- Summerfield, N. (Presenter), Nasir, M., Oztekin, A., Dag, A., 2019 INFORMS Annual Meeting, "Predicting Patient No-shows via a Hybrid Business Analytics Methodology," INFORMS, Seattle, WA. (October 23, 2019).
- Lee, H. C. B., Summerfield, N., Deokar, A., Ahmed, A. (Presenter), 2019 INFORMS Annual Meeting, "Service commitment and customers response: An empirical study on effects of delivery lead time commitment on online ratings," INFORMS, Seattle, WA. (October 20, 2019).
- Evans, K., Knight, M., Abdallah, L. M. (Presenter), Summerfield, N., Lee, S. E., Zuckerberg College of Health Sciences Spring Retreat, "Discharging Patients: A Successful Complex and Multidisciplinary Effort. Overview of discharge process research project in collaboration with the Manning School of Business," UML Inn & Conference Center. (May 22, 2019).
- Ahmed, A. (Presenter), Lee, H. C. B., Deokar, A., Summerfield, N., Decision Sciences Institute Annual Conference, "Analyzing effect of promised delivery lead time on seller reputation in e-commerce," DSI, Chicago, IL. (November 2018).
- Summerfield, N. (Presenter), Dag, A., Ajgaonkar, N., Oztekin, A., Decision Sciences Institute Annual Conference, "Predicting Patient No-Shows via a Hybrid Business Analytics Methodology," DSI, Chicago, IL. (November 2018).
- Summerfield, N. (Presenter), Dag, A., Ajgaonkar, N., Oztekin, A., INFORMS 13th Data Mining & Decision Analytics Workshop, "Predicting Patient No-Shows via a Hybrid Business Analytics Methodology," Phoenix, AZ. (November 2018).
- Summerfield, N., Oztekin, A., INFORMS Annual Meeting, "A Holistic Data Analytic Approach to Determine Impacts of the Caregiver Advise, Record, Enable (CARE) Act on Reducing Readmission and Mortality Rates among Older Adults," INFORMS, Phoenix, AZ. (November 2018).
- Summerfield, N., Zhang, J., Motiwalla, L. F. (Presenter), Mai, T., Mazza, K., 3rd North American International Conference on Industrial Engineering and Operations Management, "Using Analytics to Predict Project Management Success," IEOM Society International, Washington, DC. (September 2018).

- Summerfield, N. S. (Presenter), Dror, M., INFORMS Annual Meeting, "Expected Value of Perfect Information (EVPI) of Demand in Propane Distribution Problem," Houston, TX. (2017).
- Summerfield, N. S. (Presenter), Dror, M., INFORMS Annual Meeting, "City Streets Parking Enforcement Inspection Decisions: The Chinese Postman's Perspective," San Francisco, CA. (2014).
- Summerfield, N. S., Dror, M. (Presenter), INFORMS Annual Meeting, "City Streets Parking Enforcement Inspection Decisions: The Chinese Postman's Perspective," Phoenix, AZ. (2012).
- Suakkaphong, N. (Presenter), Dror, M., INFORMS Annual Meeting, "Biform Game: Reflection as a Stochastic Programming Problem," Charlotte, NC. (2011).
- Suakkaphong, N. (Presenter), Dror, M., INFORMS Annual Meeting, "Stochastic Programming Framework for Decentralized Inventory with Transshipment," Charlotte, NC. (2011).
- Suakkaphong, N. (Presenter), Dror, M., MSOM Annual Conference, "Biform Game: Reflection as a Stochastic Programming Problem," Ann Arbor, MI. (2011).
- Suakkaphong, N. (Presenter), Dror, M., MSOM Annual Conference, "Stochastic Programming Framework for Decentralized Inventory with Transshipment," Ann Arbor, Michigan. (2011).
- Suakkaphong, N., Dror, M. (Presenter), Public Economic Theory Conference, "Biform Game: Reflection as a Stochastic Programming Problem," Bloomington, IN. (2011).
- Suakkaphong, N., Dror, M. (Presenter), DOMinant Workshop on Inventory Routing and Fleet-Size-and-Mix Problems, "Managing Decentralized Distribution: Insights and Incentives for Collaboration," Molde, Norway. (2009).
- Suakkaphong, N. (Presenter), Dror, M., INFORMS Annual Meeting, "Managing Decentralized Distribution: Insights and Incentives for Collaboration," San Diego, CA. (2009).
- Suakkaphong, N. (Presenter), Dror, M., INFORMS Western Regional Conference, "Managing Decentralized Distribution: Insights and Incentives for Collaboration," Phoenix, AZ. (2009).
- Suakkaphong, N. (Presenter), Dror, M., International Conference on Game Theory (the 20th Summer Festival on Game Theory), "Managing Decentralized Distribution: Insights and Incentives for Collaboration," Stony Brook, New York. (2009).
- Dang, Y., Zhang, Y., Suakkaphong, N., Larson, C., Chen, H., IEEE International Conference on Intelligence and Security Informatics, "An Integrated Approach to Mapping Worldwide Bioterrorism Research Capabilities." (2008).
- Dang, Y., Suakkaphong, N., Zhang, Y., Wakhare, R., Chen, H., Larson, C., Advances in Disease Surveillance, "Mapping Bioterrorism Agents Research Literature." (2007).

## Teaching

### Teaching Experience

#### University of Massachusetts Lowell

POMS.3010 Operations Management

POMS.6120 Stats. for Predictive Analytics

POMS.6220 Decision Analytics

POMS.7300 Prescriptive Analytics: Optimization & Simulation

**University of Massachusetts Dartmouth**

POM 212 Business Statistics  
POM 333 Quantitative Business Analysis  
POM 415 Applied Decision Models  
POM 450 Business Logistics

**Teaching Experience at University of Arizona**

BNAD 518B Business Intensive II  
MIS 560 Operations Management  
MIS 578 Project Management  
MIS 473A/573A Production and Operations Management  
MIS 373 Basic Operations Management  
MIS 304 Using and Managing Information Systems

**Directed Student Learning****Doctoral Student**

Dissertation Committee Co-Chair. (September 2021 - August 2022).  
Advisee: Murtaza Nasir  
Academic Appointment: Tenure-Track Assistant Professor at Wichita State University

First-year Summer Paper Advisor. (Summer 2024)  
Advisee: Pankaj Sharma

**Master's Students**

MSBA Capstone project- Faculty advisor. (March 2024 - Present).  
Advisee: Geoffrey Hash  
Client: Vermont Transportation Department

MSBA Capstone project- Faculty advisor. (October 2023 - December 2023).  
Advisees: Praachi Ganjawalla, Riya Mehta, Shashwat Shah, Vihar Mehta  
Client: Digital Federal Credit Union (DCU)

MSBA Capstone project- Faculty advisor. (April 2023 - June 2023).  
Advisees: Anindya Choprapu, Ritika FNU  
Client: Digital Federal Credit Union (DCU)

MSBA Capstone project- Faculty advisor. (October 2021 - December 2021).  
Advisees: Varun Bisht, Weiyao Peng, Srijana Bolakhe  
Client: MFS

MSBA Capstone project- Faculty advisor. (November 2020 - May 2021).  
Advisees: Winpichmonika Thun, Qianyi Lin, Gurleen Kaur  
Client: Dell

MSBA Capstone project- Faculty advisor. (June 2020).  
Advisees: Nitheesh Mallu, Kevin Reeves, Mia Nguyen  
Client: UML – Mental health project

MSBA Capstone project- Faculty advisor. (May 2019).  
Advisees: Kevin Hammond, Daniel Turay

Client: UML Athletic – Riverhawk Ice Hockey

MSBA Capstone project- Faculty advisor. (May 2019).

Advisees: Vimal Nayani, Sanjeev Singh

MSBA Capstone project- Faculty advisor. (May 2018).

Advisees: Ram Das, Zirong Wu

Client: Dell

MSBA Capstone project- Faculty advisor. (May 2018).

Advisees: Tri Mai, Kasey Mazza

Client: MFS

### **Undergraduate Students**

SCAN Health Virtual Business Case Competition. (October 2020 - December 2020).

Advised: Mansi Thakkar, Ashley Giang, Susmitha Kollipara

Undergraduate Honors Thesis. (December 2019).

Advisee: Meymey Lov

Honors-By-Contract, "Analyzing Service Operations at Honor's College." (January 2017 - April 2017).

Advisee: Jiarui Zhao

## **SERVICE**

### **University Service**

#### **OIS Department**

Director of OIS Undergraduate Student Success. (January 2023 - **Present**).

Member of OIS Department Teaching Excellence Committee. (September 2018 - May 2021, January 2023 - **Present**).

Member of OIS Research Seminars Committee. (January 2023 - **Present**).

Member of Operations Management Faculty Search Committee. (October 2019 - May 2020, June 2021 - August 2021).

Advisor of OIS Student Club. (September 2016 - August 2017).

#### **Manning School of Business**

Co-Chair of Manning Undergraduate Program & Standards Committee (UPC). (October 2021 - May 2022, January 2023 - **Present**).

Member of Career-Connected Experience Task Force. (January 2024 - **Present**).

Member of Undergraduate Curriculum Review Task Force. (May 2024 - **Present**).

Member of Manning Undergraduate Program & Standards Committee (UPC). (September 2016 - October 2021).

Member of Manning Scholarship Committee. (April 2020 - June 2020).

Member of Manning Research Advancement Committee. (September 2016 - December 2016).

### **UMass Lowell**

Member of UML Public Health IT Curriculum Committee. (September 2021 - **Present**).

Member of Faculty Senate, UMass Lowell's Faculty Senate. (May 2018 - May 2022).

## **Professional Service**

Co-chair, SIG EBIZ - WEB 2024 (held in conjunction with ICIS2024). (July 2024-Present)

Editorial Board Member, Electronic Government, an International Journal. (2024 - Present).

Ad Hoc Journal Reviewer (Journal of Substance Use and Addiction Treatment, Information Systems Research, Information Systems Frontiers, Expert Systems With Applications, Decision Sciences, International Journal of Production Research, International Journal of Production Economics, European Journal of Operational Research, Journal of the Operational Research Society, Decision Support Systems, Manufacturing & Service Operations Management)

Ad Hoc Conference Reviewer (International Conference on Information Systems 2022, New England Associations for Information Systems 2021, Americas Conference on Information Systems 2011, International Conference on Information Systems 2011, International Conference on Electronic Business 2010)

Track Associate Editor, Annual Pacific Asia Conference on Information Systems PACIS2023. (July 2023).

Session chair, 2021 Decision Sciences Institute Annual Conference. (November 2021).

Discussant for DSI Doctoral Research Showcase, 2021 Decision Sciences Institute Annual Conference. (November 2021).

## **Professional Memberships**

Decision Sciences Institute. (2014 - Present).

INFORMS. (2007 - Present).