

# Ashley Elizabeth Davis

PhD Candidate

Department of Industrial Engineering and Management Sciences  
Northwestern University

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## Education

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PhD, Industrial Engineering and Management Sciences, Northwestern University

*Graduation: June, 2013 (expected)*

*Thesis: Addressing Geographic Inequities in Kidney Transplantation*

*Advised by Sanjay Mehrotra*

MS, Industrial Engineering and Management Sciences, Northwestern University

*Graduated December 2009*

BS, Systems Science and Engineering, Washington University in St. Louis

*Graduated May 2008, Magna Cum Laude*

BS, Engineering Mathematics, Elon University

*Graduated May 2008, Summa Cum Laude*

## Publications

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A Davis, S Mehrotra, J Friedewald, A Skaro, L McElroy, J Holl, M Abecassis, D Ladner, "Has Geographic Inequity in Kidney Transplantation Changed Since the Final Rule," *working paper*

A Davis, S Mehrotra, J Friedewald, A Skaro, L McElroy, R Kang, E Wang, J Holl, M Abecassis, D Ladner, "The Causes and Consequences of Kidney Transplantation Waiting Time Inequity across the United States," *working paper*

A Davis, S Mehrotra, J Friedewald, D Ladner, "Impact of the Statewide Sharing Variance on Kidney Transplantation Geographic Inequity and Allocation Efficiency," *working paper*

A Davis, D Ladner, J Friedewald, A Skaro, S Mehrotra, J Holl, M Abecassis, "Improving Utilization and Outcomes for High Kidney Donor Profile Index Kidneys in Transplant Patients," *working paper*

A Davis, L McElroy, J Friedewald, L VanWagner, A Gonzales, C Rigney, M Mozes, S Mehrotra, D Ladner, "Examining the Influence of Biopsy on Organ Utilization in a Single Organ Procurement Organization," *working paper*

A Davis, D Ladner, J Friedewald, S Mehrotra, M Daskin, A Skaro, M Abecassis, "Demonstrating Geographic Equity in Kidney Organ Allocation – Satisfying the Final Rule At Last," *working paper*

A Davis, MS Daskin, S Mehrotra, J Holl, "Nurse Staffing to Reduce Costs and Enhance Patient Safety," *working paper*

## Oral Presentations

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*"Improving Utilization and Outcomes of High Kidney Donor Profile Index Kidney Transplants"* 2012  
INFORMS Annual Meeting

*"Ameliorating Geographic Disparities in Kidney Transplantation Rates via Optimization Approaches"*  
American Transplant Congress 2011  
INFORMS Healthcare Conference  
American Society of Nephrologists Conference  
INFORMS Annual Meeting

*"Analysis of Kidney Transplant Center Locations in the United States"* 2010/2011  
American Transplant Congress  
American Society of Nephrologists Conference  
INFORMS Healthcare Conference

*"Distribution Robust Newsvendor Models for Shift Nurse Demand Estimation"* 2010  
INFORMS Annual Meeting  
IERC Conference

## Poster Presentations

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*"Improving Utilization and Outcomes for High Kidney Donor Profile Index Kidneys"* 2012  
American Transplant Congress  
Lewis Landsberg Research Day, Northwestern University

*"Ameliorating Geographic Disparities in Kidney Transplantation Rates via Optimization Approaches"*  
John & Gwen Smart Symposium, Northwestern University 2012  
Synapse: Applied Healthcare Operations Management & Research Conference, CHOM/NUVIHD  
Lewis Landsberg Research Day, Northwestern University 2011

*"Analysis of Dialysis Center Locations in Illinois"* 2010  
American Transplant Congress

*"Use of the Kidney Donor Risk Index to Assess Organ Utilization in a Single OPO"* 2010  
American Transplant Congress

*"Geographic Access of Liver Transplant Patients to US Transplant Centers"* 2010  
American Association for the Study of Liver Diseases

*\*\* Awarded "Poster of Distinction," given to top 10% of submitted abstracts*

## Teaching Experience

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*Grader, Northwestern University*  
IEMS 407 – Decision Tools for Managers Fall & Winter 2012

*Teaching Assistant, Northwestern University*  
IEMS 313 – Deterministic Models and Optimization Winter, 2010, 2011  
IEMS 391 – Industrial Engineering Design Winter 2011

## Professional Experience

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*Transplantation Internship, Northwestern Memorial Hospital* Summer 2009

- Attended daily meetings with transplantation surgeons and outcomes research teams to learn the transplantation process.
- Shadowed surgeons and residents during meetings with pre- and post-transplantation patients

*Operational Effectiveness Internship, St. Elizabeth's Health Center* Summer 2008

- Aided process improvement teams with various hospital processes issues through statistical and conceptual support using Lean Six Sigma Quality principles

## Honors

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*Health Services Research R36 Dissertation Award* 2011

Awarded by the Agency for Healthcare Research and Quality (AHRQ)

*IEMS Outstanding Teaching Assistant of the Year, Northwestern* 2009-2010, 2010-2011

Awarded favorite teaching assistant by the undergraduate industrial engineering student body

*Murphy Fellow, Northwestern* 2008

Full-tuition funding awarded to top first-year Industrial Engineering PhD students

*The David H. Levy Outstanding Senior Award, Washington University in St. Louis* 2008

Awarded to top graduating senior of the Systems Science and Engineering department

*Brown Engineering Scholarship, Washington University in St. Louis* 2006-2008

Full tuition scholarship awarded to top dual-degree engineering program applicant

*Elon Excellence in Engineering Award, Elon University* 2006

Awarded to top graduate of the dual-degree engineering program

*Elon Presidential Scholarship, Elon University* 2003-2006

Annual partial tuition funding awarded to top 15% of entering freshmen

## Leadership

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*President* 2010-2011

Student chapter of INFORMS, Northwestern

*Industrial Engineering Student Representative* 2010-2011

McCormick Graduate Leadership Council, Northwestern

*Graduate Student Representative* 2008-2011

Industrial Engineering Graduate Leadership Council, Northwestern

*Board Member* 2006-2008

Systems Science and Engineering Student Advisory Board, Washington University in St. Louis

*Founder* 2006

Elon Engineering Mentoring Program to mentor beginning engineering students, Elon

## Academic Society Affiliations

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- Phi Eta Sigma
- Pi Mu Epsilon
- Sigma Xi
- Phi Kappa Phi
- Tau Beta Pi

## References

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### **Sanjay Mehrotra, PhD Advisor**

Professor of Industrial Engineering and Management Sciences  
Northwestern University  
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### **Mark S Daskin, PhD Defense Committee Member**

Professor and Chair of Industrial and Operations Engineering  
University of Michigan  
1205 Beal Avenue  
Ann Arbor, Michigan 48109  
msdaskin@umich.edu

### **Baris Ata,**

Associate Professor of Managerial Economics & Decision Sciences  
Kellogg School of Management  
Northwestern University  
2001 Sheridan Road  
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### **Michael M Abecassis, PhD Defense Committee Member**

Director, Comprehensive Transplant Center  
Chief, Division of Surgery – Organ Transplantation  
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