

# Chaithanya Bandi

---

CONTACT INFORMATION	Managerial Economics and Decision Sciences Kellogg School of Management 2001 Sheridan Road, Suite 566 Evanston, IL 60208 Web: <a href="http://www.kellogg.northwestern.edu/faculty/directory/bandi_chaithanya.aspx">www.kellogg.northwestern.edu/faculty/directory/bandi_chaithanya.aspx</a>	Phone: (857) 600-1749 E-mail: <a href="mailto:c-bandi@kellogg.northwestern.edu">c-bandi@kellogg.northwestern.edu</a>
RESEARCH INTERESTS	Operations Management, Robust Optimization, Data-driven Optimization, Resource Allocation, Health-care Operations, Revenue Management, Risk Modeling	
ACADEMIC APPOINTMENTS	<b>Northwestern University</b> , Evanston, IL <i>Kellogg School of Management</i> Assistant Professor of Operations Donald P. Jacobs Scholar	<b>2013-</b> <b>2013-2014</b>
EDUCATION	<b>Massachusetts Institute of Technology</b> , Cambridge, MA <i>Sloan School of Management – Operations Research Center</i> Ph.D in Operations Research <i>Dissertation Title:</i> Tractable stochastic analysis in high dimensions via robust optimization  <b>Indian Institute of Technology, Chennai(Madras)</b> , Chennai, India <i>Department of Computer Science and Engineering</i> B.Tech in Computer Science and Engineering, Operations Research (Minor)	<b>2013</b>   <b>2008</b>
PUBLICATIONS	<ul style="list-style-type: none"><li>• C. Bandi and Dimitris Bertsimas. <i>Tractable stochastic analysis in high dimensions via robust optimization</i>. <i>Mathematical programming</i>, 134(1):23–70, 2012.</li><li>• C. Bandi, Dimitris Bertsimas, and Nataly Youssef. <i>Robust queueing theory</i>. <i>Operations Research</i>, 63(3):676–700, 2015.</li><li>• C. Bandi and Dimitris Bertsimas. <i>Optimal design for multi-item auctions: a robust optimization approach</i>. <i>Mathematics of Operations Research</i>, 39(4):1012–1038, 2014.</li><li>• C. Bandi and Dimitris Bertsimas. <i>Robust option pricing</i>. <i>European Journal of Operational Research</i>, 239(3):842–853, 2014.</li><li>• Chaitanya Bandi, Dinesh Garg, Krishna Pal Singh Rathore, Sachin Garg, Krishna Prasad Chitrapura, and Sourangshu Bhattacharya. <i>Dynamic pricing model for online advertising</i>, <i>US Patent App. 12/683,658</i>.</li><li>• C. Bandi and Ermin Wei. <i>Fairness considerations in network flow problems</i>. 2015 54th IEEE Conference on Decision and Control (CDC), pages 6909–6914. <i>IEEE</i>, 2015.</li><li>• C. Bandi, Ermin Wei, and Yuanzhang Xiao. <i>Efficiency of linear supply function bidding in electricity markets</i>. 2015 49th Asilomar Conference on Signals, Systems and Computers, pages 689–692. <i>IEEE</i>, 2015.</li></ul>	
COMPLETED ARTICLES	<ul style="list-style-type: none"><li>• C. Bandi, Dimitris Bertsimas, and Nataly Youssef. <i>Robust transient analysis of multi-server queueing systems and feedforward networks</i>. Under Review at <i>Queueing Systems</i>, 2016.</li><li>• C. Bandi, Nikolaos Trichakis, and Phebe Vayanos. <i>Robust wait time estimation in resource allocation systems with an application to kidney allocation</i>. <i>Revise and Resubmit at Management Science</i>, 2016.</li><li>• C. Bandi and Paat Rusmevichientong. <i>Robust resource allocation under uncertainty in risk preferences</i>. Under Review at <i>Management Science</i>, 2016.</li></ul>	

- C. Bandi and Diwakar Gupta. *Operating-room staffing and online scheduling*. Under Review at MSOM, 2016.
- C. Bandi. *Robust delay bounds for multi-class queueing systems under arbitrary priority policies with an application to data center management*. Submitted to Operations Research, 2016.
- C. Bandi and Dimitris Bertsimas. *Channel Coding via Robust Optimization* Under review at IEEE Transactions in Information Theory, 2016.

IN PROGRESS

- C. Bandi, Omar El Housni, and Vineet Goyal. *Performance of affine policies in multi-stage robust optimization*. Under Review at Operations Research, 2016.
- C. Bandi and Benjamin Grant. *Optimal Design of a Fantasy Sports Tournament*.
- C. Bandi and Itai Gurvich. *Characterizing global stability of queueing networks via robust optimization*.
- C. Bandi and Sivatheja Maguluri. *Robust queueing approach to optimal control of fork-join and replication systems*.
- C. Bandi and Nikos Trichakis. *Contracting with Accountable Care Organizations*.
- C. Bandi and Rajarshi Ghosh. *Robust design of All-Pay Auctions with an application to crowd-sourcing*

TEACHING  
EXPERIENCE

**Kellogg School Of Management**

*Teaching Faculty*

**2013 – present**

- Analytical Decision Modeling (OPNS 450) - Full time MBA (Winter 2014, 2015, 2016)
- Analytical Decision Modeling (OPNSM 450) - MSMS (Winter 2014, 2015, 2016)
- Analytical Decision Modeling (OPNSX 450) - Executive MBA (Winter 2015)
- Robust Optimization: Theory and Applications (OPNS 522) - Doctoral class (Fall 2016)

**Massachusetts Institute of Technology**

*Teaching Assistant*

**2008 – present**

- 15.761 Intro to Operations Management (Global Operations MBA Core)
- 15.060 Data, Models, and Decisions (MBA Core)
- 15.071 The Analytics Edge (MBA Elective)
- 15.081 Introduction to Mathematical Programming (Ph.D Core)
- 15.094 Robust Modeling, Optimization and Computation (Ph.D)

CONFERENCES  
AND TALKS

*Tractable stochastic analysis in high dimensions via robust optimization*

- ISMP, TU Berlin, Germany, 2012
- Google, Bangalore, India, 2012
- LIDS seminar, MIT, 2012
- NYU Stern Operations seminar Spring 2013
- Kellogg School of Management Operations seminar Winter 2012
- Cornell IEOR Operations seminar Spring 2013
- Ross School of Business Operations seminar Spring 2013
- Booth School of Business Operations seminar Spring 2013
- Stanford GSB Operations seminar Spring 2013
- NUS Operations seminar 2014

*Optimal Design for Multi-Item Auctions: A Robust Optimization approach*

- MSOM conference, New York, USA, 2012
- ISMP, TU Berlin, Germany, 2012
- Columbia IEOR-DRO joint seminar Fall 2014
- IBM Watson seminar 2014

*Robust Queueing Theory*

- Operations Management Seminar, MIT Sloan School of Management, 2012
- INFORMS Annual Meeting, Austin, Texas, USA, 2010
- Optimization Day, HEC-Montreal, Montreal, Canada, 2011
- NUS Operations seminar 2015

*Robust Option Pricing - An  $\epsilon$ -arbitrage approach*

- INFORMS Annual Meeting, Austin, Texas, USA, 2010
- Optimization Day, HEC-Montreal, Montreal, Canada, 2011

*Dynamic pricing model for online advertising*

- Yahoo advertising sciences group - External faculty seminar 2013
- Google Research - Bangalore - 2014

*Fairness considerations in network flow problems*

- Allerton conference 2015
- INFORMS Annual meeting 2015

*Efficiency of linear supply function bidding in electricity markets*

- CDC 2015
- INFORMS Annual meeting 2015

*Robust transient analysis of multi-server queueing systems and feedforward networks*

- Optimization-Simulation workshop, Purdue, 2015
- IBM Watson, 2015
- INFORMS Annual meeting 2015

*Robust wait time estimation in resource allocation systems with an application to kidney allocation*

- IBM Northeast regional conference - 2016
- INFORMS Annual meeting 2016
- INFORM Computing Society meeting 2017 (scedhuled)

*Robust resource allocation under uncertainty in risk preferences*

- USC IEOR seminar 2016
- Fuqua School of Business, Decision Sciences seminar 2016
- INFORMS Annual meeting 2016

*Operating-room staffing and online scheduling*

- INFORMS Annual MEeting 2016
- INFORM Computing Society meeting 2017 (scedhuled)

*Performance of affine policies in multi-stage robust optimization.*

- INFORMS Annual Meeting 2016

*Characterizing global stability of queueing networks via robust optimization*

- INFORMS Annual Meeting 2016

*Robust design of All-Pay Auctions with an application to crowdsourcing*

- INFORMS Annual meeting 2015

PROFESSIONAL  
ACTIVITIES

Member of INFORMS, Member of Applied Probability Society, MSOM Society and Optimization Society

Reviewer for *Management Science*, *Operations Research*, *Manufacturing and Services Operations Management*, *Mathematics of Operations Research*, *Queueing systems*, *POMS*, *IIE Transactions*, and *EJOR*

HONORS AND AWARDS

Finalist in George Nicholson Best Paper award - 2014  
 ORC Best paper award - 2013  
 Presidential Fellowship award from MIT  
 Best Presentation Award at INFORMS Annual Meeting in Financial Services Section.  
 Award for Academic Excellence at IIT Madras.  
 Award for Academic KVPY Fellowship award from Department of Science and Technology, Govt. of India.  
 Gold Medal awarded at the International Chemistry Olympiad Training Camp.  
 Third Position in the Regional Mathematics Olympiad.  
 All India Second Position in the National Science Olympiad.

PROFESSIONAL EXPERIENCE

**Investment Technology Group (ITG)**, Boston, MA

*Algorithmic Trading Research Intern* **2011**

Involved in developing and refining models to capture the price impact of a given trading strategy. This was within a larger framework that intends to identify transaction cost optimal trading strategies for a given set of market conditions.

**Yahoo! Research**, Bengaluru, India

*Research Intern* **2009**

Developed a new pricing model, known as Dynamic CPM pricing model, in the context of display advertising. Also studied the ad-serving problem under this scheme.

**Lehman Brothers**, Tokyo, Japan

*Intern : Exotic Derivatives Quant Desk* **2007**

Worked on implementation of pricing models for Exotic and Hybrid Products. Implemented both Monte-Carlo methods as well as PDE methods. Used C++ and the corresponding excel interfaces in this work.

**Bell Labs**, Bengaluru, India

*Intern : Softrouter team* **2006**

Worked on implementation of network algorithms for the Bell Labs *SoftRouter* project.

NATIONALITY Indian

REFERENCES *Available on request.*