

**Ozan Candogan**

ASSISTANT PROFESSOR OF  
OPERATIONS MANAGEMENT  
BOOTH SCHOOL OF BUSINESS

PHONE: (773) 834-2343

EMAIL: OZAN.CANDOGAN@CHICAGOBOOTH.EDU

WEB: [HTTP://FACULTY.CHICAGOBOOTH.EDU/OZAN.CANDOGAN](http://faculty.chicagobooth.edu/ozan.candogan)

EDUCATION	<p><b>Massachusetts Institute of Technology</b>, Cambridge, MA <span style="float: right;">2009 - 2013</span>          PhD in Electrical Engineering and Computer Science          (Minor in Economics)          Thesis: Dynamic Strategic Interactions: Analysis and Mechanism Design          Committee: Prof. Daron Acemoglu, Prof. Asuman Ozdaglar (advisor),          Prof. Pablo Parrilo (advisor), Prof. Georgia Perakis.</p> <p><b>Massachusetts Institute of Technology</b>, Cambridge, MA <span style="float: right;">2007 - 2009</span>          MS in Electrical Engineering and Computer Science          Thesis: Potential Games and Competitive Scheduling in Wireless Networks          Advisors: Prof. Asuman Ozdaglar and Prof. Pablo Parrilo.</p> <p><b>Bilkent University</b>, Ankara, Turkey <span style="float: right;">2003 - 2007</span>          BS in Electrical and Electronics Engineering</p>
WORK EXPERIENCE	<p><b>University of Chicago</b>, Chicago, IL <span style="float: right;">2015 (July) - Present</span>          Booth School of Business          Operations Management Area          Assistant Professor of Operations Management</p> <p><b>Duke University</b>, Durham, NC <span style="float: right;">2013 (July) - 2015 (June)</span>          Fuqua School of Business          Decision Sciences Area          Assistant Professor</p> <p><b>Massachusetts Institute of Technology</b>, Cambridge, MA <span style="float: right;">2007 - 2013</span>          Research/Teaching Assistant</p> <p><b>Microsoft Research New England</b>, Cambridge, MA <span style="float: right;">Summer 2010, 2011</span>          Research Intern; Mentors: Jennifer Chayes, Christian Borgs</p>
RESEARCH INTERESTS	<p><b>Impact of networks on operational decisions:</b> The role of social and economic networks in operational settings; improving firms' pricing, advertising, production, and procurement decisions using available network information; competition, intermediation, and risk propagation in networked systems.</p> <p><b>Complex social and economic systems and new methodologies:</b> Developing novel approaches and tools for the analysis of complex social and economic systems; trading network models, discrete convexity, and network flows; games on networks, decompositions of games, approximate characterization of equilibria and limiting behavior of dynamics in games; compact network models of preferences and their applications in pricing and auction design.</p> <p><b>Application areas:</b> Online social networks, ride-sharing networks, supply chain networks, online advertising, cloud computing, energy networks.</p>
AWARDS & HONORS	<ul style="list-style-type: none"> <li>• Winner of the LinkedIn Economic Graph Challenge <span style="float: right;">2015</span></li> <li>• George Nicholson Student Paper Competition Finalist <span style="float: right;">2013</span></li> <li>• Microsoft Research PhD Fellow <span style="float: right;">2012</span></li> <li>• Siebel Scholarship (MIT) for academic achievement and excellence <span style="float: right;">2009</span></li> <li>• Bilkent University High Honors student with full scholarship <span style="float: right;">2003 - 2007</span></li> <li>• The Scientific and Technological Research Council of Turkey Project Contest, Physics, 2nd place <span style="float: right;">2003</span></li> </ul>

- Ranked 55th in the University Entrance Exam in Turkey among approximately 1.5 million students 2003

- |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| JOURNAL PUBLICATIONS | <p>J1. Ozan Candogan and Aleksandar Pekec. Efficient Allocation and Pricing of Multi-Featured Items. Forthcoming in <i>Management Science</i>.</p> <p>J2. Ozan Candogan, Asuman Ozdaglar, and Pablo A Parrilo. Pricing equilibria and graphical valuations. Forthcoming in <i>ACM Transactions on Economics and Computation</i>.</p> <p>J3. Ozgur Dalkilic, Ozan Candogan, and Atilla Eryilmaz. Dayahead Electricity Pricing for a Heterogeneous Microgrid under Arbitrary Utility and Cost Structures. Forthcoming in <i>Transactions on Smart Grid</i>.</p> <p>J4. Santiago R Balseiro and Ozan Candogan. Optimal contracts for intermediaries in online advertising. <i>Operations Research</i>, 65(4):878–896, 2017.</p> <p>J5. Yang Cai, Ozan Candogan, Constantinos Daskalakis, and Christos Papadimitriou. Zero-sum polymatrix games: A generalization of minmax. <i>Mathematics of Operations Research</i>, 41(2): 648–655, 2016.</p> <p>J6. Ozan Candogan, Asuman Ozdaglar, and Pablo A Parrilo. Iterative auction design for tree valuations. <i>Operations Research</i>, 63(4):751–771, 2015.</p> <p>J7. Christian Borgs, Ozan Candogan, Jennifer Chayes, Ilan Lobel, and Hamid Nazerzadeh. Optimal multiperiod pricing with service guarantees. <i>Management Science</i>, 60(7):1792–1811, 2014.</p> <p>J8. Ozan Candogan, Asuman Ozdaglar, and Pablo A Parrilo. Dynamics in near-potential games. <i>Games and Economic Behavior</i>, 82:66–90, 2013a.</p> <p>J9. Ozan Candogan, Asuman Ozdaglar, and Pablo A Parrilo. Near-potential games: Geometry and dynamics. <i>ACM Transactions on Economics and Computation</i>, 1(2):11:1–11:32, 2013b.</p> <p>J10. Ozan Candogan, Kostas Bimpikis, and Asuman Ozdaglar. Optimal pricing in networks with externalities. <i>Operations Research</i>, 60(4):883–905, 2012.</p> <p>J11. Ozan Candogan, Ishai Menache, Asuman Ozdaglar, and Pablo A Parrilo. Flows and decompositions of games: Harmonic and potential games. <i>Mathematics of Operations Research</i>, 36(3): 474–503, 2011.</p> |
| WORKING PAPERS       | <p>W1. Kostas Bimpikis, Ozan Candogan, and Daniela Saban. Spatial pricing in ride-sharing networks, 2017. Major revision requested from <i>Operations Research</i>.</p> <p>W2. Kostas Bimpikis, Ozan Candogan, and Shayan Ehsani. Supply disruptions and optimal network structures, 2017. Minor revision requested from <i>Management Science</i>.</p> <p>W3. Santiago Balseiro, Ozan Candogan, and Huseyin Gurkan. Multi-stage intermediation in display advertising, 2017. Under review in <i>Operations Research</i>.</p> <p>W4. Ozan Candogan, Markos Epitropou, and Rakesh V Vohra. Competitive equilibrium and trading networks: A network flow approach, 2017. Working paper (preliminary version appeared in 2016 <i>ACM Conference on Economics and Computation</i>).</p> <p>W5. Ozan Candogan and Kimon Drakopoulos. Optimal signaling of content accuracy: Engagement vs. misinformation, 2017. Working paper.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| WORK IN PROGRESS     | <p>O1. Baris Ata, Alex Belloni, and Ozan Candogan. Latent agents in networks: Estimation and pricing, 2017. Work in progress.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| PATENTS              | <p>P1. Christian Borgs, Ozan Candogan, Jennifer Chayes, Ilan Lobel, and Hamid Nazerzadeh. “Pricing Mechanisms for Perishable Time-Varying Resources,” US20120095940 A1, 2012.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

PAPERS  
ACCEPTED IN  
PEER-  
REVIEWED  
CONFERENCE  
PROCEEDINGS  
AND OTHER  
PUBLICATIONS

- C1. Kostas Bimpikis, Ozan Candogan, and Daniela Saban. Spatial pricing in ride-sharing networks. In *Workshop on the Economics of Networks, Systems and Computation (NetEcon)*, 2017.
- C2. Ozan Candogan, Markos Epitropou, and Rakesh V Vohra. Competitive equilibrium and trading networks: A network flow approach. In *ACM Conference on Economics and Computation (EC)*, 2016.
- C3. Ozgur Dalkilic, Ozan Candogan, and Atilla Eryilmaz. Pricing algorithms for the day-ahead electricity market with flexible consumer participation. In *IEEE INFOCOM Smart Data Pricing Workshop*, 2013.
- C4. Ozan Candogan, Asuman Ozdaglar, and Pablo A Parrilo. Learning in near-potential games. In *IEEE Conference on Decision and Control and European Control Conference (CDC-ECC)*, 2011a.
- C5. Ozan Candogan, Kostas Bimpikis, and Asuman Ozdaglar. Optimal pricing in social networks. *ACM SIGecom Exchanges*, 10(3):15–17, 2011b.
- C6. Ozan Candogan, Ishai Menache, Asuman Ozdaglar, and Pablo A Parrilo. Near-optimal power control in wireless networks: A potential game approach. In *IEEE International Conference on Computer Communications (INFOCOM)*, 2010a.
- C7. Ozan Candogan, Kostas Bimpikis, and Asuman E Ozdaglar. Optimal pricing in the presence of local network effects. In *Workshop on Internet and Network Economics (WINE)*, 2010b.
- C8. Ozan Candogan, Asuman Ozdaglar, and Pablo A Parrilo. A projection framework for near-potential games. In *IEEE Conference on Decision and Control (CDC)*, 2010c.
- C9. Ozan Candogan, Ishai Menache, Asuman Ozdaglar, and Pablo A. Parrilo. Dynamics in near-potential games. In *Annual Allerton Conference on Communication, Control, and Computing (Allerton)*, 2010d.
- C10. Ozan Candogan, Ishai Menache, Asuman Ozdaglar, and Pablo A Parrilo. Competitive scheduling in wireless collision channels with correlated channel state. In *IEEE International Conference on Game Theory for Networks (GameNets)*, 2009.
- C11. Ozan Candogan, Hitay Özbay, and Haldun M Ozaktas. Controller implementation for a class of spatially-varying distributed parameter systems. In *International Federation of Automatic Control World Congress (IFAC)*, 2008.

TEACHING  
EXPERIENCE

- |                                                                           |                          |
|---------------------------------------------------------------------------|--------------------------|
| Instructor                                                                | Spring 2016, Winter 2017 |
| <i>40000 – Operations Management: Business Process Fundamentals</i> (MBA) |                          |
| University of Chicago                                                     |                          |
| <br>                                                                      |                          |
| Instructor                                                                | Spring 2017              |
| <i>36908 – Networks II: Introduction to Modeling and Analysis</i> (PhD)   |                          |
| University of Chicago                                                     |                          |
| <br>                                                                      |                          |
| Instructor                                                                | Winter 2016              |
| <i>36907 – Networks I: Introduction to Modeling and Analysis</i> (PhD)    |                          |
| University of Chicago                                                     |                          |
| <br>                                                                      |                          |
| Instructor                                                                | Spring 2015              |
| <i>611C – Decision Models</i> (Cross continent MBA)                       |                          |
| Duke University                                                           |                          |
| <br>                                                                      |                          |
| Instructor                                                                | Winter 2014              |
| <i>611W – Decision Models</i> (Weekend MBA)                               |                          |
| Duke University                                                           |                          |

Teaching assistant  
*15.066 – System Optimization and Analysis* (Sloan LGO Program)  
 Massachusetts Institute of Technology

Summer 2012

Teaching assistant  
*6.207 – Networks* (Undergraduate)  
 Massachusetts Institute of Technology

Fall 2009

INVITED TALKS AND CONFERENCE PRESENTATIONS	<p><b>Spatial Pricing in Ride-sharing Networks</b></p> <ul style="list-style-type: none"> <li>• UIC Business School, IDS Seminars (Scheduled) 2017</li> <li>• Massachusetts Institute of Technology (Scheduled) 2017</li> <li>• CMU, Heinz College (Scheduled) 2017</li> <li>• Universitat Pompeu Fabra, Statistics and Operations Research Seminar (Scheduled) 2017</li> <li>• USC Marshall School of Business, Operations Management Seminar 2017</li> <li>• NetEcon Workshop, Cambridge, MA 2017</li> <li>• MSOM Conference, Service SIG, Chapel Hill 2017</li> <li>• Applied Probability Society Conference, Evanston 2017</li> <li>• Marketplace Innovation Workshop, Palo Alto 2017</li> <li>• Networks, Matching, and Platforms Workshop, Denver 2017</li> <li>• Informs Annual Meeting, Nashville/Houston 2016, 2017</li> </ul> <p><b>Optimal Signaling of Content Accuracy</b></p> <ul style="list-style-type: none"> <li>• Facebook Research, Menlo Park (Scheduled) 2017</li> <li>• Stanford University, GSB, OIT Seminar 2017</li> </ul> <p><b>Latent Agents in Networks: Estimation and Pricing</b></p> <ul style="list-style-type: none"> <li>• MSOM Conference, Chapel Hill 2017</li> <li>• Informs Annual Meeting, Nashville 2016</li> </ul> <p><b>Competitive Equilibrium in Trading Networks: A Network Flow Approach</b></p> <ul style="list-style-type: none"> <li>• MIT, Laboratory for Information and Decision Systems 2017</li> <li>• NSF Conference on Network Science, St. Louis 2017</li> <li>• Informs Annual Meeting, Nashville 2016</li> <li>• Informs International Meeting, Waikoloa 2016</li> </ul> <p><b>Intermediation in Online Advertising</b></p> <ul style="list-style-type: none"> <li>• Informs Annual Meeting, Nashville 2016</li> <li>• Informs International Meeting, Waikoloa 2016</li> <li>• UIUC Decision and Control Seminar, Urbana-Champaign 2016</li> <li>• Kellogg School of Management, Operations Seminar, Evanston 2016</li> <li>• HKUST OM/IE Seminar, Hong Kong 2015</li> <li>• INSEAD DS/TOM Seminar, Singapore 2015</li> <li>• NUS Business School Decision Science Seminar, Singapore 2015</li> <li>• University of Toronto, Rotman School of Business, Toronto 2015</li> <li>• Informs Annual Meeting, Philadelphia 2015</li> <li>• ISMP Conference, Pittsburgh 2015</li> <li>• Ad Auctions Workshop, Portland, OR 2015</li> <li>• MSOM Conference, Toronto 2015</li> </ul>
-----------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

• Revenue Management Conference, New York	2015
• Stanford RAIN Seminar	2015
• Yahoo! Labs Seminar, Sunnyvale	2015
• POMS Conference, Washington D.C.	2015
• University of Chicago, Booth School of Business	2014
• Duke University, Fuqua School of Business, Decision Sciences Seminar	2014
<b>Supply Disruptions and Optimal Network Structures</b>	
• UIUC Operations Seminar, Urbana-Champaign	2016
• IMA Workshop on Analysis and Control of Network Dynamics, U. of Minnesota	2015
• Tuck School of Business, Dartmouth College, Hanover	2015
• MSOM Conference, Supply Chain SIG, Toronto	2015
• POMS Conference, Washington D.C.	2015
• INFORMS Annual Meeting, San Francisco	2014
<b>Efficient Iterative Auctions for Multi-featured Items</b>	
• University of Maryland, Smith School of Business	2014
• Microsoft Research Lab, New York	2014
• Revenue Management and Pricing Conference, Istanbul	2014
<b>Iterative Auction Design for Graphical Valuations</b>	
• INFORMS Annual Meeting, Minneapolis	2013
• University of Chicago, Booth School of Business	2013
• Duke University, Fuqua School of Business	2013
• Stanford University, GSB	2013
• Columbia University, GSB	2013
• NYU, Stern School of Business	2013
• Stanford University, MS&E	2013
• Purdue University, Krannert School of Management	2013
• USC, Marshall School of Business	2013
• University of Pennsylvania, Electrical and Systems Engineering	2013
• Johns Hopkins University, Carey Business School	2013
• University of Michigan, Ross School of Business	2013
• Microsoft Research, Cambridge, MA	2013
• MSOM Conference, New York	2012
<b>Optimal Pricing in Networks with Externalities</b>	
• POMS Conference, Chicago	2012
• Cambridge Area Economics and Computation Day (poster), Harvard University	2011
• 49th Annual Allerton Conference, Allerton	2011
• LIDS Student Conference, MIT	2011
<b>Optimal Multi-period Pricing with Service Guarantees</b>	
• Bilkent University, Industrial Engineering Department, Ankara	2014
• INFORMS Annual Meeting, Charlotte	2011
• MSOM Conference, Ann Arbor	2011
• Revenue Management Conference, New York	2011

### **Decomposition of Games: Harmonic and Potential Games**

- Workshop on Congestion Games, IMS, NUS, Singapore 2015
- 23rd Stony Brook Game Theory Festival, Stony Brook University 2012
- LIDS Advisory Committee Meeting, MIT (poster) 2012
- Market and Social Systems Engineering Seminar, University of Pennsylvania 2011
- 49th IEEE Conference on Decision and Control, Atlanta 2010
- Workshop on Decentralized Control in Systems of Strategic Actors, Santa Fe Institute 2010
- Northeast Control Workshop, The Johns Hopkins University 2010
- LIDS Student Conference, MIT 2010

### **Dynamics in Near-potential Games**

- 50th IEEE Conference on Decision and Control and European Control Conference, Orlando 2011
- INFORMS Annual Meeting, Charlotte 2011
- 48th Annual Allerton Conference, Allerton 2010

### **PROFESSIONAL REVIEWER SERVICE ACTIVITIES**

- Editorial: *Networks* (Wiley Journal) – Associate Editor.
- Journals: *Operations Research*, *Management Science*, *Manufacturing & Service Operations Management*, *Mathematics of Operations Research*, *American Economic Review*, *Journal of Economic Theory*, *Games and Economic Behavior*, *Theoretical Economics*, *American Economic Journal: Microeconomics*, *International Journal of Game Theory*, *Marketing Review*, *Networks*, *Operations Research Letters*, *IEEE Internet Computing*.

### **Workshop/Conference Organization**

- Senior program committee member for the *ACM Conference on Economics and Computation (EC)*, 2018.
- Organizer of the *Workshop on Social and Economic Networks*, Booth School of Business, 2017.
- Program committee member for the *Workshop on the Economics of Networks, Systems and Computation (NetEcon)*, 2017.
- Organizer of the Cluster on Sharing Economy, Matching Markets, and Networks, *Informs International Conference*, 2016.
- Program committee member for the *ACM Conference on Economics and Computation (EC)*, 2014 and 2016.
- Organizer of various sessions in *Informs Annual Meetings*, 2014-2017.
- Organizer of the Stream on Social and Economic Networks, *IFORS*, 2014.