Ceren Budak

CONTACT
INFORMATION

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RESEARCH
INTERESTS

My research interests lie in the area of computational social science, a discipline at the intersection of computer science, statistics, and the social sciences. I am particularly interested in applying large scale data analysis techniques to study problems with social, political, and policy implications.

EDUCATION

PhD. in Computer Science   *September 2007 to December 2012*
Computer Science Department, University of California, Santa Barbara
- Supervisors: Professor Amr El Abbadi, Professor Divyakant Agrawal
- Focus: Information Diffusion in Online Social Networks
- CGPA: 3.98/4.00

Bachelor in Computer Science   *September 2003 to June 2007*
Department of Computer Science, Bilkent University, Turkey
- Graduated ranking 1st
- CGPA: 3.96/4.00, Major CGPA: 4.00/4.00

EMPLOYMENT

Assistant Professor   *November 2015 to - present*
University of Michigan, School of Information   *Ann Arbor, MI*

Postdoctoral Researcher   *July 2013 to - July 2015*
Microsoft Research   *New York, NY*
Research area: computational social science. Below are three specific examples:
- Quantifying selection bias and slant in U.S. news media (collaborators: Sharad Goel and Justin M. Rao)
- Pluralism and solidarity during the Gezi uprising (collaborator: Duncan J. Watts)
- Estimating the economics of third-party advertising and the potential impact of Do-Not-Track on online advertising (collaborators: Sharad Goel, Justin M. Rao, and Giorgos Zervas)

Research Assistant   *September 2009 to December 2012*
University of California, Santa Barbara   *Santa Barbara, CA*
Main research area: social networks research, with a particular focus on information diffusion. Other research problems include data management solutions for developing regions and solving path problems on the GPU. (advisors: Professors Amr El Abbadi and Divyakant Agrawal)

Research Intern   *May 2012 to August 2012*
Microsoft Research   *Mountain View, CA*
Group dynamics in Twitter education chats; more particularly in capturing the factors for a Twitter user to become a member of a particular chat group. (advisor: Rakesh Agrawal)

Research Intern   *May 2011 to August 2011*
Microsoft Research   *Mountain View, CA*
   Inferring user interests in online social networks through graphical and diffusion models. (advisors: Rakesh Agrawal, Anitha Kannan)

Teaching Assistant   *September 2007 to June 2009, March-May 2011*
University of California, Santa Barbara   *Santa Barbara, CA*
   Graduate (advanced topics in databases) and undergraduate (data structures, algorithms, programming and scientific computing) courses. Responsible for discussion sessions and labs

Summer Intern, Google   *June-September 2009,New York, NY*
   Worked in the DeepWeb team on the problem of non-numerical value prediction for discovering new urls. Supervisor: Jeff Cox

Summer Intern, Yahoo   *June-September 2008, Sunnyvale, CA*
   Worked in Data Systems Group (Strategic Data Solutions, SDS) on the problem of capacity modeling. Supervisor: Partha Saha

Summer Intern, Tom Sawyer Software   *July-September 2006, Oakland, CA*
   Created constraint, accuracy, memory and CPU usage tests for Tom Sawyer products. Supervisor: Wendy Feng

Summer Intern, Havelsan Inc.   *June-July 2005, Ankara, Turkey*
   Implemented a UI to view/edit a DB, and convert data to XML format.

PUBLICATIONS

IN PROGRESS

[1] Ceren Budak, Sharad Goel, Justin M. Rao, Giorgos Zervas. Do-Not-Track and the Economics of Third-Party Advertising *Available at SSRN 250564*

[2] Ceren Budak, Anitha Kannan (Microsoft Research), Rakesh Agrawal (Microsoft Research), Jan Pedersen (Microsoft). Inferring User Interests in Online Social Networks. *Working Paper, MSR-TR-2014-68, May 2014*

PUBLISHED

CONFERENCE &
JOURNAL PAPERS

[3] Ceren Budak, Sharad Goel, Justin M. Rao. Fair and Balanced? Quantifying Media Bias Through Crowdsourced Content Analysis, *Public Opinion Quarterly.*

[4] Ceren Budak, Duncan J. Watts. Dissecting the Spirit of Gezi: Influence vs. selection in the Occupy Gezi movement. *Sociological Science.*

[5] Divyakant Agrawal, Amr El Abbadi, Vaibhav Arora, Ceren Budak, Theodore Georgiou, Hatem A. Mahmoud, Faisal Nawab, Cetin Sahin, Shiyuan Wang. Mind your Ps and Vs: A perspective on the challenges of big data management and privacy concerns. *BigComp 2015: 1-6*

[6] Ceren Budak, Theodore Georgiou, Divyakant Agrawal, Amr El Abbadi. GeoScope: Online Detection of Geo-Correlated Information Trends in Social Networks *Proceedings of VLDB Endowment (PVLDB) 2014*

[7] Divyakant Agrawal, Ceren Budak, Amr El Abbadi, Theodore Georgiou, Xifeng Yan. Big Data in Online Social Networks: User Interaction Analysis to Model User Behavior in Social Networks. *DNIS 2014: 1-16*

[8] Ceren Budak, Rakesh Agrawal (Microsoft Research). On Participation in Group Chats on Twitter. *22nd International Conference on World Wide Web (WWW'13)*

[9] Ceren Budak, Divyakant Agrawal, Amr El Abbadi. Diffusion of Information in Social Networks: Is it All Local? *International Conference on Data Mining (ICDM) 2012.*

[10] Ceren Budak, Divyakant Agrawal, Amr El Abbadi. Structural Trend Analysis for Online Social Networks *Proceedings of VLDB Endowment (PVLDB), 4(10):646656, July 2011.*

[11] Ceren Budak, Divyakant Agrawal, Amr El Abbadi. Limiting the Spread of Misinformation in Social Networks *Proceedings of the 20th international conference on World Wide Web (WWW'11) pages 665-674, New York, NY, USA, 2011. ACM.*

[12] Ceren Budak, Divyakant Agrawal, Amr El Abbadi. Where the Blogs Tip: Connectors, Mavens, Salesmen and Translators of the Blogosphere *Proceedings of the First Workshop on Social Media Analytics (SOMA '10) pages: 106-114, New York, NY, USA, 2010. ACM.*

[13] Aydin Buluc, John R. Gilbert, Ceren Budak. Solving Shortest Path Problems on the GPU *Parallel Computing 36(5-6): 241-253 (2010)*

TUTORIALS

[14] Divyakant Agrawal, Ceren Budak, Amr El Abbadi. Information Diffusion in Social Networks: Observing and Affecting What Society Cares About *Proceedings of the 20th ACM Conference on Information and Knowledge Management (CIKM 2011) pages: 2609-2610*

[15] Divyakant Agrawal, Ceren Budak, Amr El Abbadi. Information Diffusion in Social Networks: Observing and Influencing Societal Interests *Proceedings of VLDB Endowment (PVLDB), 4(12): 1512-1513 (2011)*

WORKSHOP
PRESENTATIONS &
BOOK CHAPTERS

[16] Ceren Budak, Sharad Goel, Justin M. Rao. Fair and Balanced? Quantifying Media Bias Through Crowdsourced Content Analysis, *Social science track at ICWSM 2015*

[17] Ceren Budak, Duncan J. Watts. Dissecting the Spirit of Gezi: Influence vs. selection in the Occupy Gezi movement. *Social science track at ICWSM 2015*

[18] Ceren Budak, Divyakant Agrawal, Amr El Abbadi. The Fallacy of Pigeonholing Global Users into Local Models *Workshop for Information and Decisions in Social Networks (WIDS 2012).*

[19] Ceren Budak, Divyakant Agrawal, Amr El Abbadi. Information Diffusion in Social Networks: Is Friendship the Dominant Force? *Workshop on Information in Networks (WIN 2012)*

[20] Ceren Budak, Divyakant Agrawal, Amr El Abbadi. Structure-Aware Trend Detection in Online Social Networks *Workshop on Information in Networks (WIN 2011)*

[21] Divyakant Agrawal, Bassam Bamieh, Ceren Budak, Amr El Abbadi, Andrew J.Flanagin, Stacy Patterson: Data-Driven Modeling and Analysis of Online Social Networks *Web-Age Information Management, volume 6897 of Lecture Notes in Computer Science, pages 317. Springer Berlin / Heidelberg, 2011*

INVITED TALKS	• Quantifying Pluralism and Solidarity in Social Movements: A Case Study of Gezi Park Uprising in Turkey. *The Center for Middle East Studies Distinguished Lecture Series, University of California Santa Barbara, November 2014*
	• Fair and Balanced? Quantifying U.S. News Media Bias through Crowdsourced Content Analysis*Department of Computer Science, University of California Santa Barbara, November 2014*
	• Quantifying Political Slant and Selection Bias of U.S. News Media. *COSN Committee Members Workshop, Microsoft Research Mountain View, July 2014*
	• Understanding and Managing the Diffusion of Information in Online Social Networks. *NEC Japan, March, 2014*
	• Understanding and Managing the Diffusion of Information in Online Social Networks. *Kyoto University, March, 2014*
	• Big Data in Online Social Networks: User Interaction Analysis to Model User Behavior in Social Networks. *Keynote Speaker, 9th Annual Workshop on Databases in Networked Information Systems, March, 2014*
	• The Future of Social Science Research: A Computational Social Science Perspective. *Womensphere 5th Annual Emerging Leaders Global Summit, January, 2014*
	• Navigating Through the Vast Space of Online Social Networks Research. *Technicolor Labs, Palo Alto, CA, 2012*
	• Use of Online Social Networks in Business: A Case for Viral Marketing and Redefining Influentials. *Istanbul Chamber of Commerce, Istanbul, Turkey, 2011*
	• Information Diffusion in Online Social Networks - Exploring the Vast Problem Space. *Istanbul Sehir University, Istanbul Turkey, 2011*
	• Information Diffusion in Online Social Networks - Exploring the Vast Problem Space. *Koc University, Istanbul Turkey, 2011*
	• Information Diffusion in Social Networks: Observing and Influencing Societal Interests *Tutorial presentation with Profs. Divyakant Agrawal and Amr El Abbadi in VLDB (International Conference on Very Large Databases), 2011*
	• Information Diffusion in Social Networks: Observing and Affecting What Society Cares About. *Tutorial presented single-handedly in CIKM (Conference on Information and Knowledge Management), 2011*
PROFESSIONAL ACTIVITIES	• Registration chair for COSN (ACM Conference on Online Social Networks) 2015
	• Program Committee Member for:
	• WWW (International Conference on World Wide Web) 2015,2016
	• ICWSM (International AAAI Conference on Web and Social Media) 2015
	• HCOMP (Conference on Human Computation and Crowdsourcing) 2015
	• WSDM (International ACM Conference on Web Search and Data Mining) 2014,2015
	• COSN (ACM Conference on Online Social Networks) 2014,2015
	• ICDM (IEEE International Conference on Data Mining) 2014
	• SIGMOD (ACM Special Interest Group On Management of Data Conference) 2013
	• Organizer for MSR NYC Data Science Seminar Series (for more info, please visit research.microsoft.com/en-us/events/msrnycdss/default.aspx)
	• Instructor for Microsoft Research Data Science Summer School (for more info, please visit https://ds3.research.microsoft.com)