

Motahhare Eslami
(Motahareh Eslamimehdiabadi)

Carnegie Mellon University, School of Computer Science
Human-Computer Interaction Institute

meslami@andrew.cmu.edu
<http://motahhare.com>

APPOINTMENTS

- Assistant Professor, Carnegie Mellon University, School of Computer Science, Starting at Fall 2020
Human-Computer Interaction Institute (HCII)
 - UX Researcher, Facebook 2019-2020
 - Graduate Research Assistant, Computer Science Department, 2012-2019
University of Illinois at Urbana-Champaign
 - Research Intern, Adobe Research, San Francisco, CA Spring & Summer 2017
 - Research Intern, Max Planck Institute for Software Systems Fall 2015
 - Graduate Research Assistant, Computer Engineering Department, 2009-2012
Sharif University of Technology
 - Undergraduate Research Assistant, Computer Engineering Department, 2007-2009
Sharif University of Technology
-

EDUCATION

Ph.D., Computer Science, University of Illinois at Urbana-Champaign, Illinois, U.S. 2019
Thesis: “Participating and Designing around Algorithmic Sociotechnical Systems”
Committee: Karrie Karahalios, Christian Sandvig, Brian Bailey, Hari Sundaram, Kevin Hamilton

M.S., Computer Engineering, Sharif University of Technology, Tehran, Iran 2011

B.S., Computer Engineering, Sharif University of Technology, Tehran, Iran 2009

RESEARCH INTERESTS

My work draws on *Human-Computer Interaction*, *Social Computing* and *Data Mining* techniques to investigate users’ behavior around opaque algorithmic systems, redesign these systems to communicate opaque algorithmic processes to users and provide them with a more informed, satisfying, and engaging interaction

HONORS AND AWARDS

- **Google PhD Fellowship** 2017-2019
- **Best Reviewer Award**, International Conference on Web & Social Media (ICWSM) 2018
Awarded to the top 20 reviewers
- **Heidelberg Laureate Forum Young Researcher** 2018
A prestigious international mathematics and computer science Forum (11% acceptance rate)
- **C.W. Gear Outstanding Graduate Student Award** 2017
Awarded annually to a graduate student who has demonstrated excellence in research, Department of Computer Science at University of Illinois at Urbana-Champaign
- **Adobe PhD Fellowship Finalist** 2017
- **Saburo Muroga Endowed Fellowship** 2016
Awarded to outstanding graduate students in Computer Science, University of Illinois at Urbana-Champaign

- **Feng Chen Memorial Award** 2016
Awarded to students who are first authors on a paper that has won a best paper award, Department of Computer Science, University of Illinois at Urbana-Champaign
 - **Facebook PhD Fellowship Finalist** 2016
 - **Selected for Rising Stars in EECS Workshop** 2015, 2016
 - **Best Paper Award, ACM CHI** 2015
 - **CS Grace Hopper Conference Scholarship**, University of Illinois at Urbana-Champaign 2014
 - **Honorable Mention in Facebook Midwest Regional Hackathon** 2013
 - **Exceptional Talent Award**, M.S., Computer Engineering (IT), Sharif University of Technology 2011
 - **3rd Rank in GPA**, M.S., Computer Engineering (IT), Sharif University of Technology 2011
 - **Exceptional Talent Award**, B.S., Computer Engineering (IT), Sharif University of Technology 2009
 - **1st rank in GPA**, B.S., Computer Engineering (IT), Sharif University of Technology 2009
-

PUBLICATIONS

Refereed Conference Papers

[c13] J. Asplund, **M. Eslami**, H. Sundaram, C. Sandvig and K. Karahalios. *Auditing Race and Gender Discrimination in Online Housing Markets*. Conditionally accepted at AAAI International Conference of Weblogs and Social Media (ICWSM), 2020.

[c12] **M. Eslami**, K. Vaccaro, M. K. Lee, A. Elazari Bar On, E. Gilbert, and K. Karahalios. *User Attitudes towards Algorithmic Opacity and Transparency in Online Reviewing Platforms*. ACM Conference on Human Factors in Computing Systems (CHI), 2019. [Acceptance Rate: 23.8%]

[c11] **M. Eslami**, S. R. Krishna Kumaran, C. Sandvig, K. Karahalios. *Communicating Algorithmic Process in Online Behavioral Advertising*. Proceedings of the ACM Conference on Human Factors in Computing Systems Conference (CHI), 2018. [Acceptance Rate: 26%]

[c10] K. Vaccaro, D. Huang, **M. Eslami**, C. Sandvig, K. Hamilton, and K. Karahalios. *The Illusion of Control: Placebo Effects of Control Settings*. Proceedings of the ACM Conference on Human Factors in Computing Systems Conference (CHI), 2018. [Acceptance Rate: 26%]

[c9] **M. Eslami**, K. Vaccaro, K. Karahalios, and K. Hamilton. *“Be careful; things can be worse than they appear”*: Understanding Biased Algorithms and Users’ Behavior around Them in Rating Platforms. The AAAI International Conference of Weblogs and Social Media (ICWSM), 2017. [Acceptance Rate: 14%]

[c8] J. Kulshrestha, **M. Eslami**, J. Messias, M. B. Zafar, S. Ghosh, K. Gummadi, and K. Karahalios. *Quantifying Search Bias: Investigating Sources of Bias for Political Searches in Social Media*. Proceedings of the ACM Conference on Computer Supported Cooperative Work (CSCW), 2017. [Acceptance Rate: 34.5%]

[c7] **M. Eslami**, K. Karahalios, C. Sandvig, K. Vaccaro, A. Rickman, K. Hamilton, and A. Kirlik. *First I “like” it, then I hide it: Folk Theories of Social Feeds*. Proceedings of the ACM Conference on Human Factors in Computing Systems (CHI), 2016. [Acceptance Rate: 23.5%]

[c6] **M. Eslami**, A. Rickman, K. Vaccaro, A. Aleyasen, A. Voung, K. Karahalios, K. Hamilton, and C. Sandvig. *“I always assumed that I wasn’t really that close to [her]”*: Reasoning about Invisible Algorithms in News Feeds. Proceedings of the ACM Conference on Human Factors in Computing Systems (CHI), 2015. [Acceptance Rate: 23%] **Best Paper Award**

[c5] **M. Eslami**, A. Aleyasen, R. Zilouchian Moghadam and K. Karahalios. *Friend Grouping Algorithms for Online Social Networks: preference, bias, and implications*. International Conference on Social Informatics (SocInfo), 2014. [Acceptance Rate: 23%]

[c4] **M. Eslami**, H. R. Rabiee, and M. Salehi. *Sampling from Diffusion Networks*. ASE and IEEE International Conference on Social Informatics, 2012. [Acceptance Rate: 11.5%]

[c3] P. Siyari, H. R. Rabiee, M. Salehi and **M. Eslami**. *Network Reconstruction under Compressive Sensing*. ASE and IEEE International Conference on Social Informatics, 2012. [Acceptance Rate: 11.5%]

[c2] **M. Eslami**, H. R. Rabiee, and M. Salehi. *Diffusion-Aware Sampling and Estimation in Information Diffusion Networks*. IEEE International Conference on Social Computing, 2012. [Acceptance Rate < 10%]

[c1] **M. Eslami**, H. R. Rabiee, and M. Salehi. *DNE: A Method for Extracting Cascaded Diffusion Networks from Social Networks*. IEEE International Conference on Social Computing, 2011. [Acceptance rate: 9.8%]

Refereed Journal Papers

[j4] J. Salminen, J. M. Santos, S. Jung, **M. Eslami**, and B. J. Jansen. *Persona Transparency: Analyzing the Impact of Explanations on Perceptions of Data-Driven Personas*, International Journal of Human-Computer Interaction, 2019.

[j3] J. Kulshrestha, **M. Eslami**, J. Messias, M. B. Zafar, S. Ghosh, K. P. Gummadi, and K. Karahalios. *Search bias quantification: investigating political bias in social media and web search*. Information Retrieval Journal, 1-40, 2018.

[j2] E. S. Hosseini, V. Esmaelzadeh, and **M. Eslami**. *A Hierarchical Sub-Chromosome Genetic Algorithm (HSC-GA) to Optimize Power Consumption and Data Communications Reliability in Wireless Sensor Networks*. Wireless Personal Communications (Springer). Vol. 80, no. 4, pp. 1579-1605, Oct. 2014.

[j1] P. Siyari, H. R. Rabiee, M. Salehi, and **M. Eslami**. *Network Reconstruction under Compressive Sensing*. ASE Human Journal. Vol.1, issue 3, pp. 130-143, 2012.

Extended Abstracts & Work-in-Progress Papers

[e7] **M. Eslami**, A. Aleyasen, K. Karahalios, K. Hamilton and C. Sandvig. *FeedVis: A Path for Exploring News Feed Curation Algorithms*. ACM Conference on Computer Supported Cooperative Work (CSCW), Demonstration Paper, 2015.

[e6] **M. Eslami**, A. Rickman, K. Vaccaro, A. Aleyasen, K. Karahalios, K. Hamilton, and C. Sandvig. *Exposure to the Invisible: Reasoning about Hidden Algorithms in the News Feed*, International Conference on Computational Social Science (IC^2S^2), 2015.

[e5] **M. Eslami**. *Exposure to the Invisible: Algorithm Awareness from the Individual to the Collective*. CSL Student Conference, University of Illinois at Urbana-Champaign, 2015.

[e4] K. Hamilton, K. Karahalios, C. Sandvig and **M. Eslami**. *A Path to Understanding the Effects of Algorithm Awareness*. Alt.Chi: Extended Abstracts of the ACM Conference on Human Factors in Computing Systems (CHI), 2014.

[e3] N. Spirin, **M. Eslami**, J. Ding, P. Jain, B. Bailey and K. Karahalios. *Searching for Design Examples with Crowdsourcing*. International World Wide Web Conference (WWW) Poster, 2014.

[e2] **M. Eslami**, A. Aleyasen, R. Zilouchian Moghadam and K. Karahalios. *Evaluation of Automated Friend Grouping in Online Social Networks*. Extended Abstracts of the ACM Conference on Human Factors in Computing Systems (CHI), 2014.

[e1] **M. Eslami**, A. Aleyasen and K. Karahalios. *Make Community Detection More Human*. The Human Computer Interaction Consortium (HCIC) Boaster, 2013.

Workshop Papers

[w3] **M. Eslami** and K. Karahalios. *Communicating the Algorithmic Self to Users*. The AAAI International Conference of Weblogs and Social Media (ICWSM), Workshop on Data Driven Persona and Human-Driven Analytics, 2018.

[w2] **M. Eslami** and K. Karahalios. *Embracing Seamfulness and Uncertainty in Designing around Hidden Algorithms*. ACM Conference on Human Factors in Computing Systems (CHI), Workshop on Designing for Uncertainty in HCI: When Does Uncertainty Help?, 2017.

[w1] **M. Eslami** and K. Karahalios. *Investigating Users' Understanding of Invisible Algorithms and Designing around It*. The AAAI International Conference of Weblogs and Social Media (ICWSM), Workshop on Studying User Perceptions and Experiences with Algorithms, 2017.

Doctoral Colloquium

[d1] **M. Eslami**. *Understanding and Designing around Users' Interaction with Hidden Algorithms in Socio-technical Systems*. ACM Conference on Computer Supported Cooperative Work (CSCW) Doctoral Colloquium, 2017.

TEACHING EXPERIENCE

- *Teaching Assistant*, Introduction to Data Mining, UIUC Spring 2018
- *Teaching Assistant*, Stochastic Processes, Sharif University of Technology Fall 2011
- *Teaching Assistant*, Multimedia Networks, Sharif University of Technology Spring 2010
- *Teaching Assistant*, Software Engineering, Sharif University of Technology Spring 2009
- *Teaching Assistant*, Advanced Programming (Java), Sharif University of Technology Fall 2008
- *Teaching Assistant*, Introduction to Programming (C++), Sharif University of Technology Fall 2007, Spring 2008

STUDENT MENTORING EXPERIENCE

- *Internship Mentor*, UIUC Summer & Fall 2018
 - Nouran Soliman: Working on the filter bubble project and building the BubbleBreaker Twitter application
 - *Research Advisor* to Masters students, UIUC & Sharif University
 - Joon Park: Working on adding transparency into opaque algorithmic systems 2018-present
 - Joshua Asplund: Working on the housing audit project Summer & Fall 2018
 - Jingning Zhang: Working on the Fiddler project Fall 2014 & Spring 2015 (now software engineer at Facebook)
 - Payam Siyari: Working on sampling on diffusion networks Spring 2012 (now PhD student at Georgia Tech)
 - *Research Advisor* to UIUC undergraduates, PURE Program Spring 2014
 - Andy Vuong, Akshat Gupta, and Akshun Gupta: Teaching HCI fundamentals
-

Invited Talks & Panels

- Stanford HCI seminar Fall 2019
Title: “Participating and Designing around Algorithmic Sociotechnical Systems”
- Social computing Course, Wellesley College Fall 2019
Lecture: “Participating and Designing around Algorithmic Sociotechnical Systems”
- CS 598: HCI for ML, University of Illinois at Urbana-Champaign Fall 2019
Lecture: “Participating and Designing around Algorithmic Sociotechnical Systems”
- SummerPIT-Understandable AI, Computer Science Department, Aarhus University Summer 2019
Title: “Participating and Designing around Algorithmic Sociotechnical Systems”
- Facebook’s Digital Advertising Workshop Summer 2019
Title: “Communicating Algorithmic Process in Online Behavioral advertising”
- Association of Internet Researchers (AoIR) Conference, Montreal, Canada Fall 2018
Panel: “Kicking the Black Box: The Perils and Promise of Algorithm Auditing”
- Big Data Summit, University of Illinois at Urbana-Champaign Fall 2018
Panel: “Big Data Summit Data Governance”
- CS 498: Computational Advertising, University of Illinois at Urbana-Champaign Fall 2018
Lecture: “Communicating Algorithmic Process in Online Behavioral advertising”
- CSL Student Conference, University of Illinois at Urbana-Champaign Spring 2015
“Exposure to the Invisible: Algorithm Awareness from the Individual to the Collective”

SERVICE

Program Committee

- International Conference on Web and Social Media (ICWSM) 2016-2019

Reviewer

- Human-Computer Interaction Journal 2019
- SocInfo Conference 2019
- Human Factors in Computing Systems Conference (CHI) 2016-2019
- Computer-Supported Cooperative Work and Social Computing Conference (CSCW) 2016-2019
- International Conference on Web and Social Media (ICWSM) 2015-2019
- ACM International Management of Management of Data (SIGMOD) 2017
- Semantic Web Journal 2017
- Social Media+Society Journal 2016
- International Journal of Human-Computer Studies 2016
- Behaviour & Information Technology Journal 2015
- Elsevier Computer Communications Journal 2015
- IEEE International Conference on Social Computing (SocialCom) 2011-2012

Student Volunteer

- CSCW SV Chair 2019
 - CSCW SV 2018
-

SELECTED MEDIA COVERAGE

- “We Need Bug Bounties for Bad Algorithms” May 3, 2018
Motherboard (Vice). Amit Elazari Bar On
- “Op-ed: What algorithms can learn from Donald Trump’s hair” Jul 23, 2016
Digiday. Elizabeth Lee
- “Facebook’s news feed algorithm is so mysterious, users are developing ‘folk theories’ about how it works” May 14, 2016
Quartz. Joon Ian Wong
- “Is Facebook reinforcing your political bias?” May 11, 2016
The Christian Science Monitor. Max Lewontin
- “Will an artificially intelligent robot steal your job?” Apr 11, 2016
BBC. Graihagh Jackson
- “Search Engine Agendas” Apr 2016
Communications of ACM. Gary Anthes
- “How Facebook and Google’s Algorithms Are Affecting Our Political Viewpoints” Oct 15, 2015
Huffingtonpost. Megan Anderle
- “Here’s How Facebook’s News Feed Actually Works” July 9, 2015
Time. Victor Luckerson
- “Many, many Facebook users still don’t know that their news feeds are filtered by an algorithm” Mar 27, 2015
Splinter. Alexis Madrigal
- “How do you govern a (hidden, fluid and amoral) algorithm?” Mar 18, 2015
Fortune. Stacey Higginbotham
- “How Algorithms Subtly Control What We Read, Hear, Watch And (Ultimately) Think” Mar 16, 2015
International Business Times. Christopher Zara
- “Algorithm Awareness” Oct 21, 2014
MIT Technology Review. Karrie Karahalios and Sam Kerr
- “Algorithm Awareness” Sep 21, 2014
CBC Radio
- “The secret system controlling your Facebook News Feed” Jul 30, 2014
New Scientist. Hal Hodson
- “A Social Science Audit for Facebook’s News Feed?” Jul 30, 2014
Social Science Space. J. Nathan Matias
- “OkCupid reveals it’s been lying to some of its users. Just to see what’ll happen” Jul 28, 2014
Washington Post. Brian Fung
- “Uncovering Algorithms: Looking Inside the Facebook News Feed” Jul 22, 2014
MIT Center for Civic Media. J. Nathan Matias

REFERENCES

Karrie Karahalios

Professor, *Computer Science Department*, UIUC
kkarahal@illinois.edu

Christian Sandvig

Professor, *School of Information, Department of Communication Studies*, University of Michigan
csandvig@umich.edu

Kevin Hamilton

Professor, *School of Art + Design*, UIUC
kham@illinois.edu

Eric Gilbert

Associate Professor, *School of Information*, University of Michigan
eegg@umich.edu

Hari Sundaram

Associate Professor, *Computer Science Department, Advertising Department*, UIUC
hs1@illinois.edu

Krishna P. Gummadi

Associate Professor, *Computer Science*, Max Planck Institute for Software Systems (MPI-SWS)
gummadi@mpi-sws.org