Tara Safavi

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Education

PhD in Computer Science, *University of Michigan Ann Arbor* *2017–2022*
— Research adviser: Danai Koutra

MS in Computer Science, *University of Michigan Ann Arbor* *2017–2019*
— Research adviser: Danai Koutra

BS in Computer Science, *University of Michigan Ann Arbor* *2013–2017*
— Graduated with Highest Distinction and High Honors

Awards and honors

Best student paper award, *IEEE ICDM* *Nov 2019*

NSF Graduate Research Fellowship *2018–2021*

Best paper nominee, *IEEE ICDM* *Nov 2017*

Rackham Dean's and Named PhD fellowship *2017–2018*
Full first-year PhD fellowship from the University of Michigan

Google Women Techmakers Scholarship *April 2017*
Formerly known as the Google Anita Borg scholarship, awarded to 20 women nationwide

University of Michigan Outstanding Research Award *March 2017*
Awarded to a computer science undergraduate for research with a faculty member

University of Michigan Marian Sarah Parker Prize *March 2017*
Awarded to an outstanding woman undergraduate in the College of Engineering

Stamps Leadership Scholarship *2013–2017*
National scholarship administered by the Stamps Family Charitable Foundation: Four-year funding & stipend awarded to 18 incoming University of Michigan undergraduates

Publications

Articles in peer-reviewed conference proceedings

[7] *Toward Activity Discovery in the Personal Web*
T. Safavi, A. Fourney, R. Sim, M. Juraszek, S. Williams, N. Friend, D. Koutra, P. Bennett
WSDM – ACM International Conference on Web Search and Data Mining, 2020
Full paper, acceptance rate 15%

[6] *Distribution of Node Embeddings as Multiresolution Features for Graphs*
M. Heimann, T. Safavi, D. Koutra
ICDM – IEEE International Conference on Data Mining, 2019
Full paper + oral presentation, acceptance rate 9%
Best student paper award

[5] *Personalized Knowledge Graph Summarization: From the Cloud to Your Pocket*
T. Safavi, C. Belth, L. Faber, D. Mottin, E. Müller, D. Koutra
ICDM – IEEE International Conference on Data Mining, 2019
Full paper + oral presentation, acceptance rate 9%

[4] *Smart Roles: Inferring Professional Roles in Email Networks*
D. Jin*, M. Heimann*, T. Safavi, M. Wang, W. Lee, L. Snider, D. Koutra
KDD – ACM SIGKDD International Conference on Knowledge Discovery and Data Mining, 2019
Full paper + poster presentation, acceptance rate 20%

[3] *REGAL: Representation Learning-based Graph Alignment*
M. Heimann, H. Shen, T. Safavi, D. Koutra
CIKM – ACM International Conference on Information and Knowledge Management, 2018
Full paper + oral presentation, acceptance rate 17%

[2] *Career Transitions and Trajectories: A Case Study in Computing*
T. Safavi, M. Davoodi, D. Koutra
KDD – ACM SIGKDD International Conference on Knowledge Discovery and Data Mining, 2018
Full paper + poster presentation, acceptance rate 22%

[1] *Scalable Hashing-Based Network Discovery*
T. Safavi, C. Sripada, D. Koutra
ICDM – IEEE International Conference on Data Mining, 2017
Full paper + oral presentation, acceptance rate 9%
Best paper nominee

Articles in peer-reviewed journals and book chapters

[4] *"Network Summarization"*
D. Koutra, T. Safavi, Y. Liu, A. Dighe
Social Media Analytics: Advances and Applications – CRC Press (in press), 2019

[3] *Fast Network Discovery on Sequence Data via Time-Aware Hashing*
T. Safavi, C. Sripada, D. Koutra
KAIS – Knowledge and Information Systems, 2018
Invited from ICDM 2017

[2] *Graph Summarization Methods and Applications: A Survey*
Y. Liu*, T. Safavi*, A. Dighe, D. Koutra – (**equal contribution*)
CSUR – ACM Computing Surveys, 2018

[1] *Reducing Large Graphs to Small Supergraphs: A Unified Approach*
Y. Liu, T. Safavi, N. Shah, D. Koutra
SNAM – Social Network Analysis and Mining, 2018

Industry experience

Intern, *Bloomberg, London, UK* *Sept 2019–*
— Knowledge representations for information retrieval and NLP
— Mentor: Edgar Meij

Intern, *Microsoft Research, Redmond, WA* *May–Aug 2019*
— Machine learning for personal information management
— Mentors: Adam Fourney, Robert Sim, Marcin Juraszek
— One paper at WSDM 2020 + one patent pending

Intern, *Google, Sunnyvale, CA* *May–Aug 2017*
— Machine learning for Google's network infrastructure
— Mentor: Xiang Wang
— One patent pending

Invited talks

Toward activity discovery in the personal web
— Microsoft MSAI, London, UK, Oct 2019

Mining and learning over richly attributed, heterogeneous graphs
— Bloomberg, London, UK, Sept 2019

Improving network-based tasks with interpretable and latent representations
— Microsoft Research, Redmond, WA, Dec 2018

Scalable inference of networks from time series data
— Google, Sunnyvale, CA, June 2017
— University of Michigan Discrete Math (EECS 203), April 2017

Invited workshops

CRA-W Grad Cohort, *San Francisco, CA* *April 2018*
KDD Broadening Participation in Data Mining, *San Francisco, CA* *August 2016*

Academic service

Reviewing
— PC member: ICDM demos 2018, ICANN 2019
— Reviewer: TKDD

Grant writing
— Contributed toward NSF CAREER: "Timely Insights: Interpretable, Multi-scale Summarization of Networks over Time", PI Danai Koutra, total $555,401 (funded March 2019)

Outreach

Peer mentoring, *Ann Arbor, MI* *Sept 2018—*
Mentored students in applying for the NSF GRFP and other fellowships

Girls Encoded, *Ann Arbor, MI* *April 2018–2019*
Developed and taught a middle-school computing program

Explore Graduate Studies Symposium, *Ann Arbor, MI* *Sept 2017, 2018*
Student panel and one-on-one writing feedback for prospective CSE graduate students

Ensemble of CSE Ladies (ECSEL), *Ann Arbor, MI* *Jan–July 2018*
Board member of the ECSEL group for graduate CSE women

Seven Mile Coding, *Detroit, MI* *April 2017–Jan 2018*
Board member of the Seven Mile Coding initiative in Brightmoor, Detroit

Girls Who Code, *Ann Arbor, MI* *Jan 2016–April 2017*
Co-founder of the U-M Women in Science and Engineering (WISE) Girls Who Code club

Teaching

EECS 280, *Programming and Introductory Data Structures* *Jan–April 2017*
Undergraduate TA

EECS 490, *Programming Languages* *Sept–Dec 2016*
Undergraduate TA, first offering of course

EECS 183, *Elementary Programming Concepts* *Jan–Dec 2015*
Undergraduate TA