

Tara Safavi

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Education

PhD in Computer Science, *University of Michigan*, Ann Arbor 2017–

Adviser: Danai Koutra. Research in data mining on graphs, time series, and sequences.

BS in Computer Science, *University of Michigan*, Ann Arbor 2013–2017

GPA: 3.98/4.0. Graduated with Highest Distinction.

Publications

Book chapters

1. Danai Koutra, [Tara Safavi](#), Yike Liu, Abhilash Dighe. "Network Summarization", *Social Media Analytics: Advances and Applications*, CRC Press (in press), 2018

Journal

2. Yike Liu*, [Tara Safavi](#)*, Abhilash Dighe, Danai Koutra. *Graph Summarization Methods and Applications: A Survey*. ACM Computing Surveys (**CSUR**), February 2018 — (*equal contribution)
1. Yike Liu, [Tara Safavi](#), Neil Shah, Danai Koutra. *Reducing Large Graphs to Small Supergraphs: A Unified Approach*. Social Network Analysis and Mining Journal (**SNAM**), February 2018

Conference

1. [Tara Safavi](#), Chandra Sripada, Danai Koutra. *Scalable Hashing-Based Network Discovery*. IEEE International Conference on Data Mining (**ICDM'17**), November 2017 — **full paper (9% acceptance rate) + best paper nominee**

Workshop

2. [Tara Safavi](#), Chandra Sripada, Danai Koutra. *Scalable Inference of Functional Networks from Time Series Data*. SDM Workshop on Inferring Networks from Non-Network Data (**SDM NetInf'17**), April 2017
1. Yike Liu, [Tara Safavi](#), Neil Shah, Danai Koutra. *Reducing Million-Node Graphs to a Few Structural Patterns: A Unified Approach*. KDD Workshop on Mining and Learning With Graphs (**KDD MLG'16**), August 2016

Other

1. [Tara Safavi](#). *Scalable Inference of Networks from Time Series Data*. University of Michigan **honors undergraduate thesis**, April 2017 — **awarded High Honors**

Awards and Honors

NSF Graduate Research Fellowship April 2018

Best paper candidate, IEEE ICDM 2017 Nov 2017

Rackham Dean's and Named PhD fellowship from the University of Michigan Sept 2017

Google Women Techmakers Scholarship April 2017

Formerly known as the Google Anita Borg scholarship.

Awarded to 20 women nationwide for contributions to the community of women in technology.

University of Michigan Marian Sarah Parker Prize March 2017

Awarded to an outstanding woman undergraduate in the College of Engineering.

University of Michigan Outstanding Research Award *March 2017*

Awarded to a computer science undergraduate for research with a faculty member.

Stamps Leadership Scholarship *March 2013*

National scholarship administered by the Stamps Family Charitable Foundation.

Four-year funding & stipend awarded to 18 incoming University of Michigan undergraduates.

Conference travel awards

- o IEEE ICDM: October 2017
- o ACM SIGKDD: June 2016
- o Microsoft Conference Scholarship for Grace Hopper: April 2016

Positions

Research Assistant, *University of Michigan*, Ann Arbor, MI *Jan 2016–*

Graph-focused data mining and data science in the [GEMS Lab](#) led by Danai Koutra.

Intern, *Google*, Sunnyvale, CA *May–Aug 2017*

Machine learning to understand and optimize Google's global-scale network infrastructure.

Intern, *Microsoft*, Redmond, WA *May–Aug 2016*

Anomaly detection for the Azure HDInsight Hadoop and Spark services.

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.

Volunteering and Outreach

Ensemble of CSE Ladies (ECSEL), Ann Arbor, MI *Jan 2018–*

Board member of ECSEL, Michigan's computer science graduate women group.

Seven Mile Coding, Detroit, MI *Oct 2017–Jan 2018*

Board member of the U-M Seven Mile Coding initiative in Brightmoor, Detroit.

Explore Graduate Studies Symposium, Ann Arbor, MI *Sept 2017*

Student panel and one-on-one writing feedback for prospective CSE graduate students.

Girls Who Code, Ann Arbor, MI *Jan 2016–April 2017*

Co-founder of the U-M Women in Science and Engineering Girls Who Code club.

Invited Talks

Scalable Inference of Networks from Time Series Data, Sunnyvale, CA *June 2017*

Lightning talk in the NetSoft group.

Scalable Inference of Networks from Time Series Data, Ann Arbor, MI *April 2017*

Guest lecture for Discrete Mathematics (EECS 203).

Scalable Inference of Networks from Time Series Data, Ann Arbor, MI *April 2017*

Honors undergraduate thesis defense.

Invited Workshops

CRA-W Grad Cohort, San Francisco, CA. *April 2018*

KDD Broadening Participation in Data Mining, San Francisco, CA. *August 2016*