

# Tara Safavi

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## Education

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

GPA: 4.0/4.0. Advised by Danai Koutra.

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

GPA: 3.98/4.0. Graduated with Highest Distinction.

## Awards and Honors

**NSF Graduate Research Fellowship** 2018–2021

**Best paper candidate**, IEEE ICDM 2017 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 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** 2013–2017

National scholarship administered by the Stamps Family Charitable Foundation.

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

### Conference travel awards

Various grants to attend conferences: ACM SIGKDD (2016, 2018), IEEE ICDM (2017), Microsoft Conference Scholarship for Grace Hopper (2016)

## 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

3. [Tara Safavi](#), Chandra Sripada, Danai Koutra. *Fast Network Discovery on Sequence Data via Time-Aware Hashing*. Under review with Knowledge and Information Systems (**KAIS**), 2018. **Invited as part of the "best of ICDM 2017" special issue**
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

2. [Tara Safavi](#), Maryam Davoodi, Danai Koutra. *Career Transitions and Trajectories: A Case*

*Study in Computing*. ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (**KDD'18**), August 2018. **Additional oral presentation at the KDD'18 BigScholar workshop**

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) and best paper nominee**

### Workshop

3. Lukas Faber, Tara Safavi, Davide Mottin, Emmanuel Müller, Danai Koutra. *Adaptive Personalized Knowledge Graph Summarization*. ACM SIGKDD Workshop on Mining and Learning With Graphs (**KDD MLG'18**), August 2018
2. Tara Safavi, Chandra Sripada, Danai Koutra. *Scalable Inference of Functional Networks from Time Series Data*. SIAM 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*. ACM SIGKDD 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**

## Industry Positions

**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  
Honors undergraduate thesis defense.

*April 2017*

## **Invited Workshops**

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

*April 2018*

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

*August 2016*