

Tegan Wilson

teganwilson@cs.cornell.edu
http://www.cs.cornell.edu/~teganwilson/
www.linkedin.com/in/teganwilson/

Education

Cornell University, Ithaca, NY. Aug. 2018–Present

- ❖ PhD student advised by Robert Kleinberg.
- ❖ Current interests: *Algorithms, Combinatorics, Information Theory and Complexity*.
- ❖ Current GPA 3.89. Coursework: Graduate Algorithms, Spectral Graph Theory, Algorithmic Game Theory.

Carleton College, Northfield, MN. Sept. 2014–June 2018

- ❖ B.A. in Computer Science and Mathematics, June 2018. GPA 3.73.
- ❖ Relevant Coursework: Algorithms, Real Analysis I and II, Abstract Algebra, Advanced Linear Algebra, Combinatorial Theory.

Study Abroad:

- ❖ *Budapest Semesters in Mathematics* (Fall 2016): Studied Combinatorics of Finite Sets, Combinatorial Optimization, Mathematical Cryptography, and Theory of Computing.
- ❖ *Hokkaido International Foundation Summer Homestay* (Hakodate, Japan, 2016): Japanese language and culture intensive program with homestay. Attended everyday language classes, and completed an independent study on Japanese traditional dance.

Research Projects

Oblivious Circuit Switching Networks, Jan. 2021–Present

- ❖ Current project—joint work with Daniel Amir, Robert Kleinberg, Hakim Weatherspoon, Vishal Shrivastav, and Rachit Agamwal.

Entropy Inequalities → **Private Simultaneous Messaging Protocols**, Apr. 2020–Dec. 2020

Network Coding, May 2019–Apr. 2020

Sandia National Laboratory Graduate Research Intern, May 2019–Aug. 2019

- ❖ Developed a model and wrote a program to identify change of edges appearing over time in temporal network data.

CS Senior Group Research Project, Sept. 2017–Jan. 2018

- ❖ Formulated a way to rescale complex networks to a much smaller graph while preserving important properties of the nodes.
- ❖ Did a case analysis on the lexical network using Python, found that two natural orderings of words did a good job at maintaining structure.

NREIP Intern at the Naval Research Laboratory, June 2017–Aug. 2017

- ❖ Co-developed a mathematical model to estimate the impulse response patterns of a photodiode and wrote software to collect and analyze data.
- ❖ Communicated between members of the team to develop cohesiveness of the project.

Publications

- ❖ Jeremy D. Wendt, Richard V. Field, Jr., Cynthia A. Phillips, Arvind Prasad, **Tegan Wilson**, Sucheta Soundarajan Sanjukta Bhowmick. *Partitioning Communication Streams into Graph Snapshots*. Under Submission to IEEE Transactions on Network Science and Engineering.
- ❖ Violet Brown, Xi Chen, Maryam Hedayati, Camden Sikes, Julia Strand, **Tegan Wilson**, David Liben-Nowell. [Node Ordering for Rescalable Network Summarization \(or, the Apparent Magic](#)

[of Word Frequency and Age of Acquisition in the Lexicon](#)). In: Aiello L., Cherifi C., Cherifi H., Lambiotte R., Lió P., Rocha L. (eds) Complex Networks and Their Applications VII. COMPLEX NETWORKS 2018. Studies in Computational Intelligence, vol 812. Springer, Cham

- ❖ Jesse Morgan, Meredith Hutchinson, **Tegan Wilson**, and Jonathan M. Nichols. [Linear transfer function estimation using the photodiode impulse response](#). Opt. Lett. 44, 5001-5004 (2019)
- ❖ Caitlin Williams, Meredith Hutchinson, **Tegan Wilson**, and Jonathan Nichols. (2018). [Volterra Modeling of Wideband Behavior of MZM and Photodiode IMD2](#). 1-2. 10.1109/IPCon.2018.8527261.

Other Work Experience

Analysis of Algorithms Head TA, Cornell University, Aug. 2018–Dec. 2018

- ❖ Created grading guides and lead grading sessions.
- ❖ Coordinated office hour schedules and rooms between TAs and the professor.

Math Assistant Systems Administrator, Carleton College, Dec. 2015–June 2018

- ❖ Wrote and executed scripts to update and maintain computers in both Math and CS computer labs around campus.
- ❖ Responded to questions and requests by students and faculty regarding computer labs.

Math Course Grader, Carleton College, Sept. 2015–Dec. 2015, Jan. 2017–June 2018

- ❖ Graded course homework for 15-30 students up to twice a week.
- ❖ Communicated with the Professor, identified weaknesses in the class, and suggested areas to focus on during classtime.

Leadership Experiences/Involvement

Cornell Grad Students for Gender Inclusion in Computing, (Treasurer) Nov. 2019–Present

- ❖ Manages the group budget and writes budget proposals.
- ❖ Plans social events and group direction with the other group officers.

Cornell West Coast Swing Dance Network Teacher, Oct. 2019–Mar. 2020

- ❖ Plans and co-teaches west coast swing dance lessons for the Cornell undergraduate club, Cornell PE class, and a downtown Ithaca community class.
- ❖ Interfaces with club leadership and community dancers to plan special events every semester, such as bringing outside instructors or hosting a weekend social dance.

Cornell CS First Year Mentor, Aug. 2019–Present

- ❖ Provides myself as an initial contact for two first year PhD students.
- ❖ Meets students once a month to check in, offer advice, and help getting adjusted.

Women and Mathematics Ambassador Event Speaker, Mar. 2019

- ❖ Created and gave a 30-minute introductory talk on graph colorings.

Lovelace (Carleton Gender Diversity and Inclusion in CS) Board Member, Jan. 2017–Mar. 2018

- ❖ Organized Lovelace events, such as the mentor/mentee program, diversity talks, movie screenings, and female student/faculty dinners.
- ❖ Discussed future projects and event ideas once a week with Lovelace board.

Girls Who Code Volunteer Teacher, Sept. 2015–June 2016

- ❖ Planned weekly classes and activities, and worked with students directly.

West Coast Swing Club and Ballroom Dance Team, Carleton College, Oct. 2014–June 2018

- ❖ Met 3-5 times a week for lessons and practice.
- ❖ Attended and competed at dancing events around the country each term.
- ❖ Mentored newer members with a dance buddy system.

Skills

Computer:

- ❖ Proficient: Python, Java, Matlab, and Mathematica
- ❖ Familiar: Scheme, C, HTML, CSS, and SQL

Languages: Can read, write, and speak Japanese at intermediate level.