

Tegan Wilson

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Education

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

- ❖ PhD student. Current GPA 3.89.
- ❖ Coursework: Graduate Algorithms, Combinatorial Optimization, Pseudorandomness and Combinatorial Constructs, Educational Technology.
- ❖ Current interests: *Network Coding*, *Theoretical Algorithms*, *Combinatorics*.

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 Experience

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

- ❖ 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.

Job 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 Math and Computer Science 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–Present

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

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

- ❖ 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.

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.