

## Education

- 2020     Ph.D. in Applied Mathematics  
         Illinois Institute of Technology, Chicago, IL
- 2011     B.S. in Applied Mathematics for the Life and Social Sciences, Minor in Geological Sciences  
         Arizona State University, Tempe, AZ
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## Teaching Experience

### Art of Problem Solving Online

Instructor, Mathematics and Python (2020 – present)

Courses included: number theory, Python, precalculus, elementary algebra

*Delivered live online lectures and assisted students during lectures and in class forums*

Teaching Assistant, Mathematics and Python (2019 – present)

Courses included: precalculus, calculus, Python, geometry, elementary algebra, number theory

*Assisted students during lectures and in class forums and gave detailed written feedback for project submissions*

### Illinois Institute of Technology, Chicago, IL

Teaching Assistant, Applied Mathematics (2012 – 2017)

Courses included: calculus, linear algebra, discrete mathematics, statistics, mathematical modeling

*Held office hours to answer student questions, wrote and presented Mathematica computer labs, lead recitation sessions, and gave detailed written feedback for mathematics homework and labs*

Instructor, Introductory Calculus (2015)

*Served as independent lecturer, designed course outline, wrote and presented lectures, and wrote exams, labs, and homework assignments*

Instructor, Precalculus (2014)

*Served as independent lecturer, designed course outline, wrote and presented lectures, and wrote exams and homework assignments*

### Ferris State University, Big Rapids, MI

Tutor, Mathematics and Science (2011 – 2012)

Courses included: precalculus, calculus, statistics, physics, chemistry

*Assisted students with homework and studying for undergraduate mathematics and science courses during one-on-one and group sessions*

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## Community Involvement and Outreach

### Illinois Institute of Technology SIAM Student Chapter, Chicago, IL

Student Chapter President (2016 – 2017)

*Awarded a SIAM Student Chapter Certificate of Recognition (2017)*

Chicago Area SIAM Student Conference Organizing Committee (2016 – 2017)

Student Chapter Vice President (2015 – 2016)

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## Related Professional Skills

**Programming Languages:** C++, Python, Java

**Mathematical Software:** Mathematica, CPLEX, MATLAB

**Markup Languages:**  $\LaTeX$ , HTML

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## Professional Affiliations

**Society for Industrial and Applied Mathematics**

Member (2015 – present)

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## Publications

- 2020     H. Kaul and A. Rumpf. Trilevel network interdiction game for the minimum cost flow problem with linear input dependence. In preparation.
- H. Kaul and A. Rumpf. Public transit network optimization with social access objectives. In preparation.
- H. Kaul and A. Rumpf. Linear input dependence model for interdependent civil infrastructure systems with network simplex based solution algorithm. In preparation.
- 2011     J. Ames, A. Feiler, G. Mendoza, A. Rumpf, and S. Wirkus. Determination of Tuscon, Arizona as an Ecological Trap for Cooper’s Hawks (*Accipiter cooperii*). <https://mtbi.asu.edu/2011-2>.
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## Conference and Departmental Talks

- 2020     Public transit network optimization with social access objectives. Department of Applied Mathematics, Illinois Institute of Technology, March 12.
- 2017     Linear input dependence model for interdependent civil infrastructure systems with network simplex based solution algorithm. 31st Midwestern Conference on Combinatorics and Combinatorial Computing, October 20.
- 2016     Network simplex based algorithm for the minimum-cost network flow problem with linear interdependencies. Department of Applied Mathematics, Illinois Institute of Technology, April 26.
- Introduction to minimum cost flow and the network simplex algorithm. Department of Applied Mathematics, Illinois Institute of Technology, April 19.
- Network simplex based algorithm for the minimum cost flow problem with linear interdependencies. Chicago Area SIAM Student Conference, April 16.