

## Linda Cook

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- CONTACT INFORMATION Program in Applied and Computational Math lc7@math.princeton.edu  
Princeton University, Fine Hall  
Washington Road  
Princeton, NJ 08544-1000 USA
- RESEARCH INTERESTS Structural graph theory and algorithms. Broadly, discrete math and its applications.
- EDUCATION **Program in Applied and Computational Math, Princeton University**  
Ph.D. awarded May 26, 2021
  - Dissertation Title: On recognition algorithms and structure of graphs with restricted induced cycles
  - Advisor: Paul SeymourM.S. awarded Fall 2019  
**Rutgers University New Brunswick**  
B.A. in Mathematics, Computer Science May 2017
  - 3.98/4.0, Summa Cum Laude
  - Highest honors in Computer Science, High honors in Mathematics
- PAPERS M. Chudnovsky, L. Cook and P. Seymour, *Excluding the fork and antifork*, Discrete Mathematics 343.5 (2020): 111786. (Awarded Editor's Choice)  
L. Cook and P. Seymour, *Detecting a Long Even Hole* (Submitted)  
Preprint: <https://arxiv.org/abs/2009.05691>  
M. Bonamy, L. Cook, C. Groenland and A. Wesolek, *A tight local algorithm for the minimum dominating set problem in outerplanar graphs* (Submitted)  
Y. Bromberg, A. Aptekmann, Y. Mahlich, L. Cook, S. Senn, M. Miller, V. Nanda, D. Ferreira and P. Falkowski *Quantifying Structural Relationships of Metal Binding Sites Suggests Origins of Biological Electron Transfer* (Submitted)  
L. Cook, J. Horsfield, M. Preissmann, C. Robin, P. Seymour, N. L. D. Sintiari, N. Trotignon, K. Vušković, *When all holes have the same length* (In preparation)
- TALKS *Detecting a long even hole*, Waterloo Graph Coloring Conference  
September 2019  
*Detecting a long even hole*, Graduate Student Seminar, Princeton Program in Applied and Computational Math  
September 2019  
*Induced Subgraphs and Algorithms*, Mathematics of Water Problems Seminar, Princeton University  
March 2019

TEACHING EXPERIENCE	Spring	2021	Grader, Linear Algebra with Applications	
	Spring	2020	Teaching Assistant, Introductory Graph Theory	
	May	2019	Teaching Assistant, Women and Math Summer School, Institute of Advanced Studies	
	Fall	2019	Teaching Assistant, Advanced Graph Theory	
	May	2018	Teaching Assistant, Women and Math Summer School, Institute of Advanced Studies	
	Fall	2018	Teaching Assistant, Advanced Graph Theory	
GRADUATE COURSEWORK	<input type="checkbox"/>	Induced Subgraphs	<input type="checkbox"/>	Nonlinear and Linear Optimization
	<input type="checkbox"/>	Graph Minors	<input type="checkbox"/>	Combinatorial Optimization
	<input type="checkbox"/>	Graph Structure and Algorithms	<input type="checkbox"/>	Advanced Algorithms
	<input type="checkbox"/>	The Probabilistic Method	<input type="checkbox"/>	Combinatorics I-II (at Rutgers)
HONORS AND AWARDS	2017		NSF GRFP-Honorable Mention National Science Foundation Graduate Research Fellowship	
	May 2017		Matthew Leydt Society Awarded to the top 1-2% of the Rutgers Graduating Class	
	2016-2017		Weil Mathematics Scholarship Rutgers Mathematics Undergraduate Scholarship	
	May 2016		Phi Beta Kappa National Honors Society	
RESEARCH INTERNSHIPS	Summer 2018		Network Analysis of Aquatic Food Webs. Advisors: U. Dieckmann, Evolution and Ecology Program, E. Rovenskaya, Applied Systems Analysis, International Institute of Applied Systems Analysis, Laxenberg, Austria.	
	Summer 2016		Colin de Verdière Invariant of Strongly Regular Graphs Advisor: K. Guo, Combinatorics and Optimization Department University of Waterloo.	
	Summer 2015		Complexity of Three-Dimensional Numerical Matching Advisor: J. Baron, Mathematics Department Rutgers University, DIMACS REU.	
RELEVANT SKILLS	Languages:		English (Native), German (Fluent, Goethe C1), French (Intermediate)	
	Computers:		Python, Distributed Computing, Unix	
NATIONALITY			USA & Germany	