

# Victor Reis

<https://homes.cs.washington.edu/~voreis/>

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**Education**      **University of Washington, Seattle, WA** (Sep 2018 - present)  
Ph.D. Candidate in Theoretical Computer Science  
Advisor: Thomas Rothvoss  
Research areas: Discrepancy theory and high-dimensional geometry

**Cornell University, Ithaca, NY** (Aug 2014 - May 2018)  
B.A. in Computer Science and Mathematics (GPA 3.92/4.00)

**Work Experience**

**Research Intern at Google** (Summer 2021)  
Faster heuristics for multigraph edge partition

**Quantitative Research Intern at Five Rings Capital** (Summer 2017)  
Strategies for hedging positions in interest rate futures

**Software Engineering Intern at Facebook** (Summer 2016)  
Realtime data analysis development in Java

**Awards and Activities**

**Coach of the UW ACM-ICPC Programming team** (Sep 2019 – Present)  
Problem setter for the UW Programming Contest (Sep 2019 – Present)  
Qualified for the 2022 ICPC World Finals (Sharm El-Sheikh) as a coach  
Participation at the 2022 ICPC North American Championship (Orlando) as a coach (top 10)  
Participation at the 2022 ICPC Pacific Northwest Regional Contest as a coach (1st place)  
Participation at the 2021 ICPC Pacific Northwest Regional Contest as a coach (4th place)  
Participation at the 2019 ICPC Pacific Northwest Regional Contest as a coach (4th place)

**Paul G. Allen School First-Year Ph.D. Fellowship** (Sep 2018 - May 2019)

**Coach of the Cornell ACM-ICPC Programming team** (Jan 2016 – May 2018)  
Participation at the 2018 ICPC World Finals (Beijing) as a coach (top 60)  
Participation at the 2017 ICPC Greater NY Regional Contest as a coach (1st place)  
Participation at the 2017 ICPC World Finals (Rapid City) as a coach (top 60)  
Participation at the 2016 ICPC Greater NY Regional Contest as a coach (2nd place)  
Participation at the 2016 ICPC World Finals (Phuket) as a contestant (top 40)  
Participation at the 2014 ICPC Greater NY Regional Contest as a contestant (1st place)  
Participation at the 2015 ICPC World Finals (Marrakesh) as a contestant (top 100)  
Participation at the 2014 ICPC Greater NY Regional Contest as a contestant (2nd place)

**Honorable Mention in the 2014 & 2017 Putnam Math Competition** (top 70)  
1st place at the 2017 & 2018 Rochester Math Olympiad  
1st place at the 2015 Cornell Freshman Math Prize  
Bronze Medal at the 2014 International Math Olympiad (IMO) in Cape Town  
Silver Medal at the 2013 International Math Olympiad (IMO) in Santa Marta  
Brazilian Math Olympiad: Silver Medal in 2012, Gold Medal in 2013 (top 4)

Publications	<b>The Vector Balancing Constant for Zonotopes</b> with Laurel Heck and Thomas Rothvoss, in submission.		
	<b>Approximate Carathéodory bounds via Discrepancy Theory</b> with Thomas Rothvoss, in submission.		
	<b>A New Framework for Matrix Discrepancy: Partial Coloring Bounds via Mirror Descent</b> with Daniel Dadush and Haotian Jiang, <i>STOC 2022</i> .		
	<b>Vector Balancing in Lebesgue Spaces</b> with Thomas Rothvoss, <i>Random Structures &amp; Algorithms 2022</i> .		
	<b>A Tighter Relation Between Hereditary Discrepancy &amp; Determinant Lower Bound</b> with Haotian Jiang, <i>SOSA 2022</i> .		
	<b>Tight bounds on the Fourier growth of bounded functions on the hypercube</b> with Siddharth Iyer, Anup Rao, Thomas Rothvoss and Amir Yehudayoff, arXiv.		
	<b>An Elementary Exposition of Pisier's Inequality</b> with Siddharth Iyer, Anup Rao, Thomas Rothvoss and Amir Yehudayoff, arXiv.		
	<b>Linear Size Sparsifier and the Geometry of the Operator Norm Ball</b> with Thomas Rothvoss, <i>SODA 2020</i> .		
Selected Talks	<b>UW Theory Lunch</b>	(Jul 2022)	
	Approximate Carathéodory bounds via Discrepancy Theory <b>STOC 2022</b>	(Jun 2022)	
	A New Framework for Matrix Discrepancy <b>UW Theory Lunch</b>	(Apr 2022)	
	Solving Linear Recurrences and the Berlekamp-Massey algorithm <b>SOSA 2022</b>	(Jan 2022)	
	A Tighter Relation Between Hereditary Discrepancy and Determinant Lower Bound <b>BIRS Combinatorial and Geometric Discrepancy Workshop</b>	(Oct 2020)	
	Vector Balancing in Lebesgue Spaces <b>UNT Banach Spaces Webinar</b>	(Oct 2020)	
	An Elementary Exposition of Pisier's Inequality <b>UW Theory Lunch</b>	(Apr 2020)	
	Approximating Cut Norm via Grothendieck's Inequality <b>UW Theory Seminar</b>	(Oct 2019)	
	Discrepancy Theory & Graph Sparsification <b>UW Theory Lunch</b>	(Feb 2019)	
	Subset Sum and Power Series		
	Service	<b>External Reviewer</b> for FOCS 2019, STOC 2021, STOC 2022, SIDMA 2022, SODA 2023	
	Teaching	Teaching Assistant for Advanced Toolkit for Modern Algorithms (CSE 422)	(UW, Spring 2022)
Teaching Assistant for Introduction to Algorithms (CSE 421)		(UW, Fall 2021)	
Guest Lecturer for Introduction to Computing (CSE 311)		(UW, Spring 2019)	
Teaching Assistant for Introduction to Algorithms (CS 4820)		(Cornell, Spring 2018)	
Teaching Assistant for Introduction to Algorithms (CS 4820)		(Cornell, Spring 2017)	
Teaching Assistant for Data Structures and Functional Programming (CS 3110)		(Cornell, Spring 2016)	