

Victor Reis

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Work Experience	Microsoft Research (Redmond, WA) Senior Researcher in the Algorithms group	(Sep 2024 - present)
	Institute for Advanced Study (Princeton, NJ) Member of Computer Science and Discrete Mathematics	(Sep 2023 - Jun 2024)
Education	University of Washington (Seattle, WA) Ph.D. in Theoretical Computer Science, advised by Thomas Rothvoss Thesis: <u>Vector Balancing and Integer Programming</u>	(Sep 2018 - Aug 2023)
	Cornell University (Ithaca, NY) B.A. in Computer Science and Mathematics	(Aug 2014 - May 2018) (GPA 3.92/4.00)
Internships	Research Intern at Microsoft Research (Redmond) Optimal online discrepancy minimization	(Summer 2023)
	Research Intern at Google Faster heuristics for multigraph edge partition	(Summer 2021)
	Quantitative Research Intern at Five Rings Capital Strategies for hedging positions in interest rate futures	(Summer 2017)
	Software Engineering Intern at Facebook Realtime data analysis development in Java	(Summer 2016)
CS Awards	Best Paper Award at FOCS 2023	(Nov 2023)
	Coach of the UW ACM-ICPC Programming team Problem Setter for the UW Programming Contest	(Sep 2019 – Feb 2023)
	Participation at the 2023 ICPC World Finals (Luxor) as a coach	
	Participation at the 2022 ICPC North American Championship (Orlando) as a coach	
	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	
	Participation at the 2019 ICPC Pacific Northwest Regional Contest as a coach	
	Paul G. Allen School First-Year Ph.D. Fellowship	(Sep 2018 - May 2019)
	Coach of the Cornell ACM-ICPC Programming team Participation at the 2018 ICPC World Finals (Beijing) as a coach	(Jan 2016 – May 2018)
	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	
	Participation at the 2016 ICPC Greater NY Regional Contest as a coach	
	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)	

Publications	Optimal Online Discrepancy Minimization	
	with Janardhan Kulkarni and Thomas Rothvoss, <i>STOC 2024</i> .	
	Linear-Sized Sparsifiers via Near-Linear Time Discrepancy Theory	
	with Arun Jambulapati and Kevin Tian, <i>SODA 2024</i> .	
	The Subspace Flatness Conjecture and Faster Integer Programming	
	with Thomas Rothvoss, <i>FOCS 2023 Best Paper Award</i> . Quanta article .	
	The Vector Balancing Constant for Zonotopes	
	with Rainie Bozzai and Thomas Rothvoss, <i>FOCS 2023</i> .	
	Approximate Carathéodory bounds via Discrepancy Theory	
	with Thomas Rothvoss, arXiv.	
	A New Framework for Matrix Discrepancy: Partial Coloring Bounds via Mirror Descent	
	with Daniel Dadush and Haotian Jiang, <i>STOC 2022</i> .	
	Vector Balancing in Lebesgue Spaces	
	with Thomas Rothvoss, <i>Random Structures & Algorithms 2022</i> .	
	A Tighter Relation Between Hereditary Discrepancy & Determinant Lower Bound	
	with Haotian Jiang, <i>SOSA 2022</i> .	
	Tight bounds on the Fourier growth of bounded functions on the hypercube	
	with Siddharth Iyer, Anup Rao, Thomas Rothvoss and Amir Yehudayoff, arXiv.	
	An Elementary Exposition of Pisier's Inequality	
	with Siddharth Iyer, Anup Rao, Thomas Rothvoss and Amir Yehudayoff, arXiv.	
	Linear Size Sparsifier and the Geometry of the Operator Norm Ball	
	with Thomas Rothvoss, <i>SODA 2020</i> .	
Service	Program Committee member FOCS (2024)	
	Reviewer FOCS (2019, 2023), STOC (2021, 2022), SODA (2023, 2024), SIDMA (2022, 2023), SICOMP (2024)	
Selected Talks	STOC 2024: Optimal Online Discrepancy Minimization	(Jun 2024)
	Princeton Theory Lunch: Optimal Online Discrepancy Minimization	(Mar 2024)
	Princeton DM Seminar: The Subspace Flatness Conjecture and Faster Integer Programming	(Feb 2024)
	IAS CSDM Seminar: Optimal Online Discrepancy Minimization	(Jan 2024)
	NYU Theory Seminar: Optimal Online Discrepancy Minimization	(Nov 2023)
	EPFL Theory Seminar: The Subspace Flatness Conjecture and Faster Integer Programming	(Nov 2023)
	FOCS 2023: The Subspace Flatness Conjecture and Faster Integer Programming	(Nov 2023)
	TCS+: The Subspace Flatness Conjecture and Faster Integer Programming	(Nov 2023)
	Michigan Theory Talk: The Subspace Flatness Conjecture and Faster Integer Programming	(Oct 2023)
	Michigan Theory Seminar: Optimal Online Discrepancy Minimization	(Oct 2023)
	Rutgers Theory Seminar: Optimal Online Discrepancy Minimization	(Oct 2023)
	IAS Short Talk: The Subspace Flatness Conjecture	(Oct 2023)
	Probability and Analysis Webinar: The Subspace Flatness Conjecture	(Sep 2023)
	MSR Foundations Seminar: Optimal Online Discrepancy Minimization	(Jul 2023)
	CWI N&O Seminar: The Subspace Flatness Conjecture and Faster Integer Programming	(May 2023)
	UW Theory Seminar: The Subspace Flatness Conjecture and Faster Integer Programming	(Apr 2023)
	UW Theory Lunch: Approximate Carathéodory bounds via Discrepancy Theory	(Jul 2022)
	STOC 2022: A New Framework for Matrix Discrepancy	(Jun 2022)
	UW Theory Lunch: Solving Linear Recurrences and the Berlekamp-Massey algorithm	(Apr 2022)
	SOSA 2022: A Tighter Relation Between Hereditary Discrepancy and detLB	(Jan 2022)
	BIRS Combinatorial and Geometric Discrepancy Vector Balancing in Lebesgue Spaces	(Oct 2020)
	UNT Banach Spaces Webinar: An Elementary Exposition of Pisier's Inequality	(Oct 2020)
	UW Theory Lunch: Approximating Cut Norm via Grothendieck's Inequality	(Apr 2020)
	UW Theory Seminar: Discrepancy Theory & Graph Sparsification	(Oct 2019)

Math Awards	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 Gold Medal at the 2013 Cono Sur (Cone Sul) Math Olympiad in Asunción Silver Medal at the 2013 Iberoamerican Math Olympiad in Ciudad del Saber Bronze Medal at the 2013 Romanian Master of Mathematics in Bucharest Gold Medal (top 4) at the 2013 Brazilian Math Olympiad (OBM) Silver Medal at the 2012 Brazilian Math Olympiad	
Teaching	Teaching Assistant for Lattices (CSE 599) Teaching Assistant for Advanced Toolkit for Modern Algorithms (CSE 422) Teaching Assistant for Introduction to Algorithms (CSE 421) Guest Lecturer for Introduction to Computing (CSE 311) Teaching Assistant for Introduction to Algorithms (CS 4820) Teaching Assistant for Introduction to Algorithms (CS 4820) Teaching Assistant for Data Structures and Functional Programming (CS 3110)	(UW, Winter 2023) (UW, Spring 2022) (UW, Fall 2021) (UW, Spring 2019) (Cornell, Spring 2018) (Cornell, Spring 2017) (Cornell, Spring 2016)
References	Thomas Rothvoss, Associate Professor at UW Anup Rao, Associate Professor at UW Daniel Dadush, Senior Researcher at CWI	(Ph.D. advisor) (Research collaborator) (Research collaborator)