

OSCAR SPRUMONT

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EDUCATION	University of Washington <i>Ph.D. in Computer Science and Engineering</i> <ul style="list-style-type: none">• Advisor: Anup Rao• Research areas: Coding Theory, Complexity Theory	Seattle, USA 2018 - present
	McGill University <i>B.Sc. Honours in Mathematics and Physics, Minor in Computer Science</i>	Montreal, Canada 2014 - 2018
PUBLICATIONS	<ol style="list-style-type: none">1. Tensor Reed-Muller Codes: Achieving Capacity with Quasilinear Decoding Time with Emmanuel Abbe and Colin Sandon. <i>Preprint 2026</i>2. From Bit to Block: Decoding on Erasure Channels with Henry Pfister and Gilles Zémor. <i>ISIT 2025</i>3. List-Decoding Capacity Implies Capacity on the q-ary Symmetric Channel with Francisco Pernice and Mary Wootters. <i>STOC 2025</i>4. A Criterion for Decoding on the Binary Symmetric Channel with Anup Rao. <i>Advances in Mathematics of Communications 2024</i>	
TEACHING	Teaching Assistant , University of Washington <ul style="list-style-type: none">• CSE 421: Introduction to Algorithms Spr 2025, Fall 2021, Fall 2020, Win 2020• CSE 531: Computational Complexity Spring 2022• CSE 431: Introduction to Theory of Computation Spring 2021• CSE 521: Applied Algorithms Winter 2021• CSE 311: Foundations of Computing 1 Spr 2019, Spr 2020, Fall 2019, Fall 2018• CSE 373: Data Structures and Algorithms Summer 2019• CSE 490: Toolkit for Modern Algorithms Winter 2019	
AWARDS	NSERC Postgraduate Scholarship NSERC Undergraduate Student Research Award	2020 2016, 2017
TALKS	University of Copenhagen: List Decoding Capacity Implies BSC Capacity UW Theory Seminar: On List-Decoding Transitive and Doubly Transitive Codes Over the Binary Symmetric Channel UW Theory Lunch: <ul style="list-style-type: none">• Reed-Muller Codes Achieve Bit-Capacity Mar 2024• Top-Down Proofs for Constant Depth Circuits Lower Bounds Nov 2023• Applications of the Saddlepoint Method in Combinatorics Oct 2022• Weight Distribution of Reed-Muller Codes Feb 2020• Lower Bounds on Arithmetic Circuits with Bounded Coefficients Jun 2019	Aug 2024 Mar 2023

SERVICE

Reviewer: *IEEE Transactions on Information Theory 2024*

IEEE International Symposium on Information Theory 2024

Area Chair for PhD Admissions: University of Washington

2022

Organizer for Theory Lunch: University of Washington

Fall 2023, Spring 2024

REFERENCES

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Mary Wootters: marykw@stanford.edu