

VALENTIN TISSOT-DAGUETTE

PhD Candidate at Princeton University and Bloomberg PhD Fellow

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EDUCATION

2020 - Present	Princeton University , Princeton, NJ, USA <i>PhD in Operations Research and Financial Engineering</i> Adviser: Prof. H. Mete Soner. Industry Mentor: Dr. Bruno Dupire Research Topics: Optimal stopping and free boundary problems, Deep Stochastic Optimization, Functional Expansions, Path-dependent contingent claims
2018 - 2020	EPFL , Lausanne, Switzerland <i>MSc in Financial Engineering</i> . GPA: 5.84/6.00 Coursework: Computational finance, Financial derivatives, Numerical integration of SDEs
2016 - 2017	ETH Zurich , Zurich, Switzerland <i>BSc in Mathematics</i> . Exchange year. GPA: 5.80/6.00 Coursework: Probability theory, Stochastic calculus, Randomized algorithms
2014 - 2016	EPFL , Lausanne, Switzerland <i>BSc in Mathematics</i> . First and second year
2008 - 2014	<i>Euler Course of Mathematics</i> . Selective program of mathematics for high-potential students

EXPERIENCE

Summer 2021, 2022	Bloomberg LP , New York City, NY, USA <i>Quantitative Research Intern</i>
Dec 2021 - May 2022	<i>Quantitative Research Consultant</i> Mentor: Dr. Bruno Dupire, Head of Quantitative Research Topics: Functional Taylor Series, Path signature, Karhunen-Loève expansion
Feb - Aug 2020	Lombard Odier Investment Managers , London, UK <i>Quantitative Research Intern (Master's thesis in industry)</i> Mentors: Prof. Damir Filipović and Dr. Serge Tabachnik Topics: Implied volatility indices, Variance swap, Volatility targeting
May - Nov 2019	Swiss Finance Institute @ EPFL , Lausanne, Switzerland <i>Research Assistant of Dr. Kathrin Glau</i> Topics: American option pricing, Reproducing kernel Hilbert spaces, Chebyshev interpolation

AWARDS

2022 - 2023	Bloomberg Quantitative Finance PhD Fellowship One of three recipients. Grant of \$100,410 (tuition, stipend, conference funding)
Oct 2020	2020 Swiss Life Award for Academic Excellence Award for the highest GPA in the Master in Financial Engineering program of 2018-2020, EPFL
Dec 2015	First Prize on the 2015 Combinatorial Problem Solving Contest Awarded by Prof. János Pach, EPFL

PUBLICATIONS

2022	A.M. Reppen, H.M. Soner, and V. T.-D. Deep Stochastic Optimization in Finance . Digital Finance, (2022). Link
	V. T.-D. Short Communication: Projection of Functionals and Fast Pricing of Exotic Options . SIAM Journal on Financial Mathematics, 13(2):SC74–SC86, (2022). Link

PREPRINTS

2022	B. Dupire and V. T.-D. Functional Expansions . arXiv:2212.13628 , (2022)
	A.M. Reppen, H.M. Soner, and V. T.-D. Neural Optimal Stopping Boundary . arXiv:2205.04595 , (2022). In review

TALKS

Oct 2022	Talks in Financial and Insurance Mathematics , ETH Zurich <i>Functional Expansions, Signature, and Claim Decomposition</i>
	Oxford-Princeton Workshop on Stochastic Analysis and Mathematical Finance , University of Oxford <i>Neural Optimal Stopping Boundary</i>
	PACM Graduate Student Seminar , Princeton University <i>Functional Expansions, Signature, and Claim Decomposition</i>
	ORFE Graduate Students Fin Math Seminar , Princeton University <i>Neural Optimal Stopping Boundary</i>
Sep 2022	2022 CFMAR Workshop , UC Santa Barbara <i>Neural Optimal Stopping Boundary</i>
Aug 2022	Research in Options: RiO 2022 , FGV, Rio de Janeiro <i>Projection of Functionals and Fast Pricing of Exotic Options</i> (lightning talk) <i>Functional Expansions and Claim Decomposition</i> (plenary talk)
Apr 2022	ORFE Graduate Students Fin Math Seminar , Princeton University <i>Disentangling the Chaos: the Functional Taylor Expansion</i>
Dec 2021	ORFE Graduate Students Fin Math Seminar , Princeton University <i>High-dimensional Free Boundary Problems</i>
Nov 2021	FMI Tech Econophysics Webinar (virtual) <i>Path Approximation using Signatures and Hilbert Projections</i>
	ORFE Graduate Students Fin Math Seminar , Princeton University <i>Optimal Stopping in Continuous Time</i>
Sept 2021	Bloomberg Quant (BBQ) Seminar (virtual) <i>Demystifying the Path Signature</i> (lightning talk)

TEACHING

	Princeton University , Princeton, NJ, USA <i>Assistant in Instruction</i>
Fall 2022	ORF 535/FIN 535: Financial Risk and Wealth Management
Spring 2022, 2023	ORF 335/ECO 364: Introduction to Financial Mathematics
Fall 2021	ORF 418: Optimal Learning
	EPFL , Lausanne, Switzerland <i>Assistant in Instruction</i>
Fall 2019	FIN 472: Computational Finance
2012 - 2016	Euler Course: Calculus, Geometry, Algebra

ACTIVITIES

2021 - Present	Referee for Academic Journals and Books: SIAM Journal on Financial Mathematics, Chapman and Hall/CRC, Journal of Computational Finance
Fall 2021 - Present	Organizer: ORFE Graduate Students Fin Math Seminar, Princeton University

SKILLS AND INTERESTS

Language	French (native), English (proficient), German (intermediate)
Programming	Python, Julia, Matlab, C++
Interests	Percussions, Music composition, Vegetarian cuisine