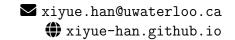
# Xiyue Han

M3 4134, 200 University Ave W, Waterloo, Ontario, N2L 3G1



#### EDUCATION

Ph.D. in Actuarial Science
Supervisor: Prof. Alexander Schied

University of Waterloo

May 2019 - Spring 2024 (Expected)

• MMath in Actuarial Science Supervisor: Prof. Alexander Schied University of Waterloo September 2017 - January 2019

B.Sc. in Actuarial Science
Second Major: Mathematics

University of Hong Kong September 2013 - May 2017

### RESEARCH INTERESTS

Rough volatility models, time series analysis, stochastic analysis and actuarial science.

#### Preprints

- Han, X. & Schied, A. Estimating the roughness exponent of stochastic volatility from discrete observations of the realized variance. arXiv: 2307.02582.
- Han, X. & Schied, A. On laws absolutely continuous with respect to fractional Brownian motion. arXiv: 2306.11824.
- Han, X. & Schied, A. Robust Faber-Schauder approximation based on discrete observations of an antiderivative. arXiv: 2211.11907.
- Han, X. & Schied, A. The roughness exponent and its model-free estimation. arXiv: 2111.10301.

#### Publications

- Han, X. & Schied, A. (2022) Step roots of Littlewood polynomials and the extrema of functions in the Takagi class. *Mathematical Proceedings of the Cambridge Philosophical Society*, 173, 591-618.
- Han, X., Schied, A. & Zhang, Z. (2022) A limit theorem for Bernoulli convolutions and the Φ-variation of functions in the Takagi class. *Journal of Theoretical Probability*, 35, 2853–2878.
- Han, X., Schied, A. & Zhang, Z. (2022) A probabilistic approach to the Φ-variation of classical fractal functions with critical roughness. Statistics & Probability Letters, 168, 108920.
- Han, X. (2021) A Gladyshev theorem for trifractional Brownian motion and n-th order fractional Brownian motion. Electronic Communications in Probability, 26, 1-12.

#### AWARDS

James C. Hickman Scholar	2022 - 2023
Sprott Scholarship	2022
Teaching Assistant Award	2022
Senate Graduate Scholarship	2022
International Doctoral Student Award	2019 - 2023
Best Presentation Award in Waterloo Student Conference	2019
International Master Student Award	2017 - 2018
Statistics and Actuarial Science Chair Award	2017 - 2023

# PROFESSIONAL CERIFICATION

## Co-chair of SAS Student Seminar Series

2023

## Presentations

•	Estimating the roughness exponent of stochastic volatility models The 4th Waterloo Student Conference in Statistics, Actuarial Science and Finance	University of Waterloo October 2023
•	The roughness exponent and its model-free estimation The 3rd Waterloo Student Conference in Statistics, Actuarial Science and Finance	University of Waterloo October 2022
•	The roughness exponent and its model-free estimation  AARMS CRG Conference on Computational Aspects in Finance and Actuarial Scie	Online nces July 2022
•	The roughness exponent and its model-free estimation The 11th World Congress of the Bachelier Finance Society	Online June 2022
•	The roughness exponent and its model-free estimation The 56th Actuarial Research Conference	Online $Augest~2021$
•	The roughness exponent and its model-free estimation The 24th International Congress on Insurance: Mathematics and Economics	Online July 2021
•	Extrema of functions in the Takagi class The 1st Waterloo Student Conference in Statistics, Actuarial Science and Finance	University of Waterloo October 2020
L	EXPEDIENCE AS TEACHING ASSISTANT	

### EXPERIENCE AS TEACHING ASSISTANT

STAT 901: Theory of Probability I	Fall 2022
ACTSC 363: Casualty and Health Insurance Mathematics I	$Spring \ 2022$
ACTSC 846: Mathematics of Financial Markets	Winter 2021
ACTSC 832: Loss Model 2	<i>Spring 2021</i>
STAT 330: Mathematical Statistics	Fall 2020
ACTSC 846: Mathematics of Financial Markets	Fall 2020
ACTSC 832: Loss Model 2	$Spring \ 2020$
ACTSC 831: Loss Model 1	$Spring \ 2020$
STAT 211: Introductory Statistics	$Winter\ 2020$
MTHEL 131: Introduction to Actuarial Practice	$Winter\ 2020$
STAT 333: Applied Probability	Spring 2019
STAT 330: Mathematical Statistics	$Spring \ 2019$
STAT 221: Introductory Statistics	Winter 2018
ACTSC 231: Introductory Financial Mathematics	Winter 2018
STAT 202: Introductory Statistics for Scientists	Fall 2017
ACTSC 221: Introductory Financial Mathematics (Non-Specialist Level)	Fall 2017