Niushan Gao | Ph.D.

Department of Mathematics, Toronto Metropolitan University, Toronto, ON, Canada

(+1) 416 979 5000 ext 552139 • niushan@torontomu.ca
www.math.ryerson.ca/~niushan • Office: EPH 421

Education

Ph.D. in Mathematics, Unversity of Alberta 2008.09–2013.08

B.Sc. in Mathematics, Beijing Normal University 2004.09–2008.07

Employment

Program Director for Financial Mathematics, Toronto Metropolitan Unversity 2022.07–present

Associate Professor, Toronto Metropolitan Unversity 2021.12–present

Assistant Professor, Ryerson Unversity 2017.09–2021.12

PIMS Postdoctoral Fellow, Unversity of Lethbridge 2016.09–2017.08

Assistant Professor, Southwest Jiaotong University 2014.04–2016.08

Postdoctoral Fellow, University of Alberta 2013.09–2014.03

Research Interests

Risk Management

Investment Management

Papers and Preprints

20 Chen, S., Gao, N., Leung, D. and Li, L. On the AOCEA property and its applications, *in progress*.

19 Tantrawan, M., Leung, D. and Gao, N. (2023). The order-type Banach-Saks properties. *Journal of Mathematical Analysis and Applications* 517(1), Article no. 126541.

18 Gao, N., Leung, D. and Xanthos, F. (2023). On local convexity in $\mathbb{L}^0$ and switching probability measures, *Positivity* 27(1), Article no. 15.

17 Chen, S., Gao, N., Leung, D. and Li, L. (2022). Automatic Fatou property of law-invariant risk measures. *Insurance: Mathematics and Economics* 105, 41-53.

16 Gao, N., Munari, C. and Xanthos, F. (2020). Stability properties of Haezendonck-Goovaerts premium principles. *Insurance: Mathematics and Economics* 94, 94-99.

15 Gao, N. and Munari, C. (2020). Surplus-invariant risk measures. *Mathematics of Operations Research* 45(4), 1193-1620.

14 Gao, N., Leung, D. and Xanthos, F. (2019). Closedness of convex sets in Orlicz spaces with applications to dual representation of risk measures. *Studia Mathematica* 249(3), 329-347.

13 Gao, N., Leung, D. and Xanthos, F. (2018). A local Hahn-Banach theorem and its applications. *Archiv der Mathematik* 112(5), 521-529.

12 Chen, S., Gao, N. and Xanthos, F. (2018). The strong Fatou property of risk measures. *Dependence Modeling* 6(1), 183-196.

11 Gao, N., Leung, D., Munari, C. and Xanthos, F. (2018). Fatou property, representations, and extensions of law-invariant risk measures on general Orlicz spaces. *Finance and Stochastics* 22(2), 395-415.

10 Gao, N., Leung, D. and Xanthos, F. (2018) Duality for unbounded order convergence and applications. *Positivity* 22(3), 711-725.

09 Gao, N. and Leung, D. (2018). Smallest order closed sublattices and option spanning. *Proceedings of the American Mathematical Society* 146(2):705-716.

08 Gao, N. and Xanthos, F. (2018). On the C-property and w^*-representations of risk measures. *Mathematical Finance* 28(2): 748-754.

07 Gao, N. and Xanthos, F. (2017). Option spanning beyond L_p-models. *Mathematics and Financial Economics* 11(3): 383-391.

06 Gao, N., Troitsky, V. and Xanthos, F. (2017). Uo-convergence and its applications to Cesáro means in Banach lattices. *Israel Journal of Mathematics* 220(2):649-689.

05 Gao, N. (2014). Unbounded order convergence in dual spaces. *Journal of Mathematical Analysis and Applications* 419(1): 347-354.

04 Gao, N. and Xanthos, F. (2014). Unbounded order convergence and application to martingales without probability. *Journal of Mathematical Analysis and Applications* 415(2): 931-947.

03 Gao, N. and Troitsky, V. (2014). Irreducible semigroups of positive operators on Banach lattices. *Linear and Multilinear Algebra* 62(1): 74-95.

02 Gao, N. (2014). On commuting and semi-commuting positive operators. *Proceedings of the American Mathematical Society* 142(8): 2733-2745.

01 Gao, N. (2013). Extensions of Perron-Frobenius theory. *Positivity* 17(4): 965-977.

Awards and Honors

Dean's Scholarly, Research and Creative Activity Award (pre-tenured) 2021
Ryerson University

Josephine Mitchell Research Prize 2013
University of Alberta