

CURRICULUM VITAE

Gordan Žitković

The University of Texas at Austin
Department of Mathematics
1 University Station C 1200
Austin, TX 78712-0257
(512) 471-1159
gordanz@math.utexas.edu
<http://www.math.utexas.edu/users/gordanz>

Employment

(long-term
positions)

The University of Texas at Austin, Department of Mathematics

Professor, 2017 - present

Associate Professor, 2011 - 2017

Assistant Professor, 2005 - 2011

Carnegie Mellon University, Department of Mathematical Sciences

Postdoctoral Associate, 2003 - 2005

Employment

(visiting
positions)

University of Oxford, Oxford-Man Institute and Mathematical Institute

Visiting Scholar, 2010

Research

Interests

stochastic analysis, optimal stochastic control

Education

Columbia University

Ph.D. Degree in Statistics, 2003 - awarded with distinction. Advisor *I. Karatzas*

Vienna University of Technology and **University of Zagreb**

M.Sc. Degree in Mathematics, 1999. Advisors *W. Schachermayer* and *Z. Vondraček*

University of Zagreb

B.Sc. Degree in Mathematics, 1997

United World College of the Adriatic, Italy

International Baccalaureate, 1993

Grants

NSF Grant (sole PI) *Three Topics in Stochastic Analysis: Kyle's model, Systems of BSDEs and Superrough volatility* (DMS-2307729), Sole PI, \$441,331, 2023-2026

NSF Grant (sole PI) *Systems of Backward Stochastic Differential Equations and Applications in Stochastic Financial Equilibrium Theory* (DMS-1815017), Sole PI, \$376,581, 2018-2022

NSF Grant (sole PI) *Stochastic Equilibria and Related Topics in Financial Mathematics* (DMS-1516165) \$346,996 2015-2018

NSF Conference Grant (co-PI) *Workshop on Probability, Control and Finance* (DMS-1204036), \$45,000 2012-2013

NSF Collaborative Research Grant (co-PI) *Kinetic Description of Emerging Challenges in Multiscale - Problems of Natural Sciences* (DMS-1107465) \$1,000,000, 2012-2017

NSF Conference grant (co-PI) *Workshop on Stochastic Analysis in Finance and Insurance (DMS-1108593)*, \$40,000, 2011-2012

NSF CAREER grant (sole PI) *Equilibria and Stability in Financial Markets (DMS-0955614)*, NSF CAREER grant, sole PI, \$500,000, 2010-2015

“The Unity Through Knowledge Fund” Grant (co-PI) *Worldwide Distributed Computing in Molecular Biology*, \$252,724, 2008-2010

NSF Grant (sole PI) *Stochastic Modeling and Methods in Financial Equilibrium Theory (DMS-0706947)*, \$179,953, 2007-2010

Publications
(submitted or in
preparation)

- [1] F. Argentieri and G. Žitković (2025) “A particle system with proximity aversion.” In preparation.
- [2] G. Žitković (2025) “Representations of Feller random measures via superprocesses and SPDEs with Lévy-type operators.” In preparation.
- [3] T. Pace and G. Žitković (2024) “Convergence of nonhomogeneous Hawkes processes and Feller random measures.” Submitted for publication.
- [4] T. Taillefumier and G. Žitković (2024) “A scaling limit for additive functionals.” Submitted for publication.

Publications
(published or
accepted for
publication)

- [1] I. Ekren, B. Mostowski, and G. Žitković (2025) “Kyle’s model with stochastic liquidity.” *Finance and Stochastics*, 29(4):1195–1231.
- [2] S. Biagini and G. Žitković (2024) “Representation of random variables as Lebesgue integrals.” *Bernoulli*, 30(3):1878–1893.
- [3] J. Jackson and G. Žitković (2022) “A characterization of solutions of quadratic bsdes and a new approach to existence.” *Stochastic Processes and their Applications*, 147:210–225.
- [4] J. Jackson and G. Žitković (2022) “Existence and uniqueness for non-Markovian triangular quadratic BSDEs.” *SIAM Journal on Control and Optimization*, 60(3):1642–1666.
- [5] C. Kardaras, H. Xing, and G. Žitković (2022) *Incomplete Stochastic Equilibria with Exponential Utilities Close to Pareto Optimality*, pages 267–292. Springer International Publishing, Cham.
- [6] K. Larsen, H. M. Soner, and G. Žitković (2020) “Conditional Davis pricing.” *Finance and Stochastics*, 24:565–599.
- [7] K. Weston and G. Žitković (2020) “An incomplete equilibrium with a stochastic annuity.” *Finance and Stochastics*, 24:359–382.
- [8] R. Fayisovich and G. Žitković (2019) “A framework for the dynamic programming principle and martingale-generated control correspondences.” *Applied Mathematics & Optimization*.
- [9] K. Larsen, O. Mostovyi, and G. Žitković (2018) “An expansion in the model space in the context of utility maximization.” *Finance and Stochastics*, 22(2):297–326.
- [10] H. Xing and G. Žitković (2018) “A class of globally solvable Markovian quadratic BSDE systems and applications.” *Ann. Probab.*, 46(1):491–550.
- [11] J. Li and G. Žitković (2017) “Existence, characterization and approximation in the generalized monotone follower problem.” *SIAM J. Control Optim.*, 55(1):94–118.
- [12] K. Larsen, H. M. Soner, and G. Žitković (2016) “Facelifting in utility maximization.” *Finance and Stochastics*, 20(1):99–121.
- [13] G. Žitković (2014) “Dynamic programming for controlled Markov families: abstractly and over martingale measures.” *SIAM Journal of Control and Optimization*, 52(3):1597–1621.

- [14] J. Choi, M. Sirbu, and G. Žitković (2013) "Shadow prices and well-posedness in the problem of optimal investment and consumption with transaction costs." *SIAM Journal of Control and Optimization*, 51(6):4414–4449.
- [15] C. Kardaras and G. Žitković (2013) "Forward-convex convergence of sequences of nonnegative random variables." *Proceeding of the American Mathematical Society*, 141:919–929.
- [16] K. Larsen and G. Žitković (2013) "Utility maximization under convex portfolio constraints." *Annals of Applied Probability*, 23(2):665–692.
- [17] G. Žitković (2012) "An example of a stochastic equilibrium with incomplete markets." *Finance and Stochastics*, 16(2):177–206.
- [18] C. Kardaras and G. Žitković (2011) "Stability of the utility maximization problem with random endowment in incomplete markets." *Mathematical Finance*, 21(2):313–333.
- [19] M. Anthopoulos and G. Žitković (2010) "On agents' agreement and partial-equilibrium pricing in incomplete markets." *Mathematical Finance*, 20(3):411–446.
- [20] M. Anthopoulos and G. Žitković (2010) "Partial equilibria with convex capital requirements: Existence, uniqueness and stability." *Annals of Finance*, 6(1):107–135.
- [21] T. Zariphopoulou and G. Žitković (2010) "Maturity-independent risk measures." *SIAM Journal on Financial Mathematics*, 1:266–288.
- [22] G. Žitković (2010) "Utility theory: historical perspectives." In *Encyclopedia of Quantitative Finance*. John Wiley and Sons Inc., New York.
- [23] M. Hlevnjak, G. Žitković, and B. Žagrović (2009) "Hydrophilicity matching : a prerequisite for the formation of protein-protein complexes." *PLoS One*, 5(6):e11169.
- [24] M. Owen and G. Žitković (2009) "Optimal investment with an unbounded random endowment and utility-based pricing." *Mathematical Finance*, 19(1):129–159.
- [25] T. A. Pirvu and G. Žitković (2009) "Maximizing the growth rate under risk constraints." *Mathematical Finance*, 19(3):423–455.
- [26] G. Žitković (2009) "Convex-compactness and its applications." *Mathematics and Financial Economics*, 3(1):1–12.
- [27] G. Žitković (2009) "A dual characterization of self-generation and exponential forward performances." *Ann. Appl. Probab.*, 19(6):2176–2210.
- [28] K. Larsen and G. Žitković (2008) "On the semimartingale property via bounded logarithmic utility." *Annals of Finance*, 4(2):255–268.
- [29] T. Zariphopoulou and G. Žitković (2008) "On maturity-independent risk measures." In *Proceedings of 47th IEEE Conference on Decision and Control*, pages 5596–6501.
- [30] K. Larsen and G. Žitković (2007) "Stability of utility-maximization in incomplete markets." *Stochastic Processes and their Applications*, 117(11):1642–1662.
- [31] G. Žitković (2006) "Financial equilibria in the semimartingale setting: complete markets and markets with withdrawal constraints." *Finance and Stochastics*, 10(1):99–119.
- [32] G. Žitković (2005) "Utility maximization with a stochastic clock and an unbounded random endowment." *Annals of Applied Probability*, 15(1B):748–777.
- [33] I. Karatzas and G. Žitković (2003) "Optimal consumption from investment and random endowment in incomplete semimartingale markets." *Annals of Probability*, 31(4):1821–1858.
- [34] G. Žitković (2002) "A filtered version of the bipolar theorem of Brannath and Schachermayer." *Journal of Theoretical Probability*, 15(1):41–61.

Graduate and
Postgraduate
Advising

Postdocs at UT Austin, Department of Mathematics (supervisor):

- *O. Mostovyi* (PhD: Carnegie Mellon University, advisor D. Kramkov) - supervised jointly with M. Sîrbu,
- *K. Weston* (PhD: Carnegie Mellon University, advisor D. Kramkov) - supervised jointly with M. Sîrbu,
- *G. Wu* (PhD: University of California Berkeley, advisors C. Evans and X. Guo)
- *S. Summersille* (PhD: University of California Berkeley, advisor Y. Perez) - supervised jointly with L. Caffarelli
- *G. Brunick* (PhD: Carnegie Mellon University, advisor S. Shreve) - supervised jointly with M. Sîrbu

Ph.D. students at UT Austin, Department of Mathematics (advisor):

- *F. Argentieri* (current)
- *A. Ranjbar* (current)
- *T. Pace* (graduated April 2024: employment *Lee College*)
- *J. Jackson* (graduated Aug 2023: employment *University of Chicago, Dickinson Instructor*)
- *R. Fayvisovich* (graduated Aug 2018: employment: *WorldQuant*),
- *P. Goswami* (graduated: Aug 2015: further education: *Resident Physician and Radiology Resident, Penn Medicine, University of Pennsylvania Health System*)
- *J. Li* (graduated: Aug 2015; employment: *Facebook*),
- *J. Choi* (co-advised with M. Sîrbu; graduated June: 2012; employment: associate professor, UNIST, Korea)
- *Y. Zhao* (graduated: May 2012; employment: *Salesforce*, San Francisco)
- *A. DiTanna* (graduated: May 2009; employment: *Goldman Sachs*)
- *M. Anthropolos* (graduated: Dec 2008; employment: associate professor, University of Piraeus, Greece)

Service

National Science Foundation:

- NSF Panelist (several applied math/probability panels — the last one in the spring of 2025, two Career panels, one special panel)

Editorial boards:

- Associate Editor for *Finance and Stochastics* (since 2009)
- Associate Editor for *Mathematical Finance* (2013-2019)

Book reviewing: Springer Verlag, Cambridge University Press, Princeton University Press, MAA Book Reviews