ALEXANDER ROITERSHTEIN

CV includes 11 pages
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CONTENTS (CLICKABLE LINKS)

EDUCATION

- PhD, Applied Mathematics, Technion - Israel Institute of Technology, 2004,

  Thesis: “Random Walks in Random Environments",
  Advisors: Eddy Mayer-Wolf and Ofer Zeitouni.

- MSc, Applied Mathematics, Technion - Israel Institute of Technology, 1999,

  Thesis: “Language Recognition by Markov Computational Systems",
  Advisor: Hava T. Siegelmann.

- MBA, Decisions and Operations Research, Tel Aviv University, 1996.

FIELDS OF INTEREST

Mathematical and statistical education; Random walk models and their applications; population dynamics; complex networks; branching processes and their applications to biology and other fields; nonparametric statistics; statistical shape analysis, time series: asymptotic tail behavior, extremes, clustering, analysis of random combinatorial structures, longitudinal mixture models and their applications to biomedical data analysis, horizontal visibility graphs; stochastic processes in random environment; general theory of Markov chains.

EMPLOYMENT

- Fall 2024 - present:

  Instructional Associate Professor, Department of Statistics, Texas A&M University, College Station.

- Fall 2022 - Summer 2024:

  Visiting Associate Professor, Department of Statistics, Texas A&M University, College Station.

- Fall 2021 - Summer 2022:

  Visiting Associate Professor, Department of Mathematics, Texas A&M University, College Station.

- Fall 2018 - Summer 2021:

  - Research Associate, Department of Statistics, Texas A&M University, College Station,
    T32 Training Program in Biostatistics, Bioinformatics, Nutrition and Cancer
    (Ruth L. Kirschstein National Research Service Award).
  - In addition, Assistant/Visiting Lecturer, Department of Statistics (Spring 2020 - Spring 2021).

- Fall 2009 - Spring 2018:

  Assistant Professor, Tenure Track, Department of Mathematics, Iowa State University.

- Fall 2007 - Spring 2009:

  Post-Doc, Department of Mathematics, Iowa State University.

- Spring 2005 - Spring 2007:

  Post-Doc, Department of Mathematics, University of British Columbia.

SHORT-TERM POSITIONS

- Research Scientist (consulting, remote), ANC–Artificial Neural Computing, Fall 2022.
- Visiting Assistant Professor, Division of Applied Mathematics, Brown University, Summer 2016.
- Visiting Researcher, ETH, Zurich, Institute for Mathematical Research, Fall Term 2004.

GRADUATE AWARDS

- Special award for the PhD. thesis at the Department of Mathematics, Technion, 2004.
- Prof. Elisha Netanyahu Prize for excellence in PhD research, Technion, 2004.
- Sandor Szego Award for Excellence in Teaching, Technion, 2001.
- Miriam and Aaron Gutwirth Excellence Scholarship, Technion, 1998.

RESEARCH GRANTS

- “Self-interacting Random Walks", Simons Foundation: Collaboration Grant (#359575, single PI), $35000, 2015-2018.

TEACHING EXPERIENCE

I have taught statistics and mathematics as a graduate teaching assistant in Tel-Aviv University and Technion and as a course instructor in University British Columbia, Iowa State University, and Texas A&M. A complete list of the courses I have taught in the instructor role is given below.

Given my educational background, experience, and research interests, I feel comfortable teaching an array of topics, including basic statistical curriculum, theoretical statistics, statistical methods, financial statistics, and data science courses. I would be interested in teaching and course development at all levels.

I would like to continue to be involved in supervising undergraduate research projects. I have advised several PhD and MSc students, a postdoctoral fellow, and have mentored independent studies and various undergraduate research projects including summer REUs, undergraduate theses, seminar studies, and a first-year honors program. Four of my published papers are co-authored by undergraduate students.

UNDERGRADUATE COURSES, TEXAS A&M

- STAT 491 Research, Fall 2023, Summer 2024, Fall 2024.
- STAT 335/CSCE 320 Principles of Data Science, Summer 2024.
- STAT 315/CSCE 305/ECEN 360 Computational Data Science, Summer 2024, Fall 2024.
- STAT 312 Statistics for Biology, Spring 2023.
- STAT 303 Statistical Methods (Social Sciences), Spring 2024, Fall 2024, Spring 2025.
- STAT 302 Statistical Methods (Biology), Fall 2023.
- STAT 212 Principles of Statistics II, Summer 2023.

- STAT 211 Principles of Statistics I, Fall 2022, Spring 2023, Fall 2023, Spring 2024.
- STAT 201 Elementary Statistical Inference, Spring 2020, Fall 2020 and Spring 2021 remote, Spring 2023, Summer 2023.
- MATH 411 Mathematical Probability, Summer 2022.
- MATH 304 Linear Algebra, Fall 2021.
- MATH 151 Engineering Mathematics I, Spring 2022.

UNDERGRADUATE COURSES, IOWA STATE UNIVERSITY

- MATH 165 Calculus I, Fall 2007, Fall 2009, Fall 2016, Spring 2017.
- MATH 166 Calculus II, Spring 2013, Spring 2016, Fall 2016.
- MATH 201 Introduction to Proofs, Fall 2015, Fall 2017, Spring 2018.
- MATH 265 Calculus III, Fall 2008, Fall 2011, Fall 2014, Summer 2016, Fall 2017.
- MATH 265H Calculus III, Honors Section, Spring 2018.
- MATH 266 Elementary Differential Equations, Spring 2008.
- MATH 267 Elementary Diff. Eqs. & Laplace Transforms, Summer 2008, Fall 2013.
- MATH 268 Laplace Transforms, Spring 2009.
- MATH 307 Matrices and Linear Algebra, Summer 2008, Fall 2010.
- MATH 317 Theory of Linear Algebra, Fall 2011.
- MATH 365 Complex Variables with Applications, Spring 2016.
- MATH 385 Introduction to PDE, Fall 2010, Summer 2011, Fall 2014, Fall 2017.
- MATH 414 Analysis I, Spring 2012, Fall 2012, Summer 2017.
- MATH 415 Analysis II, Spring 2017.
- MATH 435 Independent Studies (Geometry I), Summer 2011.
- MATH 436 Independent Studies (Geometry II), Summer 2011.
- MATH 490 Independent Studies, Summer 2009, Fall 2009, Spring 2011, Fall 2011, Spring 2016, Fall 2016, Spring 2017, Fall 2017, Spring 2018.
- MATH 491 Undergraduate Thesis, Spring 2011, Fall 2011, Spring 2017, Fall 2017, Spring 2018.
- MATH 492 Undergraduate Seminar, Spring 2009 (Game Theory), Fall 2010 (Independent Studies).
- HON 290H First-Year Honors Mentor Program, Spring 2017.
- HON 322U Honors Seminar (Mathematics of Paul Erdos), Spring 2012.

UNDERGRADUATE COURSES, UNIVERSITY OF BRITISH COLUMBIA

- MATH 317 Calculus IV, Fall 2005, Fall 2006.
- MATH 340 Introduction to Linear Programming, Summer 2007.

GRADUATE COURSES, TEXAS A&M

- MATH 639 Iterative Techniques, Summer 2022 (distance).

GRADUATE COURSES, IOWA STATE UNIVERSITY

- MATH 501 Introduction to Real Analysis, Summer 2011, Summer 2012, Summer 2014, Summer 2015.
- MATH 554 Introduction to Stochastic Processes, Fall 2008, Fall 2009, Fall 2012, Fall 2013, Fall 2015.
- MATH 590 Graduate Independent Studies Spring 2009, Fall 2014.
- MATH 610 Graduate Research Seminar, Spring 2012.
- MATH 645 Advanced Stochastic Processes, Spring 2008, Spring 2014, Spring 2015.

TEACHING PLATFORMS AND EDUCATIONAL SOFTWARE

Canvas, MyLab Math, Gradescope, WebAssign, JMP, MATLAB, Office, R, BioRender, MetaboAnalyst.

STUDENT ADVISING, IOWA STATE UNIVERSITY

PHD STUDENTS AND POSTDOCS

- Timothy Chumley (NSF Alliance Postdoc), Fall 2013 - Spring 2016.
  Currently, Assistant Professor of Mathematics at Mount Holyoke College, South Hadley, MA.
- Oscar Aguilar (PhD, Stat. & Appl. Math, 2019), joint with Arka P. Ghosh,
  Thesis: “Topics in portfolio allocation".
  Currently, Data Scientist at Macquarie Group and Assistant Professor of Analytics, Director of Business Analytics Undergraduate Studies at Grand View University, Des Moines, IA.
- Steven Noren (PhD, Math., 2017), joint with Arka P. Ghosh,
  Thesis: “Topics in self-interacting random walks".
  Currently, Instructor, Department of Mathematics and Statistics, Minnesota State University, Mankato.
- Kubilay Dagtoros (PhD, Appl. Math. & Stat., 2017), joint with Arka P. Ghosh,
  Thesis: “Large deviation results for random walks in a sparse random environments".
  Currently, Assistant Professor of Mathematics at Norfolk State University, Norfolk, VA.
- Zachary Voller (PhD, Appl. Math., 2016),
  Thesis: “Limit theorems for persistent random walks in cookie environments".
  Currently, Quantum Research & Development Engineer, Quantum Computing, Inc., Minneapolis, MN.
- Shu Yang (PhD, Appl. Math & Stat., 2014), Jae Kwang Kim and Zhengyuan Zhu principal advisers,
  Thesis: “Fractional imputation method in handling missing data".
  Currently, Associate Professor of Statistics at North Carolina State University, Raleigh, NC.
- Subhomoy Ghosh (PhD, Stat., 2013), joint with Arka P. Ghosh,
  Thesis: “Topics in stochastic growth models".
  Currently, Computational Scientist and Research Assistant Professor,
  Center for Research Computing (CRC), University of Notre Dame, IN.

- Youngsoo Seol (PhD, Appl. Math., 2013),
  Thesis: “Random walks in a sparse random environment".
  Currently, Assistant Professor of Mathematics at Dong-A University, Busan, South Korea.
- Reza Rastegar (PhD, Appl. Math., 2012), joint with Arka P. Ghosh,
  Thesis: “Topics in self-interacting random walks".
  Currently, Senior Director of Advanced Analytics & Data Science, Occidental Petroleum, Houston, TX.

MS STUDENTS

- Tetiana Takhistova (MSc, 2017),
  Thesis: “Spider random walk in a random environment".
- Yiyi Sun (MSc, Appl. Math., 2017),
  Thesis: “Trading cookies with a random walk".
- Emily Carroll (MSc, Math., 2016), joint with Arka P. Ghosh,
  Thesis: “The dynamical system of iterated Cevian tribbles".
- Ke Ren (MSc, Appl. Math., 2015),
  Creative component: “Frog models".
- Zheng (John) Zhong (MSc, Appl. Math., 2013),
  Thesis: “On random coefficient INAR(1) processes".
- Wenjun Qin (MSc, Appl. Math., 2011), joint with Arka P. Ghosh,
  Thesis: “Discrete Ornstein-Uhlenbeck process in a stationary dynamic environment".

UNDERGRADUATE THESES

- Charles McCarthy, 2018, “Compositions of Möbius transformations".
- Gavin Pop, 2017, “Planar Brownian motion".
- Zirou Zhou, 2017, “Relative growth of the partial sums of certain random Fibonacci-like sequences".
- Chen Hua, 2011, “Multi-type maximal branching process".
- Zheng (John) Zhong, 2011, “On distribution tails of a stationary INAR(1) process".

OTHER UNDERGRADUATE RESEARCH PROJECTS

- REU, Summer 2010, joint with Reza Rastegar (TA) and Chad Vidden (TA). “Random walks in a game-theoretic environment". The results were presented in MATHFEST of the MAA (Pittsburgh, Ausgust 2010), in SACNAS National Conference (Anaheim, October 2010), and in MAA Undergraduate Poster Session, Joint Mathematics Meetings (New Orleans, January 2011).
- REU, Summer 2009, joint with Arka P. Ghosh (co-mentor) and Reza Rastegar (TA). “Stochastic difference equations". The results were presented in 2009 Young Mathematician Conference at Ohio State University and in 2009 MATHFEST of the NAM (November, Howard University, Washington DC).
- Independent Studies, Daehwan Kim (Summer and Fall 2009), Jisha Zheng (Fall 2010), Vivek Hirpara (Spring 2011), Morteza Khosravi (Fall 2011), Xu Yan (Spring 2016), Zirou Zhou (Spring 2016, Spring and Fall 2017), Brandon Evans (Fall 2016), Charles McCarthy (Spring 2018).
- Research Internship Program, Zhirou Zhou, “Stochastic Difference Equations", 12/2017-5/2018.

- First-Year Honors Mentor Program, Zachary Graves, Sara Ronnkvist, Ethan Wanlass (Spring 2017).
- STAT 491 Texas A&M (Research conducted under the direction of faculty members in statistics), Vijay Seetharam (Fall 2023).

PROFESSIONAL ACTIVITIES

- Referee for peer-reviewed journals: Annals of Probability, ESAIM: Probability and Statistics, Stochastic Processes and their Applications, Annales de l'Institut Henri Poincaré, Proceedings of the Indian Academy of Sciences - Mathematical Sciences, Annales de l'Institut Fourier, Probability Theory and Related Fields, Illinois Journal of Mathematics, Mathematical and Computer Modeling, Science China Mathematics, Electronic Journal of Probability, Computational Statistics and Data Analysis, ALEA: Latin American Journal of Probability and Mathematical Statistics, Statistics and Probability Letters, Journal of Mathematical Analysis and Applications, Journal of Applied Mathematics, Theory and Applications of Graphs, TEST (An Official Journal of the Spanish Society of Statistics and Operations Research), Frontiers of Mathematics in China, Queueing Systems, Journal of Statistical Physics, Journal of Difference Equations and Applications, Journal of Mathematical Biology, Nonlinearity, Journal of Algebraic Combinatorics, Stochastics: An International Journal Of Probability And Stochastic Processes, Markov Processes and Related Fields, Computers in Biology and Medicine, Entropy, Journal of Mathematics (Hindawi), Acta Mathematica Scientia, Stochastics and Dynamics, Bernoulli, Journal of Statistical Theory and Practice, Journal of Physics A, American Mathematical Monthly, Open Mathematics, Acta Applicandae Mathematicae.
- Reviewer for the AMS Mathematical Reviews (MathSciNet).
- Mentor, National Alliance for Doctoral Studies in the Mathematical Sciences (since 2010).
- Referee for NSA's (NSA-AMS) Mathematical Sciences Program, 2014.
- Co-organizer of the special session on "Stochastic Processes with Applications to Physics and Control" at the AMS Spring Central Section Meeting, Ames, April 27–28, 2013.
- Co-organizer of the Ames Symposium in Probability. Conference in honor of Krishna B. Athreya's 70th birthday, Ames, September 18–19, 2009. Co-sponsored by the ISU Office of the Provost and the Institute for Mathematics and its Applications (IMA), Minneapolis.
- External evaluation of a tenure-track faculty (Grand Valley State University), 2011 and 2012.

DEPARTMENTAL AND INSTITUTIONAL SERVICE, IOWA STATE UNIVERSITY

- Lecturer/Senior Lecturer review committee (2015–2017, 2013–2014), Ad hoc committee on postdocs (2014–2015), Ad hoc pre-proposal review committee for the VPR Office (Fall 2014), Probability faculty search committee, joint with Statistics (2012–2013), Math biology search committee (2011–2012), Co-organizer of the Department Colloquium (2009–2011).
- PHD committees: Ding Dai, January 2020 (Stat, Major Prof.: Arka P. Ghosh), Sen Zhou, April 2018 (Math, Major Prof.: L. Steven Hou), Fikri Kucuksayacigil, April 2018 (IMSE & Math, Major Prof.: Min J. Kyung), Keguo Huang, July 2017 (Math, Major Prof.: Arka P. Ghosh), Min Wang, April 2015 (Math & Stat, Major Profs.: Zhijun Wu and Karin Dorman), Saulo Orizaga, July 2014 (Math, Major Prof.: L. Steven Hou), Dajing Wu, April 2014 (Physics, Major Prof.: Kirill Tuchin), Sambarta Dasgupta, February 2014 (EE, Major Prof.: Umesh Vaidya), Man Basnet, August 2013 (Appl. Math, Major Profs.: Fritz Keinert and Namrata Vaswani), Chi-Jen Wang, July 2013 (Appl. Math, Major Prof.: James Evans),

Jing Wang, July 2013 (Appl. Math, Major Prof.: James Evans), Maksym Pryporov, July 2013 (Appl. Math, Major Prof.: Hailiang Liu), Yiping Hao, June 2013 (Appl. Math, Major Prof.: Zhijun Wu), Ozgur Aydogmus, March 2013 (Appl. Math, Major Prof.: Zhijun Wu), Sijia Liu, July 2011 (Appl. Math, Major Prof.: Anastasios Matzavinos), Darren Row, March 2011 (Math, Major Prof.: Leslie Hogben), Jun Li, November 2009 (Physics, Major Prof.: James Vary).

- MSc committees: John Wu, July 2018 (Math., MSc, Major Prof.: Jonathan D. H. Smith), Sen Zhou, November 2017 (Math, Major Prof.: L. Steven Hou), Alex Nowak, April 2017 (Math., MSc, Major Prof.: Jonathan D. H. Smith), Abdolghani Ebrahimi, August 14, 2015 (IMSE, Major Prof.: Arka P. Ghosh).
- First-year graduate student's faculty mentor, Kuejai (Nan) Jungjaturapit (2010).

EXTRACURRICULAR UNIVERSITY SERVICE

TEXAS A&M

- Creating problems, checking students' solutions in the Integral Bee competition (March 2022).
- Grader in the annual High School Math contest (November 2021).

IOWA STATE UNIVERSITY

- Judge in a Three Minute Thesis (3MT®) competition (November 2017).
- Judge in the Symposium on Undergraduate Research & Creative Expression Agenda (April 2017).
- Faculty Adviser for the Iowa Ukrainian Students Organization (2014–2016).

PROFESSIONAL SOCIETIES

American Mathematical Society (AMS), American Statistical Association (ASA).

RECENT TALKS (SINCE 2021)

- Stochastic Processes Seminar, Texas A&M, College Station, March 2024.
- Math Colloquium, University of Houston-Downtown (Zoom), April 2022.
- Boolean Networks Seminar, University of Sofia (Zoom), February 2022.
- Austin-TAMU Probability and Related Fields Meeting, College Station, November 2021.

PUBLICATIONS AND PREPRINTS

SUBMITTED PREPRINTS

47. R. Rastegar, A. Roitershtein, V. Roytershteyn, and V. Seetharam, *Balancing art and money in pursuit of a Kelly-type optimality*, under review.
46. R. Rastegar and A. Roitershtein, *On a characterization of exponential and double exponential distributions*, accepted, to appear in REVSTAT **22** (2024).

PEER-REVIEWED ARTICLES INDEXED BY MATHEMATICAL REVIEWS

45. A. Roitershtein, R. Rastegar, R. S. Chapkin, and I. Ivanov, *Extinction scenarios in evolutionary processes: a Multinomial Wright-Fisher approach*, J. Math. Biol. **87** (2023), article 63. MR4646420

44. T. Mansour, R. Rastegar, A. Roitershtein, and G. Yıldırım, *The longest increasing subsequence in involutions avoiding* 3412 *and another pattern*, Pure Math. Appl. (PU.M.A.) **30** (2022), 11–21. MR4547047

43. A. Roitershtein and Z. Zhou, *Distribution tails of history-dependent random linear recursions*, Stoch. Models **38** (2022), 250–267. MR4408086

42. T. Mansour, R. Rastegar, A. Roitershtein, and M. Shattuck, *Shifting powers in Spivey's Bell number formula*, Quaest. Math. **45** (2022), 55–69. MR4378617

41. R. Rastegar and A. Roitershtein, *Avalanches in a short-memory excitable network*, Adv. in Appl. Probab. **53** (2021), 609–648. MR4322398

40. A. P. Ghosh, S. Noren, and A. Roitershtein, *Favorite sites of a persistent random walk*, J. Math. Anal. Appl. **501** (2021), 125180. MR4236925

39. T. Mansour, R. Rastegar, and A. Roitershtein, *Horizontal visibility graph of a random restricted growth sequence*, Adv. Appl. Math. **124** (2021), 102145. MR4188892

38. T. Mansour, R. Rastegar, and A. Roitershtein, *Finite automata, probabilistic method, and occurrence enumeration of a pattern in words and permutations*, SIAM J. Discrete Math. **34** (2020), 1011–1038. MR4082279

37. T. Mansour, R. Rastegar, and A. Roitershtein, *Staircase patterns in words: subsequences, subwords, and separation number*, European J. Combin. **86** (2020), 103099. MR4078936

36. C. McCarthy, G. Nop, R. Rastegar, and A. Roitershtein, *Random walk on the Poincaré disk induced by a group of Möbius transformations*, Markov Process. Related Fields **25** (2019), 915–940. MR4246021

35. T. Mansour, R. Rastegar, and A. Roitershtein, *On ballistic deposition process on a strip*, J. Stat. Phys. **177** (2019), 626–650. MR4027577

34. D. Buraczewski, P. Dyszewski, A. Iksanov, A. Marynych, and A. Roitershtein, *Random walks in a moderately sparse random environment*, Electron. J. Probab. **24** (2019), paper no. 69. MR3978219

33. I. Ben-Ari, A. Roitershtein, and R. B. Schinazi, *A random walk with catastrophes*, Electron. J. Probab. **24** (2019), paper no. 28. MR3933207

32. O. Angel, A. Matzavinos, and A. Roitershtein, *Limit theorem for the Robin Hood game*, Statist. Probab. Lett. **149** (2019), 9–15. MR3906783

31. T. Chumley, O. Aydogmus, A. Matzavinos, and A. Roitershtein, *Moran-type bounds for the fixation probability in a frequency-dependent Wright-Fisher model*, J. Math. Biol. **76** (2018), 1–35. MR3742781

30. A. Roitershtein and Z. Zhou, *Relative growth of the partial sums of certain random Fibonacci-like sequences*, J. Difference Equ. Appl. **23** (2017), 1913–1928. MR3764773

29. E. Carroll, A. P. Ghosh, X. H. Nguyen, and A. Roitershtein, *Iterated Routh's triangles*, J. Geom. Graph. **21** (2017), 141–156. MR3747986

28. A. P. Ghosh, S. Noren, and A. Roitershtein, *On the range of the right-transient frog model on* $\mathbb{Z}$, Adv. in Appl. Probab. **49** (2017), 327–343. MR3668379

27. A. Matzavinos, A. Roitershtein, and Y. Seol, *Random walks in a sparse random environment*, Electron. J. Probab. **21** (2016), paper 72. MR3592203

26. O. Aydogmus, A. P. Ghosh, S. Ghosh, and A. Roitershtein, *Colored maximal branching process*, Theory Probab. Appl. **59** (2015), 663–672. MR3431700

25. A. P. Ghosh, R. Rastegar, and A. Roitershtein, *On a directionally reinforced random walk*, Proc. Amer. Math. Soc. **142** (2014), 3269–3283. MR3223382

24. I. Ben-Ari, D. Hay, and A. Roitershtein, *On Wallis-type products and Pólya's urn schemes*, Amer. Math. Monthly **121** (2014), 422–432. MR3193726

23. K. Jungjaturapit, T. Pluta, R. Rastegar, A. Roitershtein, M. Temba, C. N. Vidden, and B. Wu, *Trading cookies in a gambler's ruin scenario*, Involve **6** (2013), 191–220. MR3096368

22. R. Basu and A. Roitershtein, *Divergent perpetuities modulated by regime switches*, Stoch. Models **29** (2013), 129–148. MR3056180

21. A. Roitershtein and Z. Zhong, *On random coefficient INAR(1) processes*, Sci. China Math. **56** (2013), 177–200. MR3016591

20. I. Ben-Ari, K. Boushaba, A, Matzavinos, and A. Roitershtein, *Stochastic analysis of the motion of DNA nanomechanical bipeds*, Bull. Math. Biol. **57** (2011), 1932–1951. MR2817824

19. A. P. Ghosh, E. Kleiman, and A. Roitershtein, *Large deviation bounds for functionals of Viterbi paths,* IEEE Trans. Inform. Theory **57**(2011), 3932–3937. MR2817065

18. I. Ben-Ari, A. Matzavinos, and A. Roitershtein, *On a species survival model*, Electron. Commun. Probab. **16** (2011), 226–233. MR2788894

17. D. Hay, R. Rastegar, and A. Roitershtein, *Multivariate linear recursions with Markov-dependent coefficients,* J. Multivariate Anal. **102** (2011), 521–527. MR2755013

16. A. P. Ghosh, D. Hay, V. Hirpara, R. Rastegar, A. Roitershtein, A. Schulteis, and J. Suh, *Random linear recursions with dependent coefficients*, Statist. Probab. Lett. **80** (2010), 1597–1605. MR2684005

15. A. P. Ghosh, A. Roitershtein, and A. Weerasinghe, *Optimal control of a stochastic processing system driven by a fractional Brownian motion input,* Adv. in Appl. Probab. **42** (2010), 183–209. MR2666924

14. I. Ben-Ari, M. Merle, and A. Roitershtein, *A random walk on* $\mathbb{Z}$ *with drift driven by its occupation time at zero,* Stochastic Process. Appl. **119** (2009), 2682–2710. MR2532219

13. A. Roitershtein, *Transient random walks on a strip in a random environment,* Ann. Probab. **36** (2008), 2354–2387. MR2478686

12. A. Roitershtein, *A note on multytipe branching processes with immigrants in a random environment,* Ann. Probab. **35** (2007), 1573–1592. MR2330980

11. A. Roitershtein, *One-dimensional linear recursions with Markov-dependent coefficients,* Ann. Appl. Probab. **17** (2007), 572–608. MR2308336

10. A. Roitershtein, *A log-scale limit theorem for one-dimensional random walks in random environments,* Electron. Commun. Probab. **10** (2005), 244–253. MR2198599

9. E. Mayer-Wolf, A. Roitershtein, and O. Zeitouni, *Limit theorems for one-dimensional transient random walks in Markov environments,* Ann. Inst. H. Poincaré Probab. Statist. **40** (2004), 635–659. MR2086017

8. A. Ben-Hur, A. Roitershtein, and H. T. Siegelmann, *On probabilistic analog automata,* Theoret. Comput. Sci. **320** (2004), 449–464. MR2064311

PEER-REVIEWED ARTICLES NOT INDEXED BY MATHEMATICAL REVIEWS

5. K. Zhou, I. Dobson, Z. Wang, A. Roitershtein, and A. P. Ghosh, *A Markovian influence graph formed from utility line outage data to mitigate cascading*, IEEE Trans. Power Syst. **35** (2020), 3224–3235.

4. A. P. Ghosh, W. Qin, and A. Roitershtein, *Discrete-time Ornstein-Uhlenbeck process in a stationary dynamic environment*, Journal of Interdisciplinary Mathematics **19** (2016), 1–35.

3. R. Rastegar, A. Roitershtein, V. Roytershyen, and J. Suh, *Discrete-time Langevin motion in a Gibbs potential*, Applied Mathematics **3** (2012), 2032–2037.

BOOK CHAPTER

2. C. Bowman, K. Larson, D. Stein, A. Roitershtein, and A. Matzavinos, *Bayesian uncertainty quantification for particle-based simulation of lipid bilayer membranes,* In *Cell Movement: Modeling and Applications*, M. Stolarska and N. Tarfulea (eds.), Springer, 2018, 77–102.

PEER-REVIEWED CONFERENCE PROCEEDINGS ARTICLE

1. H. T. Siegelmann, A. Roitershtein, and A. Ben-Hur, *Noisy neural networks and their generalization,* Advances in Neural Information Processing Systems (NIPS) **12** (2000), 335–341.