

Nika Lazaryan

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Curriculum Vitae

Employment

Federal Reserve Bank of Richmond

- Apr 2020 – present **QSR Manager, Quantitative Supervision and Research/SRC**
- May 2019 – Apr 2020 **Quantitative Analyst, Quantitative Supervision and Research/SRC**
- Jun 2020 – May 2019 **Various analyst positions in Research, Community Development and Human Resources departments**

Virginia Commonwealth University

- Aug. 2015 – present **Affiliate/Adjunct Faculty**
Teaching and research collaboration at the Depts. of Economics and Mathematics.
- Jan. 2009 – May 2010 **Graduate Assistant**
Teaching and research assistance to the Department of Economics.

FINCA International

- Jun. 2008 – Aug. 2008 **Research fellow, microfinance client assessment**
Research on microfinance client assessment. Collection and primary analysis of baseline survey data on microfinance clients in the Republics of Georgia and Armenia.

Work experience prior to graduate school was in the fields of international development, microfinance, real estate, personal/corporate bankruptcies, teaching, translations. Full resume available upon request.

Education

- Dec. 2015 **PhD, Systems Modeling and Analysis**
Concentration: Applied Mathematics. Secondary concentration: Statistics
Departments of Mathematics and Statistical Sciences/Operations Research
Virginia Commonwealth University
- May 2010 **MA, Economics**
School of Business, Virginia Commonwealth University
- June 2002 **MA, English and Area Studies**
Yerevan State University of Linguistics after V. Brusov

Academic Activities

Publications in peer-reviewed journals

Global dynamics in a search and matching model of the labor market, with T. Lubik. *Economic Theory*, May, 2018, 1-17.

Extinction and the Allee effect in an age structured Ricker population model with inter-stage interaction, with H. Sedaghat. *Discrete and Continuous Dynamical Systems*, March 2018, 23(2), 731-747.

Global stability and periodic solutions for a second order rational equation. with H. Sedaghat. *International Journal of Difference Equations*, 2016, 11(1), 79-103.

Periodic and non-periodic solutions in a Ricker-type second-order equation with periodic coefficients, with H. Sedaghat. *Journal of Difference Equations and Applications*, 2016, doi:10.1080/10236198.2016.1187142.

Extinction, periodicity and multistability in a Ricker model of stage-structured populations, with H. Sedaghat. *Journal of Difference Equations and Applications*, 2015, 22(4), 645-670.

Dynamics of planar systems that model stage-structured populations, with H. Sedaghat. *Discrete Dynamics in Nature and Society*, vol. 2015, Article ID 137182, 2015. doi: 10.1155/2015/137182.

Periodic and chaotic orbits of a discrete rational system, with H. Sedaghat. *Discrete Dynamics in Nature and Society*, vol. 2015, Article ID 519598, 2015, doi: 10/1155/2015/519598.

Federal Reserve publications

Using Richmond Fed manufacturing survey to gauge national and regional economic conditions, with S. Pinto. *Federal Reserve Bank of Richmond Economic Quarterly*, 2017, 103(1-4).

Global dynamics in a search and matching model of the labor market, with T. Lubik. *Federal Reserve Bank of Richmond Working Paper*, 2017, 17-12.

How couples approach portfolio allocation, with U. Neelakantan and H. Fessenden. *Federal Reserve Bank of Richmond Economic Brief*, 2017, 17-02.

Monetary incentives and mortgage renegotiation outcomes, with U. Neelakantan. *Federal Reserve Bank of Richmond Economic Quarterly*. 2016, 102(2), 147-168.

The prevalence of apprenticeships in Germany and the US, with U. Neelakantan and D. Price. *Federal Reserve Bank of Richmond Economic Brief*, 2014, 14-08.

Foreclosure crisis and response: How homeowners fared in reaching out for mortgage assistance, with S. McKay and U. Neelakantan. *Community Scope*, Federal Reserve Bank of Richmond, 2013, 3(2).

Work in progress

Periodic and chaotic solutions in the survival region of a second order exponential difference equation with Allee effect, with H. Sedaghat. In preparation.

Periodic and non-periodic solutions of an exponential difference equation with periodic parameters, with H. Sedaghat. Working paper.

Uniform boundedness and global convergence in higher order fractional difference equations, with H. Sedaghat. Working paper.

Projects at conceptual stage

Patterns and regularities in the foldings of discrete planar systems, with H. Sedaghat.

Perils of approximations, with T. Lubik.

Testing for chaos and nonlinearities in economic time series, with T. Lubik.

Estimating transition rates in a Markov model with cross-sectional data, with S. Hays.

Excursions into algebraic dynamics, with J. Flenner.

Teaching experience

Spring 2019	Econ 403: Introduction to Mathematical Economics. VCU School of Business, Dept. of Economics. Avg. student evaluations: 4.8/5.
Fall 2018	Econ 642: Panel and Nonlinear Methods in Econometrics (graduate course). VCU School of Business, Dept. of Economics. Avg. student evaluations: 4.7/5.
Spring 2018	Econ 403: Introduction to Mathematical Economics. VCU School of Business, Dept. of Economics. Avg. student evaluations 4.6/5. Math 200: Calculus with Analytic Geometry I. VCU College of Humanities and Sciences, Dept. of Mathematics. Avg. student evaluations: 4.4/5.
Fall 2017	Math 201: Calculus with Analytic Geometry II. VCU College of Humanities and Sciences, Dept. of Mathematics. Avg. student evaluations: 4.4/5.
Spring 2017	Econ 403: Introduction to Mathematical Economics. VCU School of Business, Dept. of Economics. Avg. student evaluations: 4.7/5.
Fall 2016	Math 200: Calculus with Analytic Geometry I. VCU College of Humanities and Sciences, Dept. of Mathematics. Avg. student evaluations: 4.3/5.
Spring 2016	Math 200: Calculus with Analytic Geometry I. VCU College of Humanities and Sciences, Dept. of Mathematics. Avg. student evaluations: 4.5/5.

- Fall 2015 Econ 642: Panel and Nonlinear Methods in Econometrics (graduate course).
VCU School of Business, Dept. of Economics. Avg. student evaluations: 5/5.
- 1997 – 2002 English (adult and young learners at beginner, intermediate and advanced levels).

Invited talks at conferences and seminars

- Apr. 2017 *“Global Dynamics in a Search and Matching Model of the Labor Market.”* Accepted talk at the 25th Annual Symposium of the Society of Nonlinear Dynamics and Econometrics, Paris, France.
- Nov. 2016 *“Periodic and Chaotic Solutions in the Survival Region of a Second Order Exponential Difference Equation with Allee Effect.”* Invited talk at AMS Fall Southeastern Sectional Meeting, Raleigh, NC.
- Apr. 2016 *“The Dynamics of Stage Structured Population Models.”* Invited talk at Biomathematics Seminar, Dept. of Mathematics, Virginia Commonwealth University.
- Feb. 2016 *“Periodic Solutions of an Exponential Second-Order Difference Equation with Periodic Coefficients.”* Invited talk at Analysis, Logic and Physics Seminar, Dept. of Mathematics, Virginia Commonwealth University.
- Jan. 2016 *“Periodic and Non-periodic Orbits of a Ricker Model with Periodic Coefficients.”* Invited talk at Joint Mathematics Meeting, Special Session on Difference Equations, Seattle, WA.
- Oct. 2015 *“Extinction, Periodicity and Multistability in a Ricker Model of Stage-structured Populations.”* Invited talk at AMS Fall Southeastern Sectional Meeting, Memphis, TN.
- Jun. 2015 *“Global Stability and Periodic Solutions of a Second Order Rational Equation with Applications.”* Invited talk at Progress on Difference Equations, Covilha, Portugal.
- Mar. 2015 *“Global Dynamics and Periodic Solutions of a Quadratic-fractional Second Order Equation.”* Invited talk at AMS Spring Southeastern Sectional Meeting, Washington, D.C.
- Nov. 2014 *“The Dynamics of a Planar System.”* Invited talk at AMS Fall Southeastern Sectional Meeting, Greensboro, NC.
- Sep. 2013 *“Does Foreclosure Increase the Likelihood of Homelessness? Evidence from Greater Richmond Area.”* Contributing talk at Collaborative Impact: The Case for Ending Homelessness, Federal Reserve of Richmond, Richmond, VA.
- Apr. 2013 *“The Impact of Foreclosure on Homelessness: Evidence from Greater Richmond Area.”* Seminar presentation at the VCU Economics Department, Richmond VA.

Apr. 2013 *“The Impact of Foreclosure on Homelessness: Evidence from Greater Richmond Area.”*
Poster presentation at 2013 Federal Reserve System Community Development Research Conference, Washington, D.C.

Apr. 2010 *“The Impact of Foreign Aid on Infant Mortality,”* Presentation at the Virginia Association of Economists 37th Annual Meeting, Lynchburg, VA.

Referee experience

Journal of Difference Equations and Applications, Mathematics and Financial Economics, Federal Reserve Bank of Richmond Economic Quarterly.

Memberships

American Mathematical Society, Phi Kappa Phi.

Programming languages

Stata, Matlab, SAS, R, Python, AMPL, LaTeX

Languages

- English (professional proficiency, primary language of communication)
- Russian (near-native proficiency)
- Armenian (native proficiency)

Hobbies and interests

Creative writing, philosophy, classical music, photography.