VENIAMIN SMIRNOV

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EDUCATION AND QUALIFICATIONS

- PhD, Mathematics, Texas Tech University, 2017-present, (GPA: 3.96), graduation: 12/2021.
- MS, Mathematics, Texas Tech University, 2017-2019, (GPA: 3.95)
- BS, Mathematics, Stockton University, 2013-2016, (GPA: 3.94)
- MS, Financial Analysis, Accounting and Audit, Saint-Petersburg Institute of International Relations, Economics and Law , 2002-2007, (GPA: 4.0)

TECHNICAL SKILLS

- **Programming:** Python (Numpy, Pandas, Dask, Scipy, Plotly, Matplotlib, etc), Matlab, Maple, GNU Octave, HTML, LaTeX, algorithms development.
- **ML:** Pytorch, Sklearn, Tableau.

WORK EXPERIENCE

- **01/2021 - present:** Graduate Part-Time Instructor, Department of Mathematics and Srarustucs, Texas Tech University
  - Spring 2021 MATH1452 "Calculus II with Applications"
- **09/2019 - 12/2020:** Research Assistant, Department of Mathematics and Statistics, Texas Tech University.
- **09/2017 - 09/2019:** Teaching Assistant, Department of Mathematics and Statistics, Texas Tech University. I taught the following classes:
  - Fall 2018 MATH1300 "Contemporary Math"
  - Spring 2019 MATH1300 "Contemporary Math"
  - Summer 2019 MATH4354 "Differential Equations II"
- **2015-2016:** Math tutor, Stockton University.
- **09/2014-01/2015:** Teaching Assistant, Stockton University.
- **07/2007-10/2011:** Deputy Chief of Financial Department, Krasnodar Research Institution of Agriculture.
- **06/2006-06/2007:** Accountant, Lite Portal.

RESEARCH EXPERIENCE/PROJECTS

Texas Tech University **Lubbock, TX**

12/2020-present

- Analysis of social media intelligence operations on the Twitter platform.

AVX Aircraft Company & PeopleTec & DoD & Texas Tech University **Lubbock, TX**

11/2019-12/2020

- Developed algorithms for data refinement, synchronization, and fusion of parametric and maintenance data for MH60 Black Hawk helicopters.

Texas Tech University **Lubbock, TX**

Summer 2019

- Reviewed different methods of threshold selection and studied the extreme events presented in 39 years of the US economy using different statistical approaches.
- This project led to 1 publication in Communications in Nonlinear Science and Numerical Simulation.

Texas Tech University **Lubbock, TX**

Fall 2018

- Studied predictability of market states and stock prices of individual companies by reconstructing a discrete model of S&P 500 phase space.
- This project led to 2 publications in Applied Mathematics and Nonlinear Sciences and Mathematical Methods in Modern Complexity Science: From Artificial Intelligence to Relativistic Chaotic Dynamics.

Texas Tech University **Lubbock, TX**

Summer 2018

- Proposed computationally feasible statistical algorithms for the automated assessment of isolation and integration of urban locations and neighborhoods.
- This project led to 2 publications in Journal of Vibration Testing and System Dynamics and The Many Facets of Complexity Science.

AWARDS

- 2015 Stockton Board of Trustees Fellowship for Distinguished Students ($\$1,500$)
- 2018 Patrick Odell Scholarship ($\$1,000$)
- 2019 Hua Yu Memorial Scholarship ($\$1,000$)
- 2019 The Shelby Hildebrand Graduate Fellowship ($\$10,000$)
- 2020 James D. and Mary Hazlewood Graduate Fellowship ($\$3,000$)
- 2020 Ronald M. Anderson Scholarship ($\$1,000$)

PUBLICATIONS

- Volchenkov, D., **Smirnov, V.**, “The City of Lubbock is Running Away. Integration and Isolation Patterns in the Wandering City”, Journal of Vibration Testing and System Dynamics, 3(2), 121-132 (2019)
- **Smirnov, V.**, Volchenkov, D., “Five Years of Phase Space Dynamics of the Standard & Poor’s 500”, Applied Mathematics and Nonlinear Sciences 4(1) (2019) 203–216
- **Smirnov, V.**, Ma, Zh., Volchenkov, D., "Extreme Events and Emergency Scales", Communications in Nonlinear Science and Numerical Simulation, 90 (2020)
- “An Unfair Coin of the Standard & Poor’s 500”, Dimitri Volchenkov, **Veniamin Smirnov**, Ch 2 in Mathematical Methods in Modern Complexity Science: From Artificial Intelligence to Relativistic Chaotic Dynamics. In Memory of Valentin Afraimovich (1945–2018) (Eds. J.A. Tenreiro Machado, D. Volchenkov) Springer Nonlinear Physical Science (to appear 2021)
- “Multi-scale Analysis of Urban Spatial Structures acquired from OpenStreetMap”, Dimitri Volchenkov, **Veniamin Smirnov**, Ch 12, in The Many Facets of Complexity Science: In Memory of Valentin Afraimovich (1945–2018), (Ed. D. Volchenkov) HEP & Springer Nature (to appear 2021)
- “Extreme Events And Emergency Scales”, **Veniamin Smirnov**, Zhuanzhuan Ma, And Dimitri Volchenkov, Ch 2 in Mathematical Methods in Modern Complexity Science: From Artificial Intelligence to Relativistic Chaotic Dynamics. In Memory of Valentin Afraimovich (1945–2018) (Eds. J.A. Tenreiro Machado, D. Volchenkov) Springer Nonlinear Physical Science (to appear 2021)