



# Victoria Chebotaeva






Department of Mathematics

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## Education













- 2018 – 2024     **Ph.D., University of South Carolina**, Mathematics. Dissertation title: “Erlang-distributed *SEIR* epidemic models with cross-diffusion.”  
(Director: Paula Vasquez)
- 2012 – 2018     **Specialist (M.S.+B.S.), Moscow State University, Russia**, Mathematics, Mechanics, Lecturing. Thesis title: “Mathematical Models of Epidemics in Closed Populations.”  
(Director: Irina Astashova)

## Employment History






- 2024 – . . . .     **Dornsife Teaching Fellow in Mathematics**, University of Southern California.
- 2023 – 2024     **Faculty member, Instructor**, TRIO program, University of South Carolina.
- 2018 – 2024     **Graduate Assistant**, Department of Mathematics, University of South Carolina.
- 2017 – 2018     **Teaching Assistant**, Plehanov Russian University of Economics.
- 2013 – 2018     **Private Math Tutor**, Moscow.

## Teaching Experience

### Courses Taught as Instructor of Record




- Spring 2025     Linear Algebra and Linear Differential Equations.  
                   Calculus for Business and Economics.
- Fall 2024     Precalculus.
- Spring 2024     Calculus I.  
                   Mathematical Modeling for the Life Science.
- Fall 2023     Precalculus.  
                   Basic College Algebra.
- Spring 2023     Mathematical Modeling for the Life Science.
- Fall 2022     Business Calculus.
- Spring 2022     Mathematical Modeling for the Life Science.
- Spring 2021     Finite Mathematics, online.
- Spring 2020     Basic College Algebra.

### Courses Taught as Teaching Assistant

- Fall 2021     Calculus I.
- Fall 2020     Calculus II.
- Fall 2019     Calculus I.
- Spring 2019     Calculus II.
- Fall 2018     Calculus I.

## Research

### Journal Articles

- 1 V. Chebotaeva, A. Srinivasan, and P. Vasquez, "Differentiating contact with symptomatic and asymptomatic infectious individuals in a seir epidemic model," *Bulletin of Mathematical Biology*, vol. 87, 2025, ISSN: 0092-8240.  URL: <https://doi.org/10.1007/s11538-025-01416-2>.
- 2 V. Chebotaeva and P. A. Vasquez, "Erlang-distributed seir epidemic models with cross-diffusion," *MDPI Mathematics*, vol. 11, e2205v1, 2023, ISSN: 2227-7390.  URL: <https://doi.org/10.3390/math11092167>.
- 3 I. Astashova, V. Chebotaeva, and A. Cherepanov, "Mathematical models of epidemics in closed populations and their visualization via web application phapl," *WSEAS Transactions on Biology and Biomedicine*, vol. 15, 2018, ISSN: 1109-9518.  URL: <https://www.wseas.org/multimedia/journals/biology/2018/a265908-043.php>.

### Presentations

- |               |   |
|---------------|---|
| April 2025    |  <b>Erlang-Distributed SEIR Epidemical Model with symptomatic and asymptomatic individuals</b> , SOCAMS 2025, UC Riverside   |
|               |  <b>SEIR models with Symptomatic and Asymptomatic behavior</b> , guest speaker, Scripps College  |
| February 2025 |  <b>Erlang-Distributed SEIR Epidemic Models</b> , WiMSoCal, California State University, Fullerton   |
| November 2024 |  <b>"Women in STEM. Why so few?"</b> , Charlotte's Web, University of Southern California  |
|               |  <b>"How to get a job in Academia. Or at least how Victoria got one,"</b> graduate student colloquium, University of South Carolina  |
|               |  <b>"Women in STEM. Why so few?"</b> , AWM special chapter, University of South Carolina   |
| October 2024  |  <b>"Graduate Students as Part of the Instructional Workforce for Undergraduate STEM Education,"</b> panel participant, NASEM  |
| June 2024     |  <b>"SEIR epidemic model. General and Advanced Variations,"</b> Moscow State University  |
| March 2024    |  <b>"SEIR epidemic models with cross-diffusion coefficients,"</b> Math for All, Clemson University.  |
| February 2024 |  <b>"It's Nonlinear World,"</b> Spring Initiation Ceremony of II ME & Gamecock Math Club, Department of Mathematics, University of South Carolina.                               |
| January 2024  |  <b>"Erlang-distributed SEIR epidemic models with cross-diffusion,"</b> AWM Special Session on Women in Mathematical Biology, Joint Mathematics Meetings.                        |
| October 2023  |  <b>"Erlang-distributed SEIR epidemic models,"</b> Graduate Colloquium, Department of Mathematics, University of South Carolina.   |
| May 2018      |  <b>"Mathematical models of epidemics and their visualization via web application phapl,"</b> Days of students' science, Plehanov Russian University of Economics.               |
| May 2017      |  <b>"Mathematical modeling of epidemics: SIRS and SEIRS models,"</b> Days of students' science, Plehanov Russian University of Economics.  |
| May 2016      |  <b>"Asymptotic behavior of solutions to non-linear differential equations with exponential potential,"</b> Days of students' science, Plehanov Russian University of Economics. |

## Professional Activities, Service and Supervision

- 2022 – 2023
  - **Instructional Peer Mentor for Novices GSIs**, Department of Mathematics.
  - **Peer Mentor for International Novices**, Department of Mathematics.
- 2022 – 2024
  - **Board Game Leader, Mathematics Club**, Department of Mathematics.
- 2023 – 2024
  - **Second Reader on UofSC Honors Thesis: Tedeschi, Daniel** Department of Mathematics.
- Spring 2025
  - **Coordinator of Business Calculus course**, Department of Mathematics.

## Certification

- December 2023
  - **Integrative and Experiential Learning (IEL)**, UofSC Training and Professional Development, Center for Teaching Excellence.
- May 2024
  - **Teaching Toward Inclusive Excellence (TTIE)**, UofSC Training and Professional Development, Center for Teaching Excellence.
- May 2024
  - **Mental Health and Well-being Competency**, UofSC Training and Professional Development, Center for Teaching Excellence.
- December 2024
  - **Faculty Teaching Institute Fall 2024**, USC Center for Excellence in Teaching.

## Membership in professional organizations

- 2018 – . . . .
  - USC Association for Women in Mathematics (AWM), University of South Carolina.
  - Society for Industrial and Applied Mathematics (SIAM).

## Skills

- Languages
  - Russian (native), English(fluent), Italian (beginner).
- Coding
  - C/C++, Python, MatLab,  $\text{\LaTeX}$
- Misc.
  - Academic research in OPE, PDE, and mathematical modeling, undergraduate teaching, course development (writing syllabuses, lectures, HW, quizzes and exams), consultation, graduate assistant mentoring,  $\text{\LaTeX}$  typesetting, and publishing.