Dr. Ursula Trigos-Raczkowski

Assistant Professor of Mathematics

Department of Computer Science, Mathematics, and Statistics

Vermont State University Randolph

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 Personal Website

Education

University of Michigan, Ann Arbor
Ph.D., Applied Mathematics.
M.S., Applied Mathematics.

California State University Bakersfield
B.S., Applied Mathematics. Minor, Chemistry.

Dissertation

Coexistence through Life-History Variation: revisited in tractable models
with explicit patch aging and/or size-structure.

Employment

Vermont State University Randolph
Assistant Professor, August 2025 - Present
University of Louisiana at Lafayette
Post Doctoral Fellow, July 2024 - July 2025
Integrative Biology, University of Texas at Austin
Post Doctoral Fellow, July 2023 - July 2024
Research Affiliate – Visiting Researcher/Scholar, July 2022 - July 2023
Mathematics, University of Michigan, Ann Arbor
Graduate Student Instructor & Graduate Student, July 2016 - July 2022
Mathematics, California State University Bakersfield
Teaching Assistant, Math 281 (Tutoring in Precalculus and Calculus), Jan-May 2016

Teaching

Mathematics, Vermont State University Randolph
Technical Mathematics, 3 Sections (3 credit each) FA25
Calculus I, 1 Section (4 credits) FA25
Technical Mathematics Lab, 1 section (1 credit) FA25

Mathematics, University of Michigan, Ann Arbor
Graduate Student Instructor of Record (GSI)
GSI, Calculus I, one section (4 credits), FA 2021, WN 2021, FA 2019, WN 2017
GSI, Data, Functions and Graphs (a precalculus course),
         one section (4 credits), FA 2020, FA 2016

Mathematics, California State University Bakersfield
Teaching Assistant, Math 281 (Tutoring in Precalculus and Calculus), 2014-2016
Teaching Assistant, Math 204 (Calculus IV), 2013-2014 and 2015-2016
Student Assistant, proctored exams, 2012.

Publications

The impact of prey seasonal breeding on evolutionary predator-prey dynamics (accepted for publication Nov 2025 in Journal of Difference Equations and Applications)

A Spatially-Explicit Stochastic Model for the Gulf Coast Ticks (June 13, 2025 in *Ecological Modelling*)

Discrete-Time Refuge-Mediated Competition Model (in progress)

Disturbance-Generated Competitive Coexistence (in progress) BioRxiv link

Talks   *Coexistence via life history variation revisited in models with explicit patch aging*
Presented at the following conferences:

American Institute of Mathematical Sciences, AIMS 2023
in Wilmington, North Carolina (July 2023)
Joint Mathematics Meeting, JMM 2023
in Boston, Massachusetts (January 2023)
International Conference on Mathematical Modeling and Analysis of Populations in Biological Systems, ICMA-VIII 2022
in Lafayette, Louisiana (October 2022)
EcoLunch Ecology Seminar, UT Austin 2022
in Austin, Texas (October 2022)
Ecological Society of America, ESA 2022
in Montreal, Canada (August 2022)

Awards and Fellowships

Rackham Merit Fellow (RMF, RSA) (2018)
California Scholarship Federation (2008-2011)
CSU Louis Stokes Alliance for Minority Participation, $(2012 - 2016)$

Languages and Skills

English (native), Spanish (fluent), Polish (advanced)
Matlab, LaTeX, Mathematica, SLURM HPC Cluster

References

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