Liz Izhikevich

Research Overview

My research brings a data-driven approach to understanding and improving the Internet's performance and security. I build systems that collect data about network, operator, and attacker behaviors. I use quantitative analysis, including rigorous statistics, on the data my systems collect to surface operational challenges and threats.

EDUCATION

 Ph.D. in Computer Science, Stanford University Dissertation: "A Comprehensive and Real-Time View of the Internet Service Ecosystem" Advisor: Zakir Durumeric 	2018-2024
M.S. in Computer Science, Stanford University	2023
 M.S. in Computer Science, University of California, San Diego Thesis: "Building and Breaking Burst-Parallel Systems" Advisors: Geoff Voelker and George Porter 	2017–2018
B.S. in Computer Science, University of California, San Diego – Minor: Mathematics.	2014-2017

POSITIONS

Assistant Professor, Electrical and Computer Engineering, University of California, Los Angeles July 2024—Present
 Senior Security Researcher, Censys August 2024—Present
 Research Intern, Censys June 2024—August 2024
 Graduate Research Fellow, Netflix June 2023—May 2024

Honors and Awards

• Forbes 30 Under 30, Science	2025
• EECS Rising Star, International Recognition	2023
• Community Impact Award, Stanford University	2023
• Student Services Award, Stanford University Computer Science Department	2023
• Community Contribution Paper Award, ACM Internet Measurement Conference	2022
• Graduate Research Fellowship, National Science Foundation ("NSF GRFP")	2018
• Graduate Fellowship in Science and Engineering, Stanford University ("Stanford SGF")	2018
• Department Award for Excellence in Teaching, UC San Diego	2018

† indicates mentee, * indicates co-first authorship

Conference Proceedings

- [1] L. **Izhikevich**, R. Engardt, T. Huang, and R. Teixeira, "A Global Perspective on the Past, Present, and Future of Video Streaming over Starlink", in *ACM SIGMETRICS/IFIP Performance*, 2025.
- [2] K. Izhikevich[†], G. Voelker, S. Savage, and L. **Izhikevich**, "Using Honeybuckets to Characterize Serverless Storage Scanning in the Wild", in *IEEE European Symposium on Security and Privacy*, 2024.
- [3] L. **Izhikevich**, M. Tran[†], K. Izhikevich[†], G. Akiwate, and Z. Durumeric, "Democratizing LEO Satellite Network Measurement", in *ACM SIGMETRICS/IFIP Performance*, 2024.
- [4] L. **Izhikevich**, M. Tran[†], M. Kallitsis, A. Fass, and Z. Durumeric, "Cloud Watching: Understanding Attacks Against Cloud-Hosted Services", in *Proceedings of the 23rd ACM Internet Measurement Conference*, 2023.
- [5] L. Izhikevich, G. Akiwate, B. Berger[†], S. Drakontaidis[†], A. Ascheman[†], P. Pearce, D. Adrian, and Z. Durumeric, "ZDNS: A Fast DNS Toolkit for Internet Measurement", in *Proceedings of the 22nd ACM Internet Measurement Conference*, *Community Contribution Award*, 2022.
- [6] L. Izhikevich, R. Teixeira, and Z. Durumeric, "Predicting IPv4 Services Across All Ports", in *Proceedings of the ACM SIGCOMM Conference*, 2022.
- [7] M. Ziv[†], L. **Izhikevich**, K. Ruth, K. Izhikevich[†], and Z. Durumeric, "ASdb: A System for Classifying Owners of Autonomous Systems", in *Proceedings of the 21st ACM Internet Measurement Conference*, 2021.
- [8] J. Cable*†, D. Gregory*†, L. **Izhikevich***, and Z. Durumeric, "Stratosphere: Finding Vulnerable Cloud Storage Buckets", in *Proceedings of the 24th International Symposium on Research in Attacks*, *Intrusions and Defenses*, 2021.
- [9] L. **Izhikevich**, R. Teixeira, and Z. Durumeric, "LZR: Identifying Unexpected Internet Services", in 30th USENIX Security Symposium, 2021.
- [10] G. Wan, L. Izhikevich, D. Adrian, K. Yoshioka, R. Holz, C. Rossow, and Z. Durumeric, "On the Origin of Scanning: The Impact of Location on Internet-Wide Scans", in ACM Internet Measurement Conference, 2020.
- [11] L. Ao, L. **Izhikevich**, G. M. Voelker, and G. Porter, "Sprocket: A Serverless Video Processing Framework", in *Proceedings of the Ninth ACM Symposium on Cloud Computing*, 2018.
- [12] L. **Izhikevich**, E. Peterson, and B. Voytek, "Neural oscillatory power is not Gaussian distributed across time", in *Program No. 271.03. 2016 Neuroscience Meeting Planner*, 2016.

Books

[13] N. Moshiri and L. **Izhikevich**, Design and Analysis of Data Structures. 2016, ISBN: 978-1981017232.

Pre-Prints

[14] L. **Izhikevich**, R. Gao, E. Peterson, and B. Voytek, "Measuring the average power of neural oscillations", bioRxiv, 2018. eprint: https://www.biorxiv.org/content/early/2018/10/13/441626.full.pdf.

Thesis

- [15] L. Izhikevich, "Building and Breaking Burst-Parallel Systems", M.S. thesis, University of California, San Diego, 2018.
- [16] L. **Izhikevich**, "A Comprehensive and Real-Time View of the Internet Service Ecosystem", Ph.D. dissertation, Stanford University, 2024.

PROFESSIONAL SERVICE

Technical Program Committees	
• Internet Measurement Conference	2023-2029
• IEEE Security and Privacy	2023
• Symposium on Research in Attacks, Intrusions, and Defenses	2022-2023
• The Passive and Active Measurement Conference	2022
• IEEE Security and Privacy (External Reviewer)	2022
• USENIX Security (External Reviewer)	2019-2022
• Internet Measurement Conference (External Reviewer)	2019–202
Department and University Service	
Data Science Faculty Search Committee, Stanford University	2022-2023
	2022
• Ethics & Society Review of HAI Seed Grants Committee, Stanford University	
 Ethics & Society Review of HAI Seed Grants Committee, Stanford University Chair of Ph.D. Applicant Support Program, Stanford University 	2021–2023
• Chair of Ph.D. Applicant Support Program, Stanford University	2021–2023
 Chair of Ph.D. Applicant Support Program, Stanford University Ph.D. Admissions Committee, Computer Science, Stanford University 	2021–2023
 Chair of Ph.D. Applicant Support Program, Stanford University Ph.D. Admissions Committee, Computer Science, Stanford University TEACHING	2021–2023 2019–2023
 Chair of Ph.D. Applicant Support Program, Stanford University Ph.D. Admissions Committee, Computer Science, Stanford University TEACHING Instructional Assistant at Stanford University 	2021–2023 2019–2023
 Chair of Ph.D. Applicant Support Program, Stanford University Ph.D. Admissions Committee, Computer Science, Stanford University TEACHING Instructional Assistant at Stanford University CS356: Topics in computer Networking and Security, https://cs356.stanford.edu/ Co-Creator/Co-Lecturer/Instructional Assistant at Stanford University 	2021–2023 2019–2023 Winter 2022
 Chair of Ph.D. Applicant Support Program, Stanford University Ph.D. Admissions Committee, Computer Science, Stanford University TEACHING Instructional Assistant at Stanford University CS356: Topics in computer Networking and Security, https://cs356.stanford.edu/ Co-Creator/Co-Lecturer/Instructional Assistant at Stanford University CS249i: The Modern Internet, https://cs249i.stanford.edu/ Instructional Assistant/Discussion Section Leader at UC San Diego 	2021–2023 2019–2023 Winter 2022 Fall 2021
 Chair of Ph.D. Applicant Support Program, Stanford University Ph.D. Admissions Committee, Computer Science, Stanford University TEACHING Instructional Assistant at Stanford University CS356: Topics in computer Networking and Security, https://cs356.stanford.edu/ Co-Creator/Co-Lecturer/Instructional Assistant at Stanford University CS249i: The Modern Internet, https://cs249i.stanford.edu/ Instructional Assistant/Discussion Section Leader at UC San Diego CSE100: Advanced Data Structures in C++, assisted 4 times and textbook author Instructional Assistant/Discussion Section Leader at UC San Diego 	2021–2023 2019–2023 Winter 2022 Fall 2021 Fall 2015–Winter 2017

STUDENTS

(those who have published a peer-reviewed article with me)

• Manda Tran (Ph.D.)	2024-Current
• Manda Tran (M.S.)	2021-2023

• Anna Ascheman (B.S)	2022
• Briana Berger (B.S/M.S.)	2021–2022
• Spencer Drakontaidis (B.S.)	2021–2022
• Jack Cable (B.S.)	2020-2021
• Drew Gregory (B.S.)	2020-2021
• Maya Ziv (M.S.)	2020-2021
• Katherine Izhikevich (B.S/M.S/Ph.D.)	2018–Current

REFERENCES

Zakir Durumeric

Assistant Professor of Computer Science Stanford University

Geoffrey Voelker

Professor of Computer Science and Engineering University of California, San Diego

Stefan Savage

Professor of Computer Science and Engineering University of California, San Diego

Renata Cruz Teixeira

Former Director of Research; Current Senior Research Scientist Inria, Paris; Netflix