DR. RAMI KATZ – CURRICULUM VITAE

January 25th, 2026

The transliteration of my name appearing in official documents is Ram (Rami) Kats. However, in my scientific and daily activities, as well as in my publications, my name often appears as Rami Katz.

Current Affiliation: Assistant Professor (Senior Lecturer) at the School of Electrical and Computer Engineering, Tel-Aviv University, Israel.
E-Mail Address: ramkatsee@gmail.com or ramkatsee@tauex.tau.ac.il
Phone: +972 526688584
Homepage: www.ramikatz.com

Education

- ***2018-2022:*** Ph.D. in Electrical Engineering, Systems Dept., School of Electrical Engineering, Tel-Aviv University, Israel. Academic Supervisor: Prof. Emilia Fridman.
- ***2015-2017:*** M.Sc. (Summa cum Laude) in Applied Mathematics, Dept. of Mathematics, Tel-Aviv University, Israel. Academic Supervisor: Prof. Adi Ditkowski.
- ***2011-2014***: B.Sc. (Summa cum Laude) in Mathematics/Economics, Tel-Aviv University.

Academic Employment

- ***Since 2025:*** Assistant Professor (Senior Lecturer), Systems Dept., School of Electrical and Computer Engineering, Tel-Aviv University, Israel.
- ***2023-2025:*** Postdoctoral Research Fellow, Dept. of Industrial Engineering, University of Trento, Italy.
- ***2022-2023:*** Postdoctoral Research Fellow, Systems Dept., School of Electrical Engineering, Tel-Aviv University, Israel.

Professional Qualifications

- ***2024:*** Italian **National Scientific Habilitation** (Abilitazione Scientifica Nazionale) as an ***Associate Professor*** (Professore di II Fascia) in the field GSD 09/IINF-04 – SSD IINF-04/A – Automatica (Systems and Control Engineering). Certificate link.

Honors and Awards

- ***2023:*** Juan de la Cierva international Spanish fellowship (Assistant Professor position level), one of 17 throughout Spain. Declined to take another position in Italy. Award link.
- ***2021:*** Best Student Paper Award finalist, European Control Conference 2021. Award link.
- ***2020:*** National fellowship for excellence in Ph.D. studies. Funded by the KLA corporation.

- ***2020:*** Automatica Editor's Choice Award for the paper J27: "Entrainment to subharmonic trajectories in oscillatory discrete-time systems", June 2020. Award link.
- ***2020:*** Award for Outstanding Lecturers. Afeka College of Engineering.
- ***2018:*** The Excellence in Studies Prize. Funded by the Yitzhak and Chaya Weinstein Research Institute for Signal Processing, Tel-Aviv University.
- ***2016:*** Tel-Aviv University Excellence in Studies Prize. Awarded during M.Sc. studies.
- ***2014:*** Tel-Aviv University Excellence in Studies Prize. Awarded during B.Sc. studies.
- ***2014:*** "Gifted B.Sc. students' program", School of Mathematics, Tel-Aviv University.

Invited Talks

Besides participating in and presenting contributed and invited papers at several international conferences since 2019 (C3, C4, C10, C12, C14, C15, C16 and A1, A2, A3 in my Publication list), I was also invited to give talks and seminars at international conferences and institutions.

- ***09/2026:*** "Spectral reconstruction of 1D reaction-diffusion systems from measurements via algebraic super-resolution methods", **Invited Speaker**, 5th Workshop on Stability and Control of Infinite-Dimensional Systems (SCINDIS 2026), Bayreuth, Germany. Website.
- **11/2025:** "On k-cooperativity theory for dynamical systems and its application to robust biological oscillators", online Louisiana State University Dept. of Mathematics, Control and Optimization Seminar, United States.
- **09/2025:** "On k-cooperativity theory for dynamical systems and its application to robust biological oscillators", University of Bergamo Dept. of Management, Information and Production Engineering Seminar, Italy.
- **09/2025:** "On k-cooperativity theory for dynamical systems and its application to robust biological oscillators", University of Trento Dept. of Mathematics Seminar, Italy.
- ***02/2025:*** "On k-cooperativity theory for dynamical systems and its application to robust biological oscillators", University of Bayreuth Dept. of Mathematics Seminar, Germany.
- ***06/2024:*** "Constrained system identification of reaction-diffusion equations: a bridge between control and inverse problems", Tel-Aviv University Dept. of Applied Mathematics Seminar, Israel.
- ***05/2024:*** "ISS and stability of delayed rapidly varying systems – novel constructive approaches", University of Bozen Dept. of Engineering Seminar, Italy.
- ***12/2023:*** "On the gain of entrainment in a class of contractive bilinear control systems", Drakhlin's online seminar on functional differential equations.
- ***07/2023:*** "On the gain of entrainment in a class of contractive bilinear control systems", University of Trento Dept. of Engineering Seminar, Trento, Italy.
- ***05/2023:*** "On the accuracy of Prony's method for stable super-resolution", University of Bayreuth systems and control seminar, Germany.

- ***05/2023:*** "On the gain of entrainment in a class of contractive bilinear control systems", University of Passau systems and control seminar, Germany.
- ***03/2023:*** "On the accuracy of Prony's method for stable super-resolution", Ben-Gurion University Electrical Engineering Seminar, Israel.
- ***06/2022:*** "Multi-agent deployment via sampled-data control of Distributed Parameter Systems", Ben-Gurion University Electrical Engineering Seminar, Israel.
- ***04/2022:*** "Constructive delayed control of distributed parameter systems", Drakhlin's online seminar on functional differential equations.
- ***12/2021:*** "Sampled-data control of parabolic PDEs", Tel-Aviv University Dept. of Applied Mathematics seminar, Israel.
- ***12/2021:*** "Finite-dimensional observer-based ISS and L2-gain control of parabolic PDEs", ISS and applications online seminar.
- ***04/2021:*** "Finite-dimensional observer-based control of parabolic PDEs", Distributed parameter systems online seminar.

Scientific Responsibility of Acquired External Research Funding

Awarded Grants

- ***2025:*** Alon Fellowship, competitive personal research grant awarded by the Planning and Budgeting Committee, Council for Higher Education, Israeli Ministry of Education.
  Research project: "Distributed-parameter-systems-based control and estimation of multi-agent systems" (SCOUT).
  Role: Principal Investigator.
  Awarded Sum: approximately 280,000 euros.

Participation in Externally Funded Projects

- ***2023-2025:*** Leader of Work Package 1, responsible for the development of new theoretical and methodological approaches for complex biological networks, within the ERC Starting Grant project "Integrated Structural and Probabilistic Approaches for Biological and Epidemiological Systems" (INSPIRE), European Research Council, PI: Giulia Giordano.
- ***2022-2023:*** Responsible for studying gain of entrainment properties in weakly contractive bilinear systems, with application to the ribosome flow model, within projects funded by DFG, GR 1569/24-1 and KR 1673/7-1, n. 470999742, Deutsche Forschungsgemeinschaft, PI: Lars Grüne, and ISF, grant n. 407/19, Israel Science Foundation, PI: Michael Margaliot.
- ***2022-2023:*** Collaboration to the ISF project on identification, exponential fitting, and Prony's method for super-resolution, grant no. 1793/20, Israel Science Foundation, PI: Dmitry Batenkov.

- ***2018-2022:*** Responsible for the development of novel methodologies for the control and stabilization of infinite dimensional systems, including partial differential equations and complex systems with time delays, within the ISF project, grant no. 673/19, Israel Science Foundation, PI: Emilia Fridman.
- ***2017-2018:*** Responsible for the development of sampling algorithms for 3D signals within the ERC Consolidator Grant project "Cryo-electron microscopy: mathematical foundations and algorithms" (CRYOMATH), European Research Council, PI: Yoel Shkolnisky.

Scientific Events – Organization and Chairing

- ***2026:*** Co-organizer of the workshop proposal "Robustness, resilience, and early warnings in natural dynamical networks", 2026 European Control Conference (ECC26), Reykjavík, Iceland.
- ***2024:*** Co-organizer of the invited session "Biological systems: Modelling, analysis and algorithms", 63rd IEEE Conference on Decision and Control, Milan, Italy.
- ***2024:*** Co-organizer of the invited session "Optimal and model-based control of biological systems", 63rd IEEE Conference on Decision and Control, Milan, Italy.
- ***2022:*** Session chair, 25th International Symposium on Mathematical Theory of Networks and Systems (MTNS 2022), Bayreuth, Germany.
- ***2021:*** Session chair, 2021 European Control Conference (ECC21), Rotterdam, The Netherlands.

Editorial Roles for Journals

- ***Since 2025:*** Associate Editor for the journal Mathematics of Control, Signals and Systems (MCSS).

Editorial Roles for Conferences

- ***2025:*** Member of the European Control Association Conference Editorial Board (EUCA-CEB), service in the International Program Committee of the European Control Conference as an Associate Editor for ECC 2026.
- ***2024:*** Member of the European Control Association Conference Editorial Board (EUCA-CEB), service in the International Program Committee of the European Control Conference as an Associate Editor for ECC 2025.

Reviewing Activity

- ***Since 2019:*** Reviewer for leading journals in mathematical systems and control theory, including: Automatica; European Journal of Control; IEEE Control Systems Letters; IEEE Transactions on Automatic Control; Journal of Differential Equations; Mathematics of Control, Signals and Systems; Systems & Control Letters.

- ***Since 2019:*** Reviewer for conference proceedings in mathematical systems and control theory, including: American Control Conference; European Control Conference; IEEE Conference on Decision and Control; multiple IFAC Conferences.

Research Supervision

Ph.D. students

- **Uros Sutulovic:** Department of Engineering, University of Trento, Italy. Expected graduation: 10/2026. Co-supervised with Giulia Giordano. Joint publications: J1, J4, C2.
- **Nuha Diab:** School of Mathematics, Tel-Aviv University, Israel. Expected graduation: 05/2026. Co-supervised with Dmitry Batenkov. Joint publications: J11, J14.
- **Pengfei Wang:** School of Electrical Engineering, Tel-Aviv University, Israel. Graduated: 01/2024. Co-supervised with Emilia Fridman. Joint publications: J16, C10, C11.

M.Sc. students

- **Idan Basre:** School of Engineering, Tel-Aviv University, Israel. Expected graduation: 11/2026. Co-supervised with Emilia Fridman. Joint publications: C9, C12.

Teaching Experience

Since 2011, I have matured a vast teaching experience as a Lecturer in multiple courses in both Mathematics and Systems and Control Theory, including responsibility for frontal lectures and exercise sessions, syllabus organization, creation of teaching material (lecture notes, problem sets and exams), grading exams and final projects. I received the **Afeka College of Engineering Award for Outstanding Lecturers** for the academic year 2019/2020.

- ***2025-2026:*** Course Coordinator and Lecturer, “Introduction to control theory”, B.Sc. course, School of Electrical and Computer Engineering, Tel-Aviv University, Israel.
- ***2024:*** Course Coordinator and Lecturer, “Differential inclusions and modern methods of finite-time control and observation”, Ph.D. course, Dept. of Engineering, University of Trento, Italy.
- ***2022-2023:*** Course Coordinator and Lecturer, “Introduction to control theory”, B.Sc. course, School of Electrical and Computer Engineering, Ben-Gurion University, Beer-Sheva, Israel.
- ***2022-2023:*** Course Coordinator and Lecturer, “Nonlinear dynamical systems”, M.Sc./Ph.D. course, School of Electrical and Computer Engineering, Ben-Gurion University, Beer-Sheva, Israel.
- ***2016-2022:*** Lecturer for multiple courses including “Ordinary differential equations”, “Partial differential equations”, “Mathematical analysis”, “Linear algebra”, “Complex analysis”, “Harmonic analysis”, “Numerical analysis” (B.Sc. courses), **more than 100 hours each year** overall, Afeka College of Engineering, Tel-Aviv, Israel.
- ***2011-2019:*** Lecturer for multiple courses including “Ordinary differential equations”, “Partial differential equations”, “Mathematical analysis”, “Linear algebra”, “Complex analysis”, “Harmonic analysis”, “Measure theory”, “Functional analysis”, “Topology”,

"Numerical analysis" (B.Sc. courses), "Optimal control theory", "Calculus of variations", "Monotone and contractive systems", "Functional differential equations" (M.Sc./Ph.D. courses), **more than 100 hours each year** overall, Dept. of Mathematics and School of Electrical Engineering, Tel-Aviv University, Israel.

Research Interests and International Collaborations

I am leading my own research group as an Assistant Professor at the School of Electrical and Computer Engineering, Tel-Aviv University and as the PI of the research project "Distributed-parameter-systems-based control and estimation of multi-agent systems" (SCOUT), focused on the development of new approaches from the theory of distributed parameter systems to control complex multi-agent and networked systems, with applications to communication networks, multi-agent robotics, and traffic and transportation networks.

I am also currently developing tools from signal processing (specifically, algebraic super-resolution techniques) for the identification of reaction-diffusion systems.

In general, my main research interests revolve around the development of rigorous systems-and-control methodologies for the analysis and control of complex dynamical systems, with applications to dynamical systems and networks in engineering and the life sciences.

My research activities so far have focused on the following main topics:

- Infinite-dimensional dynamical systems, including partial differential equations and time-delay systems, with a special focus on their control and stabilization (see publications J7, J16, J17, J18, J21, C1, C8) and on their observer-based control and estimation (J19, J20, J22, J23, J24, J25, J26, J27, C9, C10, C11, C12, C13, C14, C15, C16, A3).
- Control of dynamical systems on multiple time scales (perturbation theory) and the method of averaging (J3, J7, J9, J12, C5, C6, C7, A2).
- Analysis of nonlinear dynamical systems (S2, J28, C17), including monotone and contractive systems (J8, J10), with applications to systems in the life sciences (J5, J6, J17, S4, S5) and their optimal control (J6, J12), with a special focus on the robustness and resilience analysis of systems in biology, epidemiology and neuroscience (J4, C2, C4).
- Signal processing, applied harmonic analysis (J30) and surrogate models (J29, C2) for system identification (J2, J11, J14, S1, C3, A1), with a special focus on exponential fitting, inverse problems and super-resolution.

My international network of research collaborators includes:

- Dmitry Batenkov at Basis Research Institute, New York, United States
- Patrizio Colaneri and Gian Paolo Incremona at Politecnico di Milano, Italy
- Ohad Elishco at Ben-Gurion University of the Negev, Israel
- Emilia Fridman at Tel-Aviv University, Israel

- Giulia Giordano at the University of Trento, Italy
- Lars Grüne and Thomas Kriecherbauer at the University of Bayreuth, Germany
- Michael Margaliot at Tel-Aviv University, Israel
- Frederic Mazenc at CRNS - L2S, Paris-Saclay, France
- Andrii Mironchenko at the University of Bayreuth, Germany
- Antonio Russo at the University of Bergamo, Italy

Bibliometric Indices (January 25th, 2026)

- Journal papers (since 2019): **30**
- Citations: **519** (Scopus), **733** (Google Scholar)
- h-index: **13** (Scopus), **14** (Google Scholar)

Publication List

Journal Articles (peer reviewed)

J1. U.Sutulovic, D. Proverbio, **R. Katz** and G. Giordano, "gPC-based robustness analysis of neural systems through probabilistic recurrence metrics". Chaos, Solitons and Fractals, 206, 117949, 2026. [Q1, CiteScore: 9.9, Scopus] https://doi.org/10.1016/j.chaos.2026.117949

J2. **R. Katz**, G. Giordano and D. Batenkov, "Identification of reaction-diffusion dynamics from finitely many non-local noisy measurements via exponential fitting". IFAC Journal of Systems and Control, 35, 100350, 2026. [Q2, ICiteScore:3.6, Scopus] https://doi.org/10.1016/j.ifacsc.2025.100350

J3. **R. Katz**, E. Fridman and F. Mazenc, "Averaging-based ISS analysis of systems with rapidly varying periodic delays". IEEE Transactions on Automatic Control, 71(1), 676-683, 2026. [Q1, CiteScore: 12, Scopus] 10.1109/TAC.2025.3602483

J4. D. Proverbio, **R. Katz** and G. Giordano, "Robustness and resilience of dynamical networks in biology and epidemiology". Foundations and Trends in Systems and Control, Now Publishers, 12(2-3), 112-360, 2025. [Q1, CiteScore: 10.9, Scopus] http://dx.doi.org/10.1561/2600000036

J5. U. Sutulovic, D. Proverbio, **R. Katz** and G. Giordano, "Efficient and faithful reconstruction of dynamical attractors using homogeneous differentiators". Chaos, Solitons and Fractals, 199(3), 116798, 2025. [Q1, CiteScore: 9.9, Scopus] https://doi.org/10.1016/j.chaos.2025.116798

J6. A. Anderson, **R. Katz**, F. Calà Campana and G. Giordano, "Failure and Success in Single-Drug Control of Antimicrobial Resistance". IEEE Control Systems Letters, 9, 991-996, 2025. [Q1, CiteScore: 5.1, Scopus]
Also selected for presentation at the 64th IEEE Conference on Decision and Control, Rio de Janeiro, Brazil, 12/2025.

10.1109/LCSYS.2025.3576308

J7. **R. Katz** and E. Fridman, “Constructive averaging of a class of parabolic PDEs with applications to vibrational control”. IEEE Control Systems Letters, 9, 1460-1465, 2025. [Q1, CiteScore: 5.1, Scopus]
Also selected for presentation at the 64th IEEE Conference on Decision and Control, Rio de Janeiro, Brazil, 12/2025.
10.1109/LCSYS.2025.3580775

J8. **R. Katz**, G. Giordano and M. Margaliot, “Instability of equilibrium and existence of attracting periodic orbits in general strongly 2-cooperative systems”. Journal of Differential Equations, 444, 113651, 2025. [Q1, CiteScore: 4.3, Scopus]
https://doi.org/10.1016/j.jde.2025.113651

J9. A. Jbara, **R. Katz** and E. Fridman, “Averaging-Based Stability of Discrete-Time Delayed Systems via a Novel Delay-Free Transformation”. IEEE Transactions on Automatic Control, 70(2), 1328-1335, 2025. [Q1, CiteScore: 12, Scopus]
10.1109/TAC.2024.3462733

J10. **R. Katz**, T. Kriecherbauer, L. Grune and M. Margaliot, “On the gain of entrainment in a class of contractive bilinear control systems”. SIAM Journal on Control and Optimization, 62(5), 2723-2749, 2024. [Q1, CiteScore: 4.4, Scopus]
https://doi.org/10.1137/23M1585714

J11. **R. Katz**, N. Diab and D. Batenkov, “On the accuracy of Prony’s method for recovery of exponential sums with closely spaced exponents”. Applied and Computational Harmonic Analysis, 73, 101687, 2024. [Q1, CiteScore: 6.4, Scopus]
https://doi.org/10.1016/j.acha.2024.101687

J12. F. Calà Campana, **R. Katz** and G. Giordano, “Sequential-Quadratic-Hamiltonian optimal control of epidemic models with an arbitrary number of infected and non-infected compartments”. IEEE Control Systems Letters, 8, 1805-1810. 2024. [Q1, CiteScore: 5.1, Scopus]
Also selected for presentation at the 63rd IEEE Conference on Decision and Control, Milano, Italy, 12/2024.
10.1109/LCSYS.2024.3412775

J13. **R. Katz**, F. Mazenc and E. Fridman, “Constructive method for averaging-based stability via a delay free transformation”. Automatica, 163, 111568, 2024. [Q1, CiteScore: 11.1, Scopus]
https://doi.org/10.1016/j.automatica.2024.111568

J14. **R. Katz**, N. Diab and D. Batenkov, “Decimated Prony’s method for stable super-resolution”. IEEE Signal Processing Letters, 30, 1467-1471, 2023. [Q1, CiteScore: 7.2, Scopus]
https://doi.org/10.1109/LSP.2023.3324553

J15. **R. Katz** and E. Fridman, “Global stabilization of a 1D semilinear heat equation via modal decomposition and direct Lyapunov approach”. Automatica, 149, 110809, 2023. [Q1, CiteScore: 11.1, Scopus]
https://doi.org/10.1016/j.automatica.2022.110809

J16. P. Wang, **R. Katz**, and E. Fridman, “Constructive finite-dimensional boundary control of stochastic 1D parabolic PDEs”. Automatica, 148, 110793, 2023. [Q1, CiteScore: 11.1, Scopus]
https://doi.org/10.1016/j.automatica.2022.110793

J17. **R. Katz**, E. Attias, T. Tuller, and M. Margaliot, “Translation in the cell under fierce competition for shared resources: a mathematical model”. Journal of the Royal Society Interface, 19(197), 20220535, 2022. [Q2, CiteScore: 7.2, Scopus]
https://doi.org/10.1098/rsif.2022.0535

J18. **R. Katz** and E. Fridman, “Finite-dimensional boundary control of the linear Kuramoto-Sivashinsky equation under point measurement with guaranteed L^2-gain”. IEEE Transactions on Automatic Control, 67(10), 5570-5577, 2022. [Q1, CiteScore: 12, Scopus]
https://doi.org/10.1109/TAC.2021.3121234

J19. **R. Katz** and E. Fridman, “Delayed finite-dimensional observer-based control of 1D parabolic PDEs via reduced-order LMIs”. Automatica, 142, 110341, 2022. [Q1, CiteScore: 11.1, Scopus]
https://doi.org/10.1016/j.automatica.2022.110341

J20. **R. Katz** and E. Fridman, “Global finite-dimensional observer-based stabilization of a semilinear heat equation with large input delay”. Systems & Control Letters, 165, 105275, 2022. [Q2, CiteScore: 4.3, Scopus]
https://doi.org/10.1016/j.sysconle.2022.105275

J21. **R. Katz** and E. Fridman, “Regional stabilization of the nonlinear 1D Kuramoto-Sivashinsky equation via modal decomposition”. IEEE Control Systems Letters, 6, 1814-1819, 2022.
Also selected for presentation at the American Control Conference - ACC 2022, Atlanta, US, 06/2022. [Q1, CiteScore: 5.1, Scopus]
https://doi.org/10.1109/LCSYS.2021.3133492

J22. **R. Katz** and E. Fridman, “Sampled-data finite-dimensional boundary control of 1D parabolic PDEs under point measurement via a novel ISS Halanay’s inequality”. Automatica, 135, 109966, 2022. [Q1, CiteScore: 11.1, Scopus]
https://doi.org/10.1016/j.automatica.2021.109966

J23. **R. Katz** and E. Fridman, “Sub-predictors and classical predictors for finite-dimensional observer-based control of parabolic PDEs”. IEEE Control Systems Letters, 6, 626-631, 2022. [Q1, CiteScore: 5.1, Scopus]

Also selected for presentation at the 60th IEEE Conference on Decision and Control, Austin (TX), USA, 12/2021.
https://doi.org/10.1109/LCSYS.2021.3084525

J24. **R. Katz** and E. Fridman, "Finite-dimensional control of the heat equation: Dirichlet actuation and point measurement". European Journal of Control, ECC Special Issue, 62, 158-164, 2021. [Q2, CiteScore: 5.5, Scopus]
https://doi.org/10.1016/j.ejcon.2021.06.009

J25. **R. Katz** and E. Fridman, "Delayed finite-dimensional observer-based control of 1-D parabolic PDEs". Automatica, 123, 109364, 2021. [Q1, CiteScore: 11.1, Scopus]
https://doi.org/10.1016/j.automatica.2020.109364

J26. **R. Katz**, E. Fridman and A. Selivanov, "Boundary delayed observer-controller design for reaction-diffusion systems". IEEE Transactions on Automatic Control, 66(1), 275-282, 2021. [Q1, CiteScore: 12, Scopus]
https://doi.org/10.1109/TAC.2020.2973803

J27. **R. Katz** and E. Fridman, "Constructive method for finite-dimensional observer-based control of 1-D parabolic PDEs". Automatica, 122, 109285, 2020. [Q1, CiteScore: 11.1, Scopus]
https://doi.org/10.1016/j.automatica.2020.109285

J28. **R. Katz**, M. Margaliot and E. Fridman, "Entrainment to subharmonic trajectories in oscillatory discrete-time systems". Automatica, 116, 108919, 2020. [Q1, CiteScore: 11.1, Scopus] Editor's choice award
https://doi.org/10.1016/j.automatica.2020.108919

J29. A. Ditkowski and **R. Katz**, "On spectral approximations with non-standard weight functions and their implementations to generalized chaos expansions". Journal of Scientific Computing, 79, 1981-2005, 2019. [Q1, CiteScore: 4.8, Scopus]
https://doi.org/10.1007/s10915-019-00922-5.

J30. **R. Katz** and Y. Shkolnisky, "Sampling and approximation of bandlimited volumetric data". Applied and Computational Harmonic Analysis, 47, 235-247, 2019. [Q1, CiteScore: 6.4, Scopus]
https://doi.org/10.1016/j.acha.2018.11.003.

Journal Articles – submitted or in preparation

S1. **R. Katz**, F. Calà Campana and G. Giordano, "Sakawa-Shindo algorithm for optimal control of time-delay systems, with applications to epidemiology"; submitted.

S2. **R. Katz**, D. Batenkov and G. Giordano, "Separation-free exponential fitting with structured noise, with applications to inverse problems in parabolic PDEs"; submitted.
https://arxiv.org/abs/2512.14301

S3. **R. Katz**, A. Russo, G. P. Incremona, P. Colaneri and G. Giordano, “Observer-based sampled-data stabilisation of switched systems with Lipschitz nonlinearities and dwell-time”; submitted.
https://arxiv.org/abs/2511.01672

S4. **R. Katz** and G. Giordano, “Topological safe set characterization in microbial infection with drug resistance”; in preparation.

S5. **R. Katz**, O. Elishco and G. Giordano, “Antibiotic treatment and development of anti-microbial resistance via probabilistic string duplication models”; in preparation.

Papers in Conference Proceedings (peer reviewed)

C1. **R. Katz** and A. Mironchenko, “Sampled-data and event-triggered control of globally Lipschitz infinite-dimensional systems”. IEEE Conference on Decision and Control - CDC, 2025, Rio de Janeiro, Brazil, 12/2025.

C2. U. Sutulovic, D. Proverbio, **R. Katz** and G. Giordano, “Efficient gPC-based quantification of probabilistic robustness for systems in neuroscience”. European Control Conference – ECC 2025, Thessaloniki, Greece, 06/2025.

C3. **R. Katz**, G. Giordano and D. Batenkov, “Data-driven delay estimation in reaction-diffusion systems via exponential fitting”. 18th IFAC Worskhop on Time Delay Systems -TDS 2024. **Presented** in Udine, Italy, 09/2024.

C4. D. Proverbio, **R. Katz** and G. Giordano, “Bridging Robustness and Resilience for Dynamical Systems in Nature”. 26th International Symposium on Mathematical Theory of Networks and Systems - MTNS 2024. **Presented** in Cambridge, UK, 08/2024.

C5. A. Jbara, **R. Katz** and E. Fridman, “Stability by averaging of linear discrete-time systems”. European Control Conference - ECC 2024, Stockholm, Sweden, 06/2024.

C6. **R. Katz**, F. Mazenc and E. Fridman, “ISS of rapidly time-varying systems via a novel presentation and delay-free transformation”. IEEE Conference on Decision and Control - CDC 2023. Singapore, 12/2023.

C7. **R. Katz**, F. Mazenc and E. Fridman, “Stability by averaging via time-varying Lyapunov functions”. IFAC World Congress 2023. Yokohama, Japan, 07/2023.

C8. C. Kitsos, **R. Katz** and E.Fridman, “Internal stabilization of three interconnected semilinear reaction-diffusion PDEs with one actuated state”. IFAC World Congress 2023. Yokohama, Japan, 07/2023.

C9. **R. Katz**, E. Fridman and I. Basre, “Network-based deployment of multi-agents without communication of leaders with multiple followers: a PDE approach”. IEEE Conference on Decision and Control - CDC 2022. Cancun, Mexico, 12/2022.

C10. P. Wang, **R. Katz**, and E. Fridman, “Constructive method for boundary control of stochastic 1D parabolic PDEs”. International Symposium on Mathematical Theory of Networks and Systems - MTNS 2022. **Presented** in Bayreuth, Germany, 09/2022.

C11. P. Wang, **R. Katz**, and E. Fridman, “Finite-dimensional observer-based control of 1D stochastic parabolic PDEs”. American Control Conference - ACC 2022. USA, 06/2022.

C12. **R. Katz**, I. Basre and E. Fridman, “Delayed finite-dimensional observer-based control of 1D heat equation under Neumann actuation”. European Control Conference - ECC 2021. The Netherlands, **Presented** in 06/2021.

C13. **R. Katz** and E. Fridman, “Delayed finite-dimensional observer-based control of 1-D linear heat equation”. MTNS 2021. UK, 08/2021. Cancelled due to COVID-19.

C14. **R. Katz** and E. Fridman, “Finite-dimensional observer-based control of the Kuramoto-Sivashinsky equation under point measurement and actuation”. IEEE Conference on Decision and Control - CDC 2020. South Korea, **Presented** in 12/2020.

C15. **R. Katz** and E. Fridman, “Finite-dimensional observer-based controller for linear 1-D heat equation: An LMI approach”. IFAC World Congress 2020. Germany, **Presented** in 07/2020.

C16. **R. Katz**, E. Fridman and A. Selivanov, “Network-based boundary observer-controller design for 1D heat equation”. IEEE Conference on Decision and Control - CDC 2019. **Presented** in Nice, France, 12/2019.

C17. **R. Katz**, M. Margaliot and E. Fridman, “On totally positive discrete-time systems”. Mediterranean Control Conference - MED 2019. Akko, Israel, 07/2019

Conference Extended Abstracts (peer reviewed)

A1. **R. Katz**, G. Giordano and D. Batenkov, “Data-driven delay estimation in reaction-diffusion systems”. Automatica.it 2024. **Presented** in Bolzano, Italy, 09/2024.

A2. **R. Katz** and E. Fridman, “Stability of linear systems with rapidly-varying delays on two time-scales via asymptotic averaging”. TDS 2024. **Presented** in Udine, Italy, 09/2024.

A3. **R. Katz** and E. Fridman, “Global boundary stabilization of a semilinear heat equation via finite-dimensional nonlinear observers”. MTNS 2022. **Presented** in Bayreuth, Germany, 09/2022.