Tamar Friedlander

Curriculum Vitae 07/2023

The Robert H. Smith Institute of Plant Sciences and Genetics in Agriculture
Faculty of Agriculture
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EDUCATION

2005-2010	**Ph.D. in Physics**: Technion, Israel Institute of Technology - (The Lorry I. Lokey Interdisciplinary Center for Life Sciences and Engineering) with Prof. Erez Braun and Prof. Naama Brenner. Dissertation: Protein Distributions and their Role in Cell Population Functionality.
1997-2002	**M.Sc. in Electrical and Electronics Engineering**: Tel-Aviv University, Israel**,** with Prof. David. Burshtein, *Magna cum laude***.** Dissertation: Decoding Algorithms for LDPC Codes Transmitted Over Channels with ISI.
1992-1995	**B.Sc. in Physics & Mathematics ("Talpiot" program)**: Hebrew University, Jerusalem, Israel. Fully sponsored as part of military training. One of 25 cadets in a highly exclusive 3-year academic and military program designed to develop technological leaders for the defense establishment. Selected from a pool of 20,000 candidates based on intellectual and leadership capabilities

EMPLOYMENT

2017 - current	**Senior lecturer** (equivalent to assistant professor), The Robert H. Smith Institute of Plant Sciences and Genetics in Agriculture, Faculty of Agriculture, Hebrew University of Jerusalem.
Dec. 2019-May 2020	Career break due to maternity leave.
Oct. 2013-2017	**post-doctoral fellow** in IST Austria, jointly with Nick Barton, Gašper Tkačik and Călin Guet.
Apr. 2011-Sept. 2013	**Post-doctoral fellow** in Weizmann Institute of Science, Israel - with Prof. Uri Alon, Department of Molecular Cell Biology.
Oct. 2010-Apr. 2011	Career break due to maternity leave.

Nov. 2009 – Sept. 2010	**Post-doctoral fellow** in Weizmann Institute of Science, Israel - with Dr. Tsvi Tlusty, Physics of Complex Systems.
2005-2007	Teaching assistant, Department of Physics, Technion.
2003-2005	INTEL (DSPC) Communication & Radio Research Lab, Petah-Tikva – communication researcher.
2001-2002	RAMOT – TEL-AVIV UNIVERSITY, Tel-Aviv, Israel – communication researcher.
2000-2002	Teaching assistant, Department of Electrical Engineering, Tel-Aviv University.
1995-2000	ISRAEL AIR FORCE HQ, Tel-Aviv, Israel - Officer in charge of Electro-Optic Warfare (Captain).

FUNDING

2019-2024	"The role of biophysical interactions in the evolution of S-RNase based self-incompatibility", Israel Science Foundation, 1,400,000 NIS (5 years).
2020-2022	HUJI-University of Illinois seed funding, "High-throughput analysis of tree flowering data", Jointly with Nicholas F. Martin 25,000 $ / 50,000 $.
2021-2022	Shonberger research center for plant science in agriculture, "Identification of deeply conserved cis-regulatory elements for crop improvement", Jointly with Idan Efroni, 25,000 $.
2022-2024	"Development and Use of model for olive fertility preservation under extreme climatic conditions", Israel Ministry of Agriculture, co-PI, 90,000 NIS.

HONORS AND FELLOWSHIPS

2018	Golda Meir fellowship
2013-2015	IST 2-years full post-doctoral fellowship – people programme (Marie Curie Actions) of the European Union's seventh framework programme. Personal fellowship (2-years full salary and research costs) [€123,800].
2012	6th Q-bio meeting in Santa Fe participation scholarship.
2011-2012	Charles Clore post-doctoral fellowship.
2010	Physics of Complex Systems Dean's fellowship.
2009	3rd Q-bio meeting in Santa Fe travel and participation scholarship.
2006-2008	Center for Complexity Science (the Yeshaya Horowitz Association) full scholarship for PhD students [$ 55,500].
2006	Complex systems summer school (UK) participation scholarship.
2005-2009	Scholarship of the Irwin and Joan Jacobs Graduate School for graduate studies and research.
2002	Communication and Electronics Corps prize for M.Sc. thesis.
2002	M.Sc. *Magna cum Laude*.
2002	Max Kranzberg award.
2001-2002	Scholarship of the Graduate School for graduate studies and research, Tel-Aviv University.

1998-1999	Israel Defense Forces partial scholarship for M.Sc. studies.
1992-1995	Full scholarship (tuition and board) for entire B.Sc. studies.

TEACHING

2000-2002	Teaching assistant, Department of Electrical Engineering, Tel-Aviv University in the courses: • Linear systems. • Introduction to Digital Signal Processing.
2005-2007	Teaching assistant, Department of Physics, Technion in the courses: • Instructor in the Physics lab. • Introduction to Thermodynamics and Statistical Physics.
2018 – now	Developed and lectured the course "population genetics", Hebrew University of Jerusalem, Faculty of Agriculture.
2018 – now	Co-founder of the "agro-informatics" under-graduate curriculum in the faculty of agriculture.
2021 -	Developed and lectured the course "computational models in genetics and living systems" for Computer Science students, Hebrew University.
2021	Taught under-graduate seminar, faculty of Agriculture, Hebrew University.
2022	Developed and taught the course "models and simulations in life sciences", advanced under-graduate as part of the agro-informatics curriculum.

STUDENTS AND LAB MEMBERS

Alumni:

Tzahi Gabzi, M.Sc Math – jointly with Yitzhak Pilpel (Weizmann Institute) – graduated Apr. 2019.

Guy Kornowski – Math undergraduate project (Apr.-Sept. 2018).

Dr. Ilan Smoly – post-doctoral fellow, PhD in computer science and bioinformatics (Nov. 2018 – Nov. 2021).

Haim Elbaz – Under-graduate project (Aug. 2021 – Dec. 2022).

Amit Hen-Hanina and Tal Cohen – under-graduate data analysis project (CS course) (June-Oct. 2022).

Dr. Keren Erez – researcher (Sept. 2019 – July 2023).

Current lab members:

Koren Erad – M.Sc (Oct. 2020 – now), B.Sc in Math.

Dr. Amit Jangid – post-doc (April 2022 – now), MSc Physics, PhD Biophysics.

David Enrique Sayag – M.Sc (March 2023- now), B.Sc. in Physics.

TALKS

July 2023	“The role of promiscuous molecular recognition in the evolution of RNase-based self-incompatibility”, “Predicting evolution” EMBO workshop, Heidelberg, Germany.
Apr. 2023	“The role of multi-partner protein interactions in the evolution of RNase-based self-incompatibility”, Israeli Society for Evolutionary Biology annual meeting, Haifa University.
Mar. 2023	“Flowering prediction in ‘Barnea’ olive trees using temperature and flowering data, The Dahlia Greidinger International Symposium, Technion.
Jan 2023	“Fitness landscape analysis of a tRNA gene reveals that the wild type allele is sub-optimal, yet mutationally robust”, Biological physics seminar, HUJI.
Nov. 2022	“Modeling Biological networks - “more is different” – keynote lecture, 18th International Symposium on Bioinformatics Research and Applications (ISBRA2022), Haifa, Israel.
July 2022	“Fitness landscape analysis reveals that the wild type allele is sub-optimal, yet mutationally robust”, The 2nd Biology for Physics Conference, Barcelona, Spain.
June 2022	“Fitness landscape analysis reveals that the wild type allele is sub-optimal, yet mutationally robust”, Vienna graduate school of population genetics seminar (virtual).
Mar. 2022	“Fitness landscape analysis reveals that the wild type allele is sub-optimal and mutationally robust”, Israeli Society for Evolutionary Biology annual meeting, Weizmann Institute.
Feb. 2022	“Fitness landscape analysis reveals that the wild type allele is sub-optimal and mutationally robust”, Evolutionary systems biology, Wellcome Connecting Science (virtual meeting).
Dec. 2021	“Fitness landscape analysis reveals that the wild type allele is sub-optimal and mutationally robust”, Hebrew University, Dept. of Ecology, Evolution and Behavior departmental seminar.
Oct. 2021	"ניבוי שיעורי פריחה בעצי זית מזן 'ברנע' על סמך טמפרטורות במהלך עונת החורף"', כנס מדעי החקלאות בישראל, 2021.
June 2021	“Exploration of tRNA fitness landscape reveals that the wild-type allele is sub-optimal and mutationally robust”, “Predicting evolution”, EMBL conference (online).
June 2021	“Evolution of new regulatory function on biophysically realistic fitness landscapes”, Haifa University, EEB departmental seminar.
Dec. 2020	Invited talk: “Evolution of new regulatory function on biophysically realistic fitness landscapes”, Israeli Society for Evolutionary Biology (*ISEB*) - online.
Aug. 2019	"The relation between crosstalk and gene regulation form revisited", European Society for Evolutionary Biology (*ESEB*), Turku, Finland.
Mar. 2019	"Intrinsic limits to gene regulation by global crosstalk", Computational biology departmental seminar, Hebrew University of Jerusalem.
June 2018	"Evolution of new regulatory functions on biophysically realistic fitness

	landscapes", *Q-bio conference*, Houston, Texas.
Apr. 2018	"Intrinsic limits to gene regulation by global crosstalk", Plant Science, Weizmann Institute – Departmental seminar.
Jan. 2018	"Evolution of new regulatory functions on biophysically realistic fitness landscapes", *High Dimensional dynamics in Theoretical biology* workshop, Sde-Boker.
Jan. 2018	"Evolution of new regulatory functions on biophysically realistic fitness landscapes", Plant Science Departmental seminar, Tel-Aviv University.
Dec. 2017	"Intrinsic limits to gene regulation by global crosstalk", Institute of Desert Research, Sde-Boker, Ben-Gurion University – Departmental seminar.
Aug. 2017	"Evolution of new regulatory function on biophysically realistic fitness landscapes", European Society for Evolutionary Biology (*ESEB*) conference, Groningen, The Netherlands.
Mar. 2017	"Intrinsic limits to gene regulation by global crosstalk", Harvard University, Systems Biology Department.
Mar. 2017	"Intrinsic limits to gene regulation by global crosstalk", APS March meeting, New Orleans, USA.
Feb. 2017	"Intrinsic limits to gene regulation by global crosstalk", Princeton University.
Feb. 2017	"Intrinsic limits to gene regulation by global crosstalk", Yale University, Physics Department.
Feb. 2017	"Intrinsic limits to gene regulation by global crosstalk", Yale University, Systems Biology Institute.
Feb. 2017	"Intrinsic limits to gene regulation by global crosstalk", Bar-Ilan University, Engineering Faculty.
Jan. 2017	"Intrinsic limits to gene regulation by global crosstalk", Bar-Ilan University, Life Sciences.
Jan. 2017	"Intrinsic limits to gene regulation by global crosstalk", Hebrew University, Physics Department, Biophysics seminar.
Jan. 2017	"Intrinsic limits to gene regulation by global crosstalk", Bar-Ilan University, Math Department.
Jan. 2017	"Intrinsic limits to gene regulation by global crosstalk", Tel-Aviv University, Life Sciences.
Dec. 2016	"Intrinsic limits to gene regulation by global crosstalk", Hebrew University, Life Sciences.
Dec. 2016	"Intrinsic limits to gene regulation by global crosstalk", Bar-Ilan University Physics Department.
Dec. 2016	"Intrinsic limits to gene regulation by global crosstalk", Ben-Gurion university Physics Department, Biophysics seminar.
Dec. 2016	"Intrinsic limits to gene regulation by global crosstalk", Hebrew University Faculty of Agriculture.
Nov. 2016	"Intrinsic limits to gene regulation by global crosstalk", Tel-Aviv University, Physics Department.
July 2016	"Intrinsic limits to gene regulation by global crosstalk", *10th Q-bio meeting*, Nashville Tennessee.
Jan. 2016	"Intrinsic limits to gene regulation by global crosstalk", IOP topical research

meeting: *Physical Principles of Biological and Active Systems*, Edinburgh, UK.

Jan. 2016 "Mutation-rules and the evolution of sparseness and modularity in biological systems", Ben-Gurion University Israel, Life Sciences departmental seminar.

Oct. 2015 "Intrinsic limits to gene regulation by global crosstalk", *Computational modeling of gene expression and its evolution*, Tel-Aviv University, Israel.

Jul. 2015 "Evolution of bow-tie architectures in biology", *SMBE*, Vienna, Austria.

Dec. 2014 "Mutation-rules and the evolution of sparseness and modularity in biological systems", Bar-Ilan University Israel, computational biology seminar.

Aug. 2013 "Adaptive response by state-dependent inactivation", Hebrew University Jerusalem Israel, Physics Department, Biophysics seminar.

Apr. 2013 "Mutations-rules and the evolution of sparseness and modularity in biological systems", IST Austria.

Apr. 2013 "Mutations-rules and the evolution of sparseness and modularity in biological systems", Princeton University, Department of Ecology and Evolutionary Biology.

Apr. 2013 "Mutations-rules and the evolution of sparseness and modularity in biological systems", University of Arizona, Department of Ecology and Evolutionary Biology.

Apr. 2013 "Mutations-rules and the evolution of sparseness and modularity in biological systems", Stanford University, Department of Biology.

Apr. 2013 "Mutations-rules and the evolution of sparseness and modularity in biological systems", University of California Santa Barbara, Department of Ecology Evolution and Marine Biology.

Dec. 2012 "Mutation-rules and the evolution of sparseness and modularity in biological systems", Weizmann Institute Systems Biology Retreat.

Aug. 2012 "Multiplicative mutations, sparseness and modularity in biological systems", *The 6th q-bio conference*, Santa Fe New-Mexico; spotlight talk.

Feb. 2010 "Adaptive Response by State-dependent Inactivation", Weizmann Institute, Faculty of Physics, Clore seminar - Physics and Biology meetings.

Jan. 2010 Invited speaker: "Adaptive Response by State-dependent Inactivation", International Workshop on Mathematical Methods in Systems Biology, Tel-Aviv University.

Oct. 2009 "Adaptive Response by State-dependent Inactivation", Technion, Faculty of Physics, Biophysics seminar.

June 2009 "Adaptive Response by State-dependent Inactivation", Technion, Faculty of Electrical Engineering, Neuroscience seminar.

Dec. 2008 "Adaptive Response from State-dependent Inactivation", The 54th Annual Meeting of the Israel Physical Society, Ben-Guryon University.

Feb. 2008 "From Cellular Properties to Population Asymptotics in the Population Balance Equation", Biological networks seminar, Technion.

Dec. 2007 "Population Steady State Distributions: Asymptotic and Exact Results", The 53rd Annual Meeting of the Israel Physical Society, Weizmann Institute.

Dec. 2002 "Decoding Algorithms for LDPC Codes Transmitted Over Channels with ISI", The 22nd convention of Electrical and Electronics Engineers in Israel, Tel-Aviv University.

May 2002 "LDPC Codes Decoding Over Channels with ISI", M.Sc. seminar, Faculty of

Electrical Engineering Departmental seminar, Tel-Aviv University.

POSTERS AND ACADEMIC ACTIVITY

July 2023	"Inferring evolutionary dynamics on empirical incomplete fitness landscapes", *SMBE*, Ferrara, Italy.
Apr. 2023	"To interact or not to interact: a toy model for the evolution of the protein-protein interaction network in RNase-based self-incompatibility system", Israeli Society for Evolutionary Biology annual meeting, Haifa University, presented by Amit Jangid (post-doc).
Apr. 2023	"Inferring evolutionary dynamics on incomplete fitness landscapes", Israeli Society for Evolutionary Biology annual meeting, Haifa University, presented by David Enrique Sayag (MSc student).
Aug 2022	"Fitness landscape analysis reveals that the wild type allele is sub-optimal, yet mutationally robust", *ESEB* 2022, Prague.
Aug 2022	"Fitness landscape analysis reveals that the wild type allele is sub-optimal, yet mutationally robust", *SMBE everywhere*, symposium GS3 (virtual).
July 2021	"Exploration of a tRNA gene fitness landscape reveals that the wild-type allele is sub-optimal and mutationally robust", Society of Molecular Biology and Evolution (*SMBE*) conference - online.
Aug. 2018	"Intrinsic limits to gene regulation by global crosstalk", European Society for Evolutionary Biology (*ESEB*) -*Evolution joint meeting*, Montpellier, France.
Feb. 2018	Participated in Camp Evolution VI workshop, Sde Boker.
Feb. 2018	"Intrinsic limits to gene regulation by global crosstalk", *EMBO Workshop on Optimizations and trade-offs in cell growth and survival (w18-84)*, Weizmann Institute.
Nov. 2016	"Evolution of new regulatory functions on biophysically realistic fitness landscapes", *Genome Evolution*, Weizmann Institute, Israel.
May 2016	"Intrinsic limits to gene regulation by global crosstalk", *Information, Probability and Inference in Systems Biology*, IST Austria, Austria.
May 2016	"Intrinsic limits to gene regulation by global crosstalk", *Chemolution: from Chemistry to Evolution*, University of Vienna, Austria.
Oct. 2015	"Intrinsic limits to gene regulation by global crosstalk", *Computational modeling of gene expression and its evolution*, Tel-Aviv University, Israel.
	Received 3rd best poster award.
Aug. 2015	"Evolution of bow-tie networks in biology", with A.E. Mayo and U. Alon.
	ESEB, Lausanne, Switzerland.
May 2014	"Evolution of bow-tie networks in biology", with A.E. Mayo and U. Alon.
	Stochastic Biology: from Cells to Populations, IST Austria, Klosterneuburg, Austria.
February 2014	"Evolution of bow-tie networks in biology", with A.E. Mayo and U. Alon.
	Physics of Evolution, Regulation and Signaling, LMU Munich, Germany.
January 2014	"Evolution of bow-tie networks in biology", with A.E. Mayo and U. Alon.
	PopGroup47, Population genetics group meeting, Bath UK.
March 2013	"Multiplicative mutations, sparseness and modularity in biological systems", with A.E. Mayo and U. Alon.

	"Effects of regulation by a small RNA on phenotypic variability in *E. coli*", R. Arbel-Goren, A. Tal, **T. Friedlander**, and J. Stavans**.** Presented by R. Arbel-Goren.
	One2many: from single cells to populations – systems biology symposium, Weizmann Institute.
Dec. 2012	"Multiplicative mutations, sparseness and modularity in biological systems", *The 58th Annual Meeting of the Israel Physical Society,* Hebrew University, Jerusalem, with A.E. Mayo and U. Alon.
Dec. 2012	"Effects of regulation by a small RNA on phenotypic variability in E. coli", R. Arbel-Goren, A. Tal, T. Friedlander, and J. Stavans. *Functional RNAs*, Spain.
	Presented by R. Arbel-Goren.
Aug. 2012	"Multiplicative mutations, sparseness and modularity in biological systems", *The 6th q-bio conference*, Santa Fe New-Mexico, with A.E. Mayo and U. Alon.
	Poster selected for spotlight talk.
Aug. 2012	"Effects of regulation by a small RNA on phenotypic variability in *E. coli*", R. Arbel-Goren, A. Tal, **T. Friedlander**, H. Kranz, S. Noll, and J. Stavans**.** *ICSB the 13th international conference on systems biology*, Toronto, Canada.
	Presented by R. Arbel-Goren.
Oct. 2010	"Adaptation by state-dependent inactivation", *The Annual Israel Biophysical Society meeting,* with N. Brenner.
Nov. 2009	"Adaptation by state-dependent inactivation", *From Darwin to Evo-Devo, a symposium in honor of the 150th anniversary of Darwin's "The origin of Species",* with N. Brenner.
Aug. 2009	"Adaptation by state-dependent inactivation", *The 3rd q-bio conference on cellular information processing*, Santa Fe New-Mexico, with N. Brenner.
Sept. 2008	"Effective Feedback Emerges from Activity-Dependent Inactivation", *The Center for Complexity Science meeting*, the Hebrew University of Jerusalem, with N. Brenner.
Mar. 2008	"From Cellular Properties to Population Asymptotics in the Population Balance Equation", *Batsheva seminar on Information Processing in Living Cells*, Ein-Gedi, Israel, with N. Brenner.
Sept. 2007	"Features of Steady State Populations Distributions", *Physics of Biological Matter, Research workshop of the Israel Science Foundation, Safed Summer Workshop,* with E. Braun and N. Brenner.
Aug. 2006	Participated in 10 days summer school: "From Individual to Collective Behaviour in Large-Scale Complex Systems: An Interdisciplinary Summer School on Complex Systems", The English Lake District, organized by the University of Manchester, UK.

COMMUNITY SERVICE

2018 – now: co-founder of the "agro-informatics" under-graduate curriculum in the faculty of agriculture and student advisor.

Served in ISF committees (2021, 2022).

2018-2019: managed the Plant Science Institute departmental seminar.

Served in PhD committees: Shahar Rezenman (Weizmann), Leo Creasey (U Haifa), Ashish Mishra (Plant Sciences, here), Timo Hellwig (here).

PhD thesis judge: Itzhak Chait (TAU).

JOURNAL REVIEWER:

Peer-reviewed journals:

Proceedings of the Royal Society B, Journal of Theoretical Biology, PNAS, American Naturalist, Cell Systems, Nature, eLife, Nature Communications, Review Commons, Genetics, PLos Computational Biology.

Grant reviews:

ISF-China, ISF (2023), HUJI sustainability (2023).

JOURNAL EDITOR: PLoS One.

Session chair in conferences: ISBRA U Haifa (Nov 2022), Predicting evolution EMBL Heidelberg (July 2023).

OUTREACH

2023	Public lecture to "Katzir" intermediate school science class.
2014-2015	Co-founder of "People in Science" at IST Austria to focus on social and personal aspects of being scientists.
2010	Participated in a women empowerment workshop aimed at women in science (12 meetings).
2003-2004	Voluntary tutoring of Math to high school students.
1990-1992, 2000-2002	Member of the "Society for the Protection of Nature in Israel" ("Hahevra Lahaganat Hateva"). Voluntarily participated in nature preservation activities, such as cleaning of Mount Carmel streams and forest rehabilitation activities after fire.

LIST OF PUBLICATIONS

In preparation

- K Erez, A. Jangid, O. Feldheim, **T. Friedlander**, "The role of promiscuous molecular recognition in the evolution of RNase-based self-incompatibility", https://www.biorxiv.org/content/10.1101/2023.10.05.561000v1.abstract, in revision.
- A. Jangid, K Erez, O. Feldheim, **T. Friedlander**, "Web of constraints on RNAse-SLF interactions and allelic diversity in non-self recognition based self-incompatibility systems", in preparation.
- I. Smoly, H. Elbaz, C. Engelen*, T. Wechsler*, G. Elbaz, G. Ben Ari, A. Samach, **T. Friedlander**, "Olive flowering dependence on winter temperatures – linking empirical results to a dynamic model", submitted.

Peer-reviewed journals

- C. Engelen*, T. Wechsler*, O. Bakhshian*, I. Smoly, I. Flaks, **T. Friedlander**, G. Ben Ari, A. Samach, "Unraveling the Impact of different temperatures on the accumulation of chilling units required for olive winter flower induction", *Plants* 12(8) , 2023.
- T. Gabzi, Y. Pilpel, **T. Friedlander**, "Fitness landscape analysis of a tRNA gene reveals that the wild type allele is sub-optimal, yet mutationally robust", Molecular Biology and Evolution, https://doi.org/10.1093/molbev/msac178, August 2022.
- R. Grah, **T. Friedlander**, "The relation between crosstalk and gene regulation form revisited", *PLoS Computational Biology*. 16(2): e1007642 (2020).
- **T. Friedlander***, R. Prizak*, N. Barton and G. Tkacik, "Evolution of new regulatory functions on biophysically realistic fitness landscapes", (* - equal contribution), *Nature Communications*, 8(216), 2017, doi:10.1038/s41467-017-00238-8.
- **T. Friedlander**, R. Prizak, C. Guet. N. Barton and G. Tkačik, "Intrinsic limits to gene regulation by global crosstalk", *Nature Communications*, 7(12307), Aug. 2016, doi:10.1038/ncomms12307.
- **T. Friedlander,** A. E. Mayo, T. Tlusty and U. Alon, "Evolution of bow-tie architectures in biology", *PLoS Computational Biology*,11(3): e1004055 (2015). doi:10.1371/journal.pcbi.1004055.
- **T. Friedlander,** A. E. Mayo, T. Tlusty and U. Alon, "Mutation-rules and the evolution of sparseness and modularity in biological systems", *PLoS One* 8(8): e70444 (2013). doi:10.1371/journal.pone.0070444.
- R. Arbel-Goren, A. Tal, **T. Friedlander,** S. Meshner, N. Costantino, D. L. Court and J. Stavans, "Effects of regulation by a small RNA on phenotypic variability in *E. coli*", *Nucleic Acids Research*, 1-10, March 2013; published online March 21, 2013 doi:10.1093/nar/gkt184.

- **T. Friedlander** and N. Brenner, "Adaptive response and enlargement of dynamic range", *Mathematical Biosciences and Engineering*, **8**(2): 515-528, April 2011.

- **T. Friedlander** and N. Brenner, "Adaptive Response by State-Dependent Inactivation", *Proceedings of the National Academy of Sciences*, **106**(52):22558-22563, December 29, 2009; doi:10.1073/pnas.0902146106.

- **T. Friedlander** and N. Brenner, "Cellular Properties and Population Asymptotics in the Population Balance Equation", *Physical Review Letters* **101,** 018104 (2008).

  Also selected for publication in "Virtual Journal of Biological Physics Research", vol. 16, issue 2, July 15, 2008.

Conference Proceedings

- **T. Friedlander**, R. Prizak, C. Guet. N. Barton and G. Tkacik, "Intrinsic limits to gene regulation by global crosstalk", *Proceedings of The 10th q-bio conference*, Nashville Tennessee, July 2016.

- **T. Friedlander,** A. E. Mayo and U. Alon, "Multiplicative mutations, sparseness and modularity in biological systems", *Proceedings of The 6th q-bio conference*, Santa Fe New-Mexico, Aug. 2012.

- **T. Friedlander** and N. Brenner, "Adaptive response and background signal compensation", *Proceedings of The 4th q-bio conference on cellular information processing*, Santa Fe New-Mexico, Aug. 2010.

- **T. Friedlander** and N. Brenner, "Adaptation by State-Dependent Inactivation", *Proceedings of The 3rd q-bio conference on cellular information processing*, Santa Fe New-Mexico, Aug. 2009.

- **T. Friedlander** and D. Burshtein, "Decoding Algorithms for LDPC Codes Transmitted Over Channels with ISI", *Proceedings of the 22nd convention of Electrical and Electronics Engineers in Israel*, p. 268, Dec. 2002.

Dissertations

- "Decoding algorithms for LDPC codes transmitted over channels with ISI", Advisor: Prof. David Burshtein, Tel-Aviv University, June 2002.

- "Protein distributions and their role in cell population functionality", Advisors: Prof. Naama Brenner and Prof. Erez Braun, Technion, Oct. 2010.