Yoav Ram — CV

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Education

2010-2016	**Ph.D.**, Direct Ph.D. track, Tel-Aviv University Thesis title: *The Evolution of Stress-Induced Mutagenesis: Causes and Consequences*
2010-2012	**M.Sc.**, Direct Ph.D. track, Tel-Aviv University Theoretical and Computational Biology
2007-2010	**B.Sc.**, Biology and Mathematics *magna cum lauda*, Tel-Aviv University

Employment

Starting 2018	**Senior lecturer**, Efi Arazi School of Computer Science, the Interdisciplinary Center, Herzliya
2016-2018	**Postdoctoral fellow**, Center for Computational, Evolutionary, and Human Genomics, Stanford University Mentor — Prof. Marcus W. Feldman, Department of Biology
2016	**Postdoctoral fellow**, Hadany Lab, Tel-Aviv University Mentor — Prof. Lilach Hadany, Department of Plant Sciences
2016	**Data scientist** , Neura
2010-2016	**Ph.D. student**, Hadany Lab, Tel-Aviv University Mentor — Prof. Lilach Hadany, Department of Plant Sciences
2008-2010	**Research Assistant**, Hadany Lab, Tel-Aviv University Mentor — Prof. Lilach Hadany, Department of Plant Sciences
2008-2009	**Software Developer**, NetAlign
2006-2008	**Software Developer**, XLNet
2002-2006	**Communications Researcher**, IDF Intelligence Corps

Awards

2016-17	**Postdoctoral fellowship** of the Stanford Center for Computational, Evolutionary, and Human Genomics
2015-16	**Dean's Award for Excellence in Teaching**, Faculty of Engineering, Tel-Aviv University
2015	The Israel Society for Microbiology travel award
*	The Anat Karuskopf Fund travel award
*	The Manna Institute for Plants BioSciences travel award
2014	The Israeli Ministry of Science and Technology **International Education Scholarship**
2013-2014	Research achievements scholarship, Life Sciences faculty, Tel-Aviv University.
*	Fellowship from the Manna Program in Food Safety and Security
2013	The Manna Institute for Plants BioSciences travel award
2012	Registration & accommodation waiver for PopGroup45 in Nottingham, UK
*	Crowd-funded travel expenses for PopGroup45 via The #SciFund Challenge
2011-2012	Research achievements scholarship, Life Sciences faculty, Tel-Aviv University
2011	Society for the Study of Evolution International travel award
2010-2015	**Direct Ph.D. scholarship**, Department of Plant Sciences, Tel-Aviv University
2010	Society for Molecular Biology & Evolution Undergraduate Diversity Mentoring Program award
*	**Best poster award** at Mathematical Methods in Systems Biology workshop, Tel-Aviv, Israel
2009	Amos de-Shalit Ulpana for excellent students in Life Sciences, Weizmann Institute.

# Publications *equal contribution | citation counts from Scholar*

Published & Accepted

Ram, Y., Liberman, U., Feldman, M.W. (2018) *Evolution of vertical and oblique transmission under fluctuating selection.* Proceedings of the National Academy of Sciences USA, 201719171. DOI: 10.1073/pnas.1719171115.

Ram, Y., Altenberg, L., Liberman, U., Feldman, M.W. (2018) *Generation of variation and a modified mean fitness principle: Necessity is the mother of genetic invention.* Theoretical Population Biology. DOI: 10.1016/j.tpb.2018.02.004.

Harari, Y., **Ram, Y.**, Rappoport, N., Hadany, L., Kupiec, M. (2018) *Spontaneous changes in ploidy are common in yeast.* Current Biology, 28:111. DOI: j.cub.2018.01.062.

Harari, Y., **Ram, Y.**, Kupiec, M. (2018) *Frequent ploidy changes in growing yeast cultures.* Current Genetics, 0:14.. DOI: 10.1007/s00294-018-0823-y.

Obolski, U.*, **Ram, Y.***, Hadany, L. (2018) *Evolution on rugged adaptive landscapes.* Reports on Progress in Physics, 81: 12602. DOI: 10.1088/1361-6633/aa94d4. 1 citation

Dellus-Gur, E., **Ram, Y.**, Hadany, L. (2017) *Errors in mutagenesis and the benefit of cell-to-cell signalling in the evolution of stress-induced mutagenesis.* Royal Society Open Science, 4:170529. DOI: 10.1098/rsos.170529.

Obolski, U., Lewin-Epstein, O., Even-Tov, E., **Ram, Y.**, Hadany, L. (2017) *With a little help from my friends: cooperation can accelerate the rate of adaptive valley crossing.* BMC Evolutionary Biology, 17:143. DOI: 10.1186/s12862-017-0983-2. 1 citation

Rougier, N.P., . . . , **Ram, Y.**, et al. (2017) *Sustainable computational science: the ReScience initiative.* PeerJ Computer Science, 3: e142. DOI:10.7717/peerj-cs.142. 3 citations

Ram, Y., Hadany, L. (2016) *Condition-dependent sex: who does it, when, and why?.* Philosophical Transactions of the Royal Society B, 371: 20150539. DOI: 10.1098/rstb.2015.0539. 5 citations

Ram, Y., Hadany, L. (2015) *The probability of improvement in Fisher's geometric model: a probabilistic approach.* Theoretical Population Biology, 99: 1-6. DOI: 10.1016/j.tpb.2014.10.004. 5 citations

Ram, Y., Hadany, L. (2014) *Stress-induced mutagenesis and complex adaptation.* Proceedings of the Royal Society B. 281: 20141025. DOI: 10.1098/rspb.2014.1025. 25 citations

Gueijman, A., Ayali, A., **Ram, Y.**, Hadany, L. (2013) *Dispersing away from bad environments: The evolution of fitness-associated dispersal (FAD) in homogeneous environments.* BMC Evolutionary Biology, 13:125. DOI: 10.1186/1471-2148-13-125. 11 citations

Ram, Y., Hadany, L. (2012) *The evolution of stress-induced hypermutation in asexual populations.* Evolution (IF 4.2, 66: 2315-2328. DOI: 10.1111/j.1558-5646.2012.01576.x. 51 citations

Submitted

Ram, Y., Hadany, L. *The evolution of stress-induced mutagenesis in the presence of recombination.* Under review by *The American Naturalist*

Ram, Y., Dellus-Gur, E., Bibi, M., Obolski, U., Berman, J., Hadany, L. *Predicting microbial relative growth in a mixed culture from growth curve data.* bioRxiv DOI: 10.1101/022640. Submitted to *PLoS Computational Biology*

Zinger, E., Guiejman, A, **Ram, Y.**, Ruby, E., Binder, M., Yechieli, N., Ohad, N., Hadany L. *The plant and the ant: less fit Lamium plants produce more dispersible seeds*. Submitted to *Ecology Letters*

Datasets & Software

Ram, Y., Zinger, E., Hadany, L. (2017). *Sid: Image processing for seed images*. Zenodo. DOI: 10.5281/zenodo.344898.

Ram, Y., Hadany L. (2014) *Data from: Stress-induced mutagenesis and complex adaptation*. Dryad Digital Repository. DOI: 10.5061/dryad.3066j.

Ram, Y., Guiejman, A. and Hadany L. (2014). *proevolution simulation: Version Dobzhansky*. ZENODO. DOI: 10.5281/zenodo.11400.

Ram, Y., Hadany, L. (2014) *proevolution simulation: Version Charles. ZENODO*. DOI: 10.5281/zenodo.11401.

Teaching & Mentoring Experience

2016– **Technical Instructor**, Private training for Industry
Designed and developed multiple scientific programming workshops
Taught 1-5 day workshops in Israel and in California
python.yoavram.com

2015 **Lecturer**, Python Programming for Biologists, Tel-Aviv University
Developed and taught a new & successful course for postgraduate Biology students
py4life.github.io

2014-2015 **Lecturer**, Python Programming for Engineers, Tel-Aviv University
Lead 9 staff members, together teaching 600 1st year Engineering students.
Received the *Dean's Award for Excellence in Teaching*

2014 **Teaching Assistant**, Extended Introduction to Computer Science, Tel-Aviv University

2013-2016 **Mentoring** of undergraduate and graduate students at Hadany Lab
Supervised five undergraduate students doing research projects
Participated in mentoring of three postgraduate students

2013-2014 **Lecturer**, Gentle Introduction to Programming, Tel-Aviv University
Preparation course for 1st year Computer Science students

2013-2014 **Lecturer**, Introduction to Programming for Engineers, Tel-Aviv University
Preparation course for 1st year Engineering students

2012, 2015 **Teaching Assistant**, Evolution, Tel-Aviv University

2011-2013 **Teaching Assistant**, Python Programming for Engineers, Tel-Aviv University
Developed with two other postgraduate students a new course for 1st year Engineering students

2005 **Course Commander**, IDF Intelligence Corps
Responsible for intensive 3-month training of 8 recruits with B.Sc. in Exact Sciences

Selected Presentations

2018	Invited speaker at the *Genome Evolution Conference*, Weizmann Institute
2017	Oral presentation at the *Evolgenome* seminar, Stanford University
∗	Poster at the *Gordon Research Conference* on Biological Mechanisms in Evolution, Stonehill College, Easton, MA, USA
∗	Oral presentation at *Israel Society for Microbiology* Annual Meeting.
∗	Oral presentation at *FISEB/ILANIT*, Eilat.
2016	Seminar at the Instituto Gulbenkian de Ciência, Portugal.
2015	**Oral presentation at the *Gordon Research Conference* on Biological Mechanisms in Evolution**, Stonehill College, Easton, MA, USA
∗	Poster at the *"Forecasting Evolution?"* SFB 680 conference in Lisbon, Portugal
∗	Seminar at the Institute of Science and Technology, Austria
∗	Short oral presentation at the *Two2Many* Systems Biology Conference, Weizmann Institute
2013	Poster at *ESEB 2013* in Lisbon, Portugal
∗	Poster at the *Gordon Research Conference* on Biological Mechanisms in Evolution, Stonehill College, Easton, MA, USA
∗	Oral presentation at the 5th Annual *SIDEER Graduate Symposium*, Ben-Gurion University of the Negev, Sede-Boqer Campus
2012	Oral presentation at the 1st Graduate Students Conference in *Genetics, Genomics and Evolution*, Ben-Gurion University of the Negev. DOI: 10.6084/m9.figshare.96049.
∗	**Oral presentation at *PopGroup 45* in Nottingham, UK**. DOI: 10.6084/m9.figshare.95939.
2011	Poster at *ESEB 2011* in Tubingen, Germany. F1000 Posters 2011, 2: 1484.
2010	Poster at *SMBE 2010* in Lyon, France.
as undergrad	Poster at *MMSB* in Tel-Aviv, Israel, 2010 – **Best poster award**

Other Academic Activities

Reviewer 2011–	PLOS Genetics Proceeding of the Royal Society B Evolution Journal of Evolutionary Biology PLOS ONE Theoretical Population Biology Integrative Zoology Quarterly Review of Biology ReScience Israel Journal of Ecology & Evolution
Co-organizer 2011-2014	BioMath Student Journal Club, Tel Aviv University
Popular Media	Even-Tov, E., Obolski, U., Gueijman, A., **Ram, Y.**, Hadany, L. (2010) *The Evolutionary Riddle of Sexual Reproduction*. Galileo, an Israeli journal for popular science: June, 32-41

Outreach | *Dive into Scientific Python* — Oral presentation, DataTalks meetup, Herzeliya, March 15, 2017 — YouTube

∗ | *How to study evolution using Scientific Python* — Oral presentation, PyCon Israel 2016, Tel Aviv, May 2 - 3, 2016 — YouTube

∗ | *Evolution and mutation in stressful times* — Oral presentation, The Evolution Series, Tel Aviv University Botanical Gardens, May 16, 2013 — PDF