

Curriculum Vitae

Yoav Ram

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Personal Information

Name Yoav Ram

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Education

- **Starting Fall 2016:** Postdoctoral fellow, Feldman lab, Stanford University
- **Current:** Postdoctoral fellow, Hadany lab, Tel-Aviv University
- Ph.D., 2010 - 2016
 - *Institution:* Tel-Aviv University
 - *Advisor:* Prof. Lilach Hadany
 - *Ph.D. title:* The Evolution of Stress-Induced Mutagenesis: Causes and Consequences
 - Submitted February 2016
- M.Sc., 2010-2012 (direct Ph.D. track)
Theoretical and Computational Biology, Tel-Aviv University
- B.Sc., 2007-2010
Biology and Mathematics *magna cum laude*, Tel-Aviv University

Publications

- **Ram, Y.** and 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
- **Ram, Y.** and Hadany, L. (2014) Stress-induced mutagenesis and complex adaptation. *Proceeding of the Royal Society B*. 281: 20141025. DOI: 10.1098/rspb.2014.1025
- Gueijman, A., Ayali, A., **Ram, Y.**, and Hadany, L. (2013) Dispersing away from bad environments: The evolution of fitness-associated dispersal (FAD) in homogeneous environments. *BMC Evol. Biol.*, 13:125. DOI: 10.1186/1471-2148-13-125 (OA)

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

In progress

- **Ram, Y.**, and Hadany, L. Condition-dependent sex: who does it, when, and why?. *In print*.
- Geffen, E., Hadany, L., **Ram, Y.**, and Gafny, S. Genetic diversity in edge populations: A complementary view. *Submitted*.
- **Ram, Y.**, Dellus-Gur, E., Bibi, M., Obolski, U., Berman, J., and Hadany, L. Predicting microbial relative growth in a mixed culture from growth curve data. *Submitted*. Preprint available, DOI: 10.1101/022640.
- Obolski, U., Lewin-Epstein, O., Even-Tov, E., **Ram, Y.**, Hadany, L. With a little help from my friends: Cooperation can accelerate crossing of adaptive valleys. *Submitted*. Preprint available, DOI: 10.1101/062323.

Software & Datasets

- **Ram Y.**, Hadany L. (2014) Data from: Stress-induced mutagenesis and complex adaptation. *Dryad Digital Repository*. DOI: 10.5061/dryad.3066j.
- **Ram, Y.**, Hadany, L. (2014) proevolution simulation: Version Charles. *ZENODO*. DOI: 10.5281/zenodo.11401.
- **Ram, Y.**, Guiejman, A. and Hadany L. (2014). proevolution simulation: Version Dobzhansky. *ZENODO*. DOI: 10.5281/zenodo.11400.

Presentations

- 2016** *How to Study Evolution using Scientific Python* - contributed talk at the first PyCon Israel 2016, Tel-Aviv, Israel, May 2 - 3, 2016.
The Evolution of Stress-Induced Mutagenesis - seminar at the Department of Biology and the Environment, Faculty of Natural Sciences, University of Haifa-Oranim, May 22.
The Evolution of Stress-Induced Mutagenesis: Causes and Consequences - PhD seminar at the Department of Molecular Biology and Ecology of Plants, Tel-Aviv University, April 6.
Microbial Growth in a Mixed Culture - Poster at ISM (Israel Society for Microbiology) annual meeting in Bar-Ilan, February 17-18.
The Population Genetics of Stress-Induced Mutation - seminar at the IGC, Portugal, January 14.
- 2015** Poster at the *first Pearl Seiden International meeting in Life Sciences*, Technion, Haifa, Israel, December 9 - 10.
Oral presentation at the **Gordon Research Conference on Biological Mechanisms in Evolution**, Stonehill College, Easton, MA, USA, June 28 - July 3.
 Poster at the *Forecasting Evolution?* SFB 680 conference in Lisbon, Portugal, July 8 - 11.
The Population Genetics of Stress-Induced Mutation - seminar at the IST, Austria, June 25.
Stress-induced mutagenesis & complex adaptation - **Short oral presentation** at the Two2Many Systems Biology Conference, Weizmann Institute, March.
 Oral presentation at the Quantitative and Evolutionary Biology Seminar, Tel-Aviv University, March.

- On the role of stress-induced mutagenesis in evolution* - Poster at the Israeli Genetics Society annual meeting, Weizmann Institute, February.
- 2014** *On the role of stress-induced mutagenesis in evolution* - Poster at ISM (Israel Society for Microbiology) annual meeting, Haifa, April.
- Stress, mutation, evolution, and mathematical models* - Presentation at the Astrophysics student journal club at Tel-Aviv University, March.
- Modeling the evolution of the mutation rate* - Presentation at the Topics in Theoretical and Mathematical Biology Seminar at Tel-Aviv University, March.
- The rate of complex adaptation with and without stress-induced mutagenesis* - Poster at FISEB/ILANIT 2014, Eilat, February.
- 2013** Seminar presentation at the Pupko Lab at Tel-Aviv University, November.
- Seminar presentation at the Philosophy of Biology Group at the Humanities Faculty, Tel-Aviv University, October.
- Adaptedness, Adaptability and Stress-Induced Mutagenesis* - Poster at *PDEs and Dynamical Systems in Biology* conference in Bar-Ilan University, October 1.
- Adaptedness, Adaptability and Stress-Induced Mutagenesis* - Poster at **ESEB 2013** in Lisbon, Portugal, August 19-24.
- Stress-induced Mutagenesis and the Evolution of Complex Traits* - Poster at the **Gordon Research Conference on Biological Mechanisms in Evolution**, Stonehill College, Easton, MA, USA, June 2-6.
- The Role of Stress-Induced Mutation in the Emergence of Complex Adaptations* - **Oral presentation** at the *5th Annual SIDEER Graduate Symposium*, Ben-Gurion University of the Negev, Sede-Boqer Campus, March 20.
- 2012** *Evolutionary Causes and Consequences of Stress-Induced Hypermutation* - **Oral presentation** at *The 1st Graduate Students' Conference in Genetics, Genomics and Evolution*, Ben-Gurion University of the Negev, September 23. DOI: 10.6084/m9.figshare.96049.
- Seminar presentation at the Pilpel Lab at the Weizmann Institute of Science, June.
- The Evolution of Stress-Induced Mutagenesis in Finite and Infinite Populations* - **Oral presentation at PopGroup 45** in Nottingham, UK, January. DOI: 10.6084/m9.figshare.95939.
- 2011** Seminar presentation at the Eldar Lab at Tel-Aviv University, December.
- Seminar presentation at the Department of Molecular Biology and Plants M.Sc. Seminar at Tel-Aviv University, November.
- Rise and Fall of Mutator Bacteria* - Seminar presentation at the *BioMath Student Journal Club*, Tel-Aviv University, May. DOI: 10.6084/m9.figshare.95940.
- The Evolution of Stress-Induced Hypermutation* - Poster at **ESEB 2011** in Tübingen, Germany, August. See: F1000 Posters 2011, 2: 1484.
- 2010** *The Evolution of Stress-Induced Hypermutation* - Poster at **SMBE 2010** in Lyon, France, July.
- The Evolution of Stress-Induced Hypermutation* - Poster at *MMSB 2010* in Tel-Aviv, Israel – won the **Best poster award**.

Awards

- 2017** Stanford Center for Computational, Evolutionary, and Human Genomics (CEHG) Post-doctoral Fellowship, Stanford University.
- 2016** Dean's Award for Excellence in Teaching at the Faculty of Engineering, Tel-Aviv University.
- 2015** The *Israel Society for Microbiology Travel Award to Forecasting Evolution?* in Lisbon,

Portugal.

The *Anat Karuskopf Fund Travel Award to Forecasting Evolution?* in Lisbon, Portugal.

Travel award from the *Manna Institute for Plants BioSciences to Forecasting Evolution?* in Lisbon, Portugal.

2014 The Ministry of Science and Technology International Education Scholarship to travel to the 2015 **Gordon Research Conference on Biological Mechanisms in Evolution**.

Research achievements scholarship from the Life-Science faculty, Tel-Aviv University.

2013 Fellowship from the *Manna Program in Food Safety and Security* for 2013-14.

Travel award from the *Manna Institute for Plants BioSciences to ESEB 2013* in Lisbon, Portugal.

2012 Research achievements scholarship from the Life-Science faculty, Tel-Aviv University.

Registration and accommodation waiver (sponsored by Cambridge University Press) for *PopGroup45* in Nottingham, UK.

Crowd-funded travel expenses for *PopGroup 45* via *The #SciFund Challenge*.

2011 SSE International Travel Award to *ESEB 2011* in Tübingen, Germany.

2010 Direct Ph.D. scholarship from the Department of Molecular Biology and Ecology of Plants, Tel-Aviv University, 2010-2015.

Undergraduate Diversity Mentoring Program award at *SMBE 2010* in Lyon, France.

Best poster award at *MMSB 2010* in Tel-Aviv, Israel.

2009 The *Amos de-Shalit* Ulpana for excellent students in Life-Sciences at the Weizmann Institute of Science.

Peer-Reviews

2016 ReScience

2015 Theoretical Population Biology
Evolution

2014 PLOS ONE

2012 Proceeding of the Royal Society B

2011 Integrative Zoology

Teaching

Spring 2015 Python Programming for Biologists (0411-3122, Teacher) - new graduate students course

Evolution (0455-2536, TA)

Fall 2014 Python Programming for Engineers (0509-1820, Teacher) - received Dean's Award for Excellence in Teaching

Summer 2014 Gentle Introduction to Programming (preparation course for 1st year CS students)

Introduction to Programming for Engineers (preparation course for 1st year eng. students)

Fall 2013 Python Programming for Engineers (0509-1820, Teacher)

Summer 2013 Gentle Introduction to Programming (preparation course for 1st year CS students)

Introduction to Programming for Engineers (preparation course for 1st year eng. students)

Spring 2013 Extended Introduction to Computer Science (0368-1105, TA)

Fall 2012 Python Programming for Engineers (0509-1820, TA)

Spring 2012 Evolution (0455-2536, TA)

Fall 2011 Python Programming for Engineers (0509-1821, TA)

2011-2014 Co-organizing the *BioMath Student Journal Club* at Tel-Aviv University

Conferences

2016 PyCon Israel 2016, Tel Aviv, May.

Israeli Society for Microbiology (ISM) annual meeting in Bar-Ilan, February.

2015 The *first Pearl Seiden International meeting in Life Sciences*, Technion, Haifa, Israel, December.

Gordon Research Conference on Biological Mechanisms in Evolution in Stonehill College, Easton, MA, USA, June.

Forecasting Evolution? SFB 680 conference in Lisbon, Portugal, July.

Two2Many Systems Biology Conference, Weizmann Institute, March.

Israeli Genetics Society annual meeting in Weizmann Institute, February.

Israeli Society for Microbiology (ISM) annual meeting in Bar-Ilan, February.

2014 Israeli Society for Microbiology (ISM) annual meeting in Haifa, April.

The *Federation of the Israeli Societies for Experimental Biology (ILANIT)* congress in Eilat, Israel, February.

2013 *PDEs and Dynamical Systems in Biology* conference in Bar-Ilan University, October.

The 14th Congress of the European Society for Evolutionary Biology (ESEB) in Lisbon, Portugal, August.

Gordon Research Conference on Biological Mechanisms in Evolution in Stonehill College, Easton, MA, USA, June.

The 5th Annual SIDEER Graduate Symposium - The Emergence of Design in Nature in Ben-Gurion University of the Negev, Sede-Boqer Campus, March.

2012 *The 1st Graduate Students' Conference in Genetics, Genomics and Evolution* in Ben-Gurion University of the Negev, September.

The 45th Population Genetics Group meeting in Nottingham, UK, January.

2011 *The 13th Congress of the European Society for Evolutionary Biology (ESEB)* in Tübingen, Germany, August.

2010 *Learning, Decision Making and Evolutionary Theory: Can We Bridge the Gap?* in Kfar-Blum, Israel, November.

Theoretical Models in Ecology, Evolution and Behavior: Recent Advances and Conceptual Issues at the Hebrew University in Jerusalem, Israel, October.

The annual meeting of the Society for Molecular Biology and Evolution (SMBE) in Lyon, France, July.

Mathematical Methods in Systems Biology in Tel-Aviv University, Israel, January.

2009 *From Darwin to Evo-Devo Symposium* in the Technion, Haifa, Israel, October.

Evolution in Jerusalem: A Workshop in Celebration of Darwin's 'The Origin of Species' in the Hebrew University, Jerusalem, Israel, October.

Public Outreach

Publications

- 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

Presentations

- **How to Study Evolution Using Scientific Python** - contributed talk at PyCon Israel 2016, Tel Aviv, May 2 - 3, 2016
- **Evolution and mutation in stressful times** - the evolution series in Tel-Aviv University's Botanical Gardens, May 16, 2013.