

**ADAMS**  
Fellowships מלגות אדמס

האקדמיה הלאומית הישראלית למדעים  
المجمع الوطني الإسرائيلي للعلوم والآداب  
THE ISRAEL ACADEMY OF SCIENCES AND HUMANITIES



**ADAMS SEMINAR 2018**

סמינר אדמס תשע"ח



# Adams Seminar 2018

## סמינר אדמס תשע"ח

Guest Lecturer

**Professor Peretz Lavie**

Professor of Biological Psychiatry  
President of the Technion -  
Israel Institute of Technology



## **Prof. Peretz Lavie**

President  
Technion-Israel Institute of Technology

Prof. Peretz Lavie joined the Technion Rappaport Faculty of Medicine in 1975 where he served as Dean from 1993-1999. In 2001 he was appointed as the Vice President of External Relations and Resource Development. Since

October 1<sup>st</sup> 2009 Prof. Lavie has been serving as President of the Technion. In the summer of 2017, he assented to a request by the Technion Council to extend his term in office for another two years. In doing so he became the first President in the history of Technion to be elected for a third term and will serve a total of ten years in office.

Under his leadership the Technion stands among the top 100 world class research universities, distinguished by academic excellence, interdisciplinary research strategy, innovative globalization and financial stability. During his tenure, the Technion has recorded a number of impressive achievements led by the recruitment of more than 200 new faculty members, which involved raising extensive resources. By establishing the "Yanai Prize" in academic education, Prof Lavie has led a transformational change in the quality of teaching on campus and in student satisfaction.

Prof Lavie conceived and played a principal role in the Technion's expansion to New York where, together with Cornell University, the Jacobs Technion Cornell Institute was opened on Roosevelt Island. Similarly, in China the Technion established the Guangdong Technion-Israel Institute of Technology in Shantou. He led a major campaign to increase the number of dormitories and junior faculty apartments on campus, as well as initiating numerous renovation projects, such as the expansion of research and teaching facilities and the Technion gates.

Prof. Lavie is considered one of the founders of sleep medicine, publishing more than 400 scientific articles and eight books in the field of sleep research and sleep disorders. His book "The Enchanted World of Sleep" has been translated into 15 languages. Prof. Lavie's research has won many prizes, including the EMET prize in medicine (2006), the most prestigious prize for academic achievements in Israel. He is the founder and co-founder of 5 companies that develop and produce medical devices for sleep medicine and cardiology and provide diagnostic services. He is married to Dr. Lena Lavie, a cell biologist; they have 3 children and 7 grandchildren.



## Marcel Adams

Hebrew-speaking philanthropist Marcel Adams, who escaped from a forced-labor camp in Romania in 1944, fought in Israel's War of Independence and made his fortune in Montreal, has endowed the Adams Fellowship Program to support Israel's brightest doctoral students in the natural and exact sciences each year.

Marcel Adams (Abramovich) was born in Piatra-Neamt, Romania, in 1920. The anti-Semitic regime in Romania during the Holocaust interrupted his studies, triggering a lifelong quest for learning and a zest for the life of the mind. An active member of Hanoar Hazioni in Bucharest, Adams survived forced labor, food shortages and arbitrary harassment by the authorities.

After coming to Israel with the Jewish Agency's help in 1944, Adams settled in Pardes Hanna and participated in the War of Independence. He moved to Canada in 1951 and worked as a tanner before going into real estate. He eventually developed dozens of properties, mostly in eastern Canada, including Galeries de la Capitale, the largest shopping mall in the province of Quebec. With his late wife Annie, he established Tel Aviv University's Adams Institute for Business Management Information Systems and endowed the university's Adams Super Center for Brain Research. Marcel Adams is a Montreal resident, the proud father of four and grandfather of eleven. He remains full of energy and looks at least a decade younger than his 98 years.

Adams officially signed an agreement to establish the Adams Fellowships with the Israel Academy of Sciences and Humanities in Jerusalem in May 2005. The fund is large enough to provide \$1 million annually to outstanding PhD students, covering their full tuition and living expenses throughout four years of study and including funds for attending scientific conferences and workshops abroad. Most recipients are aged 26 to 34.

The easy way would have been to hand over a check, but Adams wishes to pay back his 1944 debt to the Jewish people, which gave him a new identity and hope for rebuilding from the ashes of Europe. The fellowship helps young men and women thrive technologically, scientifically and intellectually. In turn, Adams believes they will carry the flag for the next generation and for future generations.

A professional committee at the Academy reviews applications from doctoral students and chooses the awardees, for study in such fields as organic chemistry, molecular biology, chemistry, mathematics, engineering, physics, genetics, computer science and brain research.

Marcel Adams wishes to help the best and brightest academics, those with tremendous potential for growth, who have demonstrated excellence in both quality of mind and personal character.

This year's newly appointed Adams Fellows represent the Fourteenth Cycle of the Adams Fellowship Program.

## ADAMS Fellowship Steering & Approval Committee



Professor Moti Segev,  
Chairman



Professor Gedeon Dagan



Professor Moty Heiblum



Professor Shmaryahu Hoz



Professor David Kahzdan



Professor Gil Kalai



Professor Moshe Oren



Professor Hermona Soreq

## Former Committee Members

Professor Amiram Grinvald,  
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Professor Itamar Willner,  
Past Chairman

Professor Chaim Cedar,  
Past Chairman

Professor Yoram Groner,  
Founding Chairman

Professor Yakir Aharonov

Professor Noga Alon

Professor Moshe Moshe

Professor Abraham Nitzan

Professor Yosef Shiloh

Professor Yigal Talmi

Professor Jacob Ziv



Greetings from

### **Professor Mordechai (Moti) Segev**

Academy Member, Chair of the Adams Fellowships Steering and Approval Committee

Warm greetings to all the current Adams fellows, Adams Alumni, Adams Committee, Members of the Israel Academy of Sciences and Humanities, to our President Prof. Nili Cohen, and most of all to the generous Adams Family.

The Adams Fellowship Program attempts to select our very best PhD students, with the clear goal of nurturing the next generation of leading researchers in Israel. Israel is blessed with excellent young researchers. Our PhD students tend to be more mature, more motivated and knowledgeable than in other countries, partly due to the army service, and partly because the respect for knowledge and encouraging curiosity have been engraved in our culture for millennia. But being blessed with raw talent does not guarantee success in the world of research. This takes two more ingredients: creativity to come up with new original ideas, and courage to go after them – to boldly go where no one has gone before. I will therefore dedicate this welcome address to creativity and courage in the scientific world and here, in Israel.

Creativity and originality are manifested in the ability to think beyond the horizon. Not compromising on doing secondary work or follow-up research. Allow yourself to dream, assess the feasibility of your dreams in scientific eyes: how realizable they are, what would it take to pursue them, and whether (or not) the expected impact is worth the effort. To a large extent – thinking beyond the horizon is in our culture. It relates to the fact that we tend to be argumentative people. This is reflected in many biblical arguments even between our forefathers and God, ranging from Abraham's arguing with God about the destruction of Sdom, to Moses arguing with God in the golden calf story, and many more. And of course the famous Talmudic arguments and counter-arguments whose traditions last to this day. For at least two millennia, these arguments have enriched our thinking beyond the horizon. Nowadays this is reflected in the fact that a very large fraction of the Nobel Laureates in Physics, Chemistry and Economics were Jewish. So the "Jewish secret" on how to think about new creative ideas is to question and argue: argue with your fellow students, and most importantly – argue with your mentors. Do not accept anything for granted. Most often, scientific arguments lead to new discoveries.

Courage to pursue new ideas and the willingness to take risks are also part of our culture for longer than written history. In the past twenty years, this is manifested in the large number of

start-up companies in Israel, and in the fact that our economy is blooming in spite of the large expenses on defense and security, which have no comparable case in the Western culture. Many times, carrying out innovative research involves going against the odds, taking the uncertain path, where you may very well fail. It takes courage to take such a risk. This is how science makes progress: by the handful who do take risk, standing out in front of the masses.

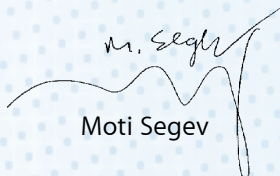
I'd like to add and say that science values creativity more than high grades, originality more than knowledge. Albert Einstein used to say: Imagination is more important than knowledge, for knowledge is limited to all we know and understand, while imagination embraces the entire world, and all there ever will be to know and understand.

In the same vein, many times visionary discoveries required fighting for. The best known example among us is of Danny Schechtman, who had to fight for his discovery of the quasicrystals for a decade. Danny had to fight pretty much against the whole science community, and his adversaries included Nobel Laureates. Danny's story is perhaps the most extreme one, but certainly not the only one: Many others among us had to go against the odds, and fight for their ideas. The lesson we learn from this is that if you are make an important discovery and the evidence is unequivocal, you should fight for it – by collecting more and more proofs, and encouraging others to follow. In the end, most likely the recognition will arrive.

With this, I'd like to wish you all success in your research, imagination to think creatively, good judgement to distinguish between a discovery and secondary work, courage to follow your heart, and persistence to make it happen.

We, the members of the committee that selected you, are hopeful that at least some of you will make huge discoveries, and become leaders of the next generation of researchers.

Best of luck to all of you.

  
Moti Segev



Introductory remarks by

**Professor Nili Cohen**

President of the Israel Academy

I am very pleased to greet our new Adams Fellows for 2018-2019 here at the Israel Academy of Sciences and Humanities. Since the inauguration of the Adams Fellowship Program in May 2005, 119 Adams Fellows, PhD students of the highest academic standing, have been inducted. Many of them now hold research and teaching positions in major universities and scientific centers. We are happy to introduce this year's eight new fellows briefly in this brochure.

Adams Fellows enjoy sustained financial support for three to four uninterrupted years of doctoral study. The amount of the grant has been increased to compensate for inflation and currency fluctuation and to maintain the prestige of the Adams Fellowships. The Fellows also enjoy two privileges unique to this graduate student support program. Each Adams Fellow is eligible for an annual international study grant of \$3,000, to be used for active participation in international scientific conferences/workshops, for laboratory study abroad, for international scientific collaboration or to interview for a postdoctoral position, provided the trip is intended to contribute meaningfully to his/her scientific career. Adams Fellows are also given the opportunity to interact with one another and to form a small science community of their own, through initiatives such as invited lectures by renowned scientists at annual seminars and conferences, science communication workshops and field trips. We are confident that the Adams Fellowships constitute a meaningful contribution to the training of excellent scientists in Israel.

I would like to extend my heartfelt admiration and appreciation to Mr. Marcel Adams for playing such a vital role in the support of Israel's outstanding young scientists. I was privileged to meet Marcel Adams and his dear late wife Annie while I was rector of Tel-Aviv University, and I marveled then at their vision and commitment to the advancement of science. It is a great pleasure for me to celebrate Marcel's 98<sup>th</sup> birthday at the Israel Academy! I was happy to meet his family at the Academy, and I remain impressed by their steadfast devotion to the promotion of science. We are deeply grateful to the Adams family and are honored by their outstanding support.



### Adar Adamsky

PhD student of Dr. Inbal Goshen, Edmond and Lily Safra Center for Brain Sciences (ELSC), The Hebrew University of Jerusalem

Dissertation topic: Dynamic Changes in Long-term Memory Network Organization Underlie Systems Consolidation

From a young age, Adar has been fascinated by the mysteries of the human brain. This, together with her passion for knowledge and research, led her to study psychology and cognitive science at the Hebrew University. Throughout her undergraduate studies, Adar worked on research projects in various subfields in neuroscience, seeking to deepen her scientific knowledge and acquire new experimental skills. Upon completing her BSc *summa cum laude*, she continued her studies at the Hebrew University in the direct PhD program for computational neuroscience.

Today, under the supervision of Dr. Inbal Goshen, Adar is examining the processes in the brain that are involved in the transition from recent to remote memory, in the hope of advancing our understanding in this area and paving the way for developing new treatments for memory impairments. Her recent work demonstrating the effects of astrocytic activation on memory, carried out in collaboration with other lab members, has been accepted for publication in the high-impact journal *Cell*. Alongside her research, Adar places great emphasis on educational work. She has served as a teaching assistant in neuroscience courses and volunteered in a variety of educational projects for children and youth. Adar is presently serving as a teaching assistant in a course on neurodegenerative diseases and instructing a neuroscience seminar for high-school biology students.



### Ayelet Arazi

PhD student of Prof. Ilan Dinstein, Department of Brain and Cognitive Sciences, Ben-Gurion University of the Negev

Dissertation topic: Neural Variability and its Relationship with Perception, Attention and Working Memory

Ayelet was born and raised in Ma'alot, a small town in the Galilee. From a young age, she was attracted to science, mathematics and biology. During high school she volunteered with Magen David Adom and in a center for children with special needs. After two years of military service in the Air Traffic Control Unit, she started her BSc in Biomedical Engineering at Ben-Gurion University. During her final undergraduate year, Ayelet joined Prof. Ilan Dinstein's lab, where she studied and analyzed brain activity of individuals with autism and developed new and sophisticated algorithms for analyzing EEG activity. She completed her MA in Brain Sciences *summa cum laude* under the supervision of Prof. Dinstein, and she is currently studying for her PhD in the Department of Brain and Cognitive Sciences at Ben-Gurion University.

Ayelet specializes in the reliability of neural responses of the human brain, a new and fascinating field of neurosciences. Using neuroimaging techniques, including EEG and fMRI, Ayelet has shown that the activity of the human brain varies dramatically from one moment to the next, even when the same sensory stimulus is presented. This brain variability/noise is tightly related to cognitive function and behavior and is found to be greater in humans with neurodevelopmental disorders such as ADHD and autism. Ayelet is now leading a project in which she is using EEG to record brain activity in toddlers with autism, to examine whether excessive brain variability is an early marker of autism.

Alongside her research, Ayelet serves as a teaching assistant for undergraduate math courses in the Department of Brain and Cognitive Sciences.



## Yaron Ben-Ami

PhD student of Asst. Prof. Avshalom Manela, Faculty of Aerospace Engineering,  
Technion – Israel Institute of Technology

Dissertation topic: Effect of Thermal Boundary Conditions on Heat and Mass Transfer Processes in Rarefied Gas Flows

Yaron Ben-Ami was born and raised in Kibbutz Gal'ed. From a young age he took a keen interest in mathematics and science, though his fondness for riding tractors led him to believe that he would grow up to be a farmer rather than a scientist.

After serving in the army as an infantry officer, Yaron started his BSc studies in the Department of Mechanical Engineering at Ben-Gurion University of the Negev, and he continued there for his MSc. Yaron graduated both degrees *summa cum laude*, ranking first in his class. His MSc research, carried out under the supervision of Prof. Avi Levy, considered the modelling of the erosive wear caused by solid particles conveyed in a fluid. In the course of this work, Yaron became infatuated with the field of fluid mechanics and fascinated by the variety of complex phenomena that could be formulated and analyzed using a compact set of equations. Consequently, he chose to proceed to PhD studies in the field of rarefied gas dynamics in the Faculty of Aerospace Engineering at the Technion, under the supervision of Asst. Prof. Avshalom Manela.

In his current research, Yaron is investigating the effect of thermal boundary conditions on rarefied gas flows. His research, focusing on the coupling phenomena characterizing the dynamic and thermodynamic flow descriptions in non-equilibrium gas flows, is expected to aid in analyzing heat- and mass-transfer processes prevailing in micro-scale devices and low-pressure transport vehicles, such as the recently developed Hyperloop and high-altitude aircrafts.

Alongside his research, Yaron is a much-appreciated teaching assistant in undergraduate courses on incompressible aerodynamics and viscous flow, where he shares his enthusiasm for fluid mechanics with the students.

In the course of his studies, Yaron met and married his beloved wife, Netta. They have two smart and beautiful children, Ori and Gur.



## Anael Ben-Asher

PhD student of Prof. Nimrod Moiseyev, Schulich Faculty of Chemistry,  
Technion – Israel Institute of Technology.

Dissertation topic: Non-Hermitian Quantum Scattering Theory for Cold Molecular Collision Experiments.

Anael was raised in Karmiel in the Western Galilee. Always fond of mathematics, she won an award for a creative solution in the Weizmann Institute's math competition for middle-school students. While still in high school, Anael took academic courses in chemistry in the framework of the "Archimedes" program at the Technion, and there she discovered the beauty of the chemistry world. She won the second prize in the "Chemiada," the Israeli national chemistry competition for high school students, and she was a member of the Israeli delegation to the International Chemistry Youth Olympiad.

After serving in the IDF as a technological Intelligence researcher, Anael completed her BSc in chemistry at the Technion and graduated *summa cum laude*. During her studies, she became fascinated by quantum chemistry and by the possibility of using mathematical tools to theoretically explain chemical processes. Anael started researching quantum chemistry as an undergraduate under the supervision of Prof. Nimrod Moiseyev, and she has continued her research as a graduate student in a direct PhD track. For her achievements, Anael received the Schulich Scholarship of Excellence from the Technion's Faculty of Chemistry. Her research concentrates on the development of methods and applications using non-Hermitian quantum scattering theory to explain and interpret cold molecular collision experiments.



### Yoav Levine

PhD student of Prof. Amnon Shashua, School of Computer Science and Engineering,  
The Hebrew University of Jerusalem

Dissertation topic: Bridging Deep Learning and Many-Body Physics via Tensor Networks

Yoav grew up in Jerusalem and lives in Tel Aviv with his wife Gali. After serving in an IDF intelligence unit, he pursued a double BSc in physics and electrical engineering at Tel Aviv University, where he participated in the Adi Lautman Program for Outstanding Students. He graduated *summa cum laude* from both departments. During his undergraduate studies he conducted physics research at a US DoE particle-accelerator facility and at the Weizmann Institute Atomic Scale Physics lab. There, he encountered the fascinating field of topological phases of matter, and he continued pursuing research in this field from a theoretical perspective as part of his graduate work at the Weizmann Institute. His MSc thesis resulted in a published paper theoretically analyzing a realization scheme for topological phases of matter.

Increasingly intrigued by the field of Artificial Intelligence, which has raised fundamental scientific questions and shown a great potential to impact society, Yoav joined the deep learning theory group at the Hebrew University for his doctoral work. His research aims to shed light on the success of prominent deep learning architectures by using tools from quantum physics, and to promote the use of deep networks for quantum physics research. Yoav has published three theoretical papers establishing novel connections between these fields. The first two provide new insights into prominent deep learning architectures of the kind used for computer vision and speech recognition, while the third proves that deep learning architectures can be employed for the investigation of highly entangled many-body quantum systems.



### Itai Linial

PhD student of Prof. Re'em Sari, Racah Institute of Physics, Faculty of Sciences and Mathematics,  
The Hebrew University of Jerusalem

Dissertation topic: Common-Envelope Evolution of Binary Stars and Planetary Dynamics

Born and raised in Jerusalem, Itai has always been drawn both to nature and to science. During high school, he participated in several scientific programs and tournaments and began taking physics and math courses at the Hebrew University. After four years of army service in an intelligence corps technological unit, Itai returned to Jerusalem to complete his BSc in physics and mathematics.

Upon completing both BSc degrees *cum laude*, Itai started his physics MSc under the supervision of Prof. Re'em Sari, studying the stable mass transfer between stars and supermassive black holes and their evolution under the influence of gravitational waves. He later worked on planetary dynamics, developing a novel method for extracting the mass and density of extrasolar planets from observations of small variations in their orbits.

As a PhD student in Sari's group, Itai continues to pursue his passion for astrophysics. For now, he is working on theoretical aspects of the mutual evolution of binary star systems in the common-envelope phase. This evolution may be an important formation channel of binary black holes and neutron stars, which merge due to the emission of gravitational radiation. The recent groundbreaking discoveries of gravitational waves by the LIGO and Virgo collaborations mark the emergence of a new field in astronomy. Itai hopes in the near future to explore the theoretical challenges and opportunities that this field will bring.



## Eran Lustig

PhD student of Prof. Mordechai (Moti) Segev, Faculty of Physics,  
The Technion – Israel Institute of Technology

Dissertation topic: Topological Photonics – Finding and Describing Topological Phases in Classical and Quantum Optical Systems

Born and raised in Haifa, Eran Lustig was always attracted to science. However, only during his five-year army service, after reading dozens of popular-science books and scientific textbooks, did he decide to make science his career. Immediately after finishing his service, he enrolled in the program for outstanding students at the Technion, combining a BSc in physics and electrical engineering with an MSc in physics, which turned into a direct PhD in physics under the supervision of Prof. Mordechai Segev.

In his PhD studies, Eran is exploring the relations between light and the mathematical field of topology. During his past two and a half years of graduate studies, Eran has led the efforts to demonstrate in theory and by experiment a phenomenon known as a photonic topological insulator in synthetic dimensions, which is of great interest to many leading research groups around the world. Eran demonstrated by experiment that light can propagate through the bulk of a material in a special state that makes it immune to backscattering due to defects or disorder in the material. During this period, Eran has also presented 9 refereed papers at international conferences, 6 of them as the first author. He has published a paper and has 3 papers under review at prestigious journals, all of them as first author.

Eran teaches undergraduate courses in different areas of physics, including laser physics, waves, and Physics 1, where he also serves as the lead teaching assistant.



## David Mass

PhD student of Prof. Tali Kaufman, Department of Computer Science, Bar-Ilan University

Dissertation topic: High-Dimensional Expanders in the Theory of Computation

David was born and grew up in Ramat Gan. He taught himself several programming languages at a very early age, and in primary school he was already creating computer games by himself, which were presented to the whole school.

At Bar-Ilan University, where David received his BSc in computer science, he was awarded the Rector's Prize as the department's leading student in each of the three years of his BSc studies. He graduated *summa cum laude*, with the department's highest average in at least ten years.

Continuing his studies at Bar-Ilan under the supervision of Prof. Tali Kaufman, David showed in his MSc thesis that high-order random walks on high-dimensional expanders converge rapidly toward their stationary distribution. This work was the first to define high-order random walks. It was published and presented at the important ITCS conference and was cited in several other papers during the year after it was published. David was awarded the Dean's Prize for Advanced Studies and graduated *summa cum laude* with an average of over 99.

David is currently continuing to investigate the emerging field of high-dimensional expanders. These objects possess stronger properties than their one-dimensional analogs, which are expander graphs. As such, they have the potential to achieve applications that could not be attained with expander graphs. David hopes that his research will contribute to the development of this fascinating field.



### Leon Anavy

PhD student of Prof. Zohar Yakhini, Computer Science Department, Technion – Israel Institute of Technology

Dissertation topic: Computational Challenges in Synthetic Biology



### Evgeniy Boyko

PhD student of Prof. Moran Bercovici and Prof. Amir D. Gat, Faculty of Mechanical Engineering, Technion – Israel Institute of Technology

Dissertation topic: Non-Uniform Electroosmotic Flow in Rigid and Elastic Microfluidic Configurations



### Shachar Carmeli

Phd student of Dr. Dmitry Gourevitch, Department of Mathematics, Weizmann Institute of Science

Dissertation topic: Harmonic Analysis on Spherical Spaces



### Tuvia Gefen

PhD student of Prof. Alex Retzker, Racah Institute of Physics, Faculty of Sciences and Mathematics, The Hebrew University of Jerusalem

Dissertation topic: Quantum Metrology and Computing with NV Centers and Trapped Ions



### Bracha Laufer-Goldshtein

PhD student of Prof. Sharon Gannot (Bar-Ilan) and Prof. Ronen Talmon (Technion), Faculty of Electrical Engineering, Bar-Ilan University

Dissertation topic: Manifold Learning Techniques for Source Localization and Array Processing



### Ofer Neufeld

PhD student of Prof. Oren Cohen, Department of Physics, The Technion – Israel Institute of Technology

Dissertation topic: Generation of High Harmonics with Fully Tunable Polarization



### Inbal Oz

PhD student of Prof. Oded Hod and Prof. Avraham Nitzan, School of Chemistry,  
Faculty of Exact Sciences, Tel Aviv University

Dissertation topic: Simulating Non-Equilibrium Thermodynamics in Open Quantum Systems



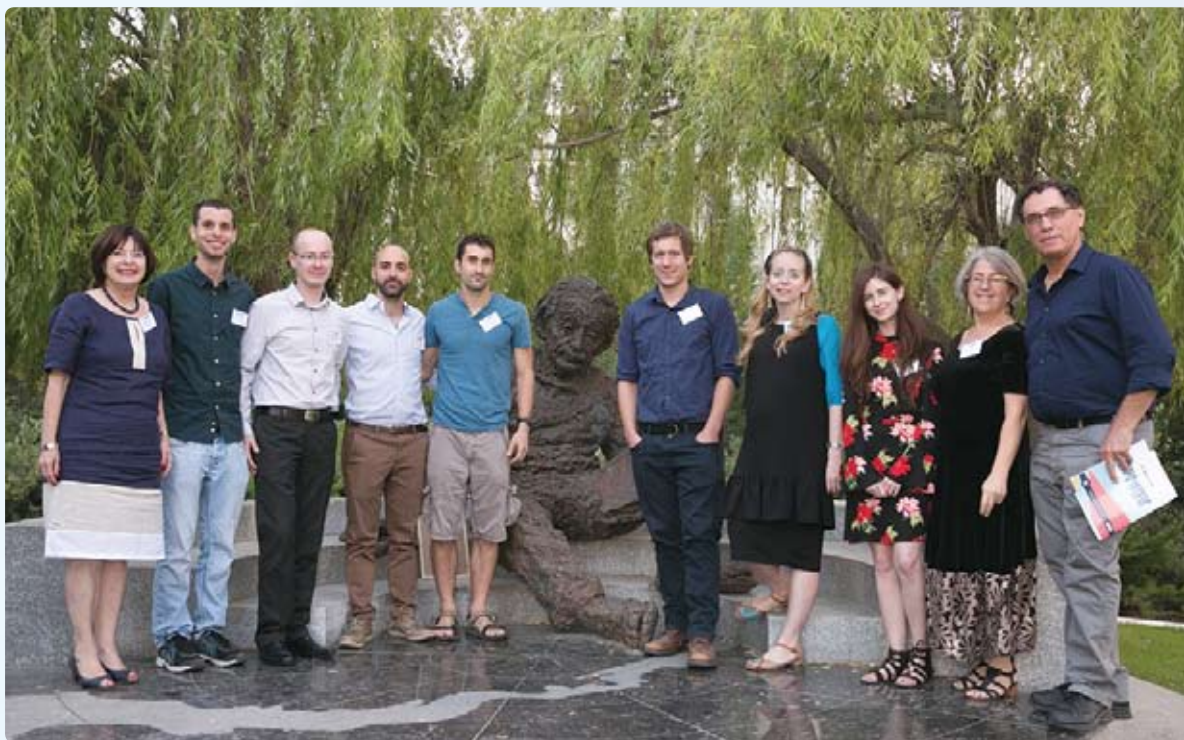
### Or Yair

PhD student of Prof. Ronen Talmon, Viterbi Faculty of Electrical Engineering,  
Technion – Israel Institute of Technology

Dissertation topic: Geometric Learning for Data-Driven Analysis of Dynamical Systems

## ANNUAL ADAMS SEMINAR

July 2017



Left to Right: Batsheva Shor, Tuvia Gefen, Evgeniy Boyko, Leon Anavy, Or Yair, Shachar Carmeli, Bracha Laufer, Inbal Oz, Linda Adams Troy, Prof. Moti Segev (missing: Ofer Neufeld)



### Angelica Elkan

PhD student of Prof. Boris Rybtchinski, Department of Organic Chemistry, Weizmann Institute of Science

Dissertation topic: Hybrid Materials Based on Organic Nanocrystals and Carbon Nanotubes (CNTs)



### Hezi Grisaro

PhD student of Prof. Avraham N. Dancygier, Faculty of Civil and Environmental Engineering, Technion – Israel Institute of Technology

Dissertation topic: Response of a Structural Element to Combined Loading of Explosion and Fragmentation Impacts



### Yael Korem

PhD student of Prof. Uri Alon, Department of Molecular Cell Biology, Weizmann Institute of Science

Dissertation topic: Optimal Division of Labor in Cells and Tissues



### Gali Noti

PhD student of Prof. Noam Nisan, School of Computer Science & Engineering and the Center for the Study of Rationality, The Hebrew University of Jerusalem

Dissertation topic: Behavioral Algorithmic Game Theory



### Avia Raviv Moshe

PhD student of Prof. Yaron Oz, School of Physics and Astronomy, Faculty of Exact Sciences, Tel-Aviv University

Dissertation topic: Lifshitz Quantum Field Theories, Gravity and Hydrodynamics



### Asael Roichman

PhD student of Prof. Haim Cohen, Faculty of Life Sciences, Bar-Ilan University

Dissertation topic: Sirtuins in Aging and Metabolism



### Alexander Shleyfman

PhD student of Prof. Carmel Domshlak, Faculty of Industrial Engineering and Management, Technion-Israel Institute of Technology

Dissertation topic: Symmetry Breaking and Operator Pruning in Classical Planning and Beyond



### Amitai Yuval

PhD student of Prof. Jake Solomon, Department of Mathematics, The Hebrew University of Jerusalem

Dissertation topic: Geodesics of Positive Lagrangians in Almost Calabi-Yau Manifolds

## ANNUAL ADAMS SEMINAR

July 2017



Top: Prof. Nili Cohen and Sylvan Adams

Bottom

Left: Inbal Oz and Avia Raviv Moshe

Right: Adams Fellows in the lobby before the ceremony





### **Omri Azencot**

PhD student of Prof. Mirela Ben-Chen, Computer Science Department, Technion–Israel Institute of Technology

Dissertation topic: Operator Representations in Geometry Processing



### **Izchak Baruch Goldshtein**

PhD student of Prof. Moshe Lewenstein and Prof. Ely Porat, Department of Computer Science, Bar-Ilan University

Dissertation topic: Polynomial Lower Bounds on Algorithms and Data Structures



### **Barak Hirshberg**

PhD student of Prof. Benny Gerber, The School of Chemistry, The Hebrew University of Jerusalem

Dissertation topic: Structure, Interactions and Dynamics of Many-Atom Systems



### **Michael Kalyuzhny**

PhD student of Prof. Ronen Kadmon, Department of Ecology, Evolution and Behavior, The Hebrew University of Jerusalem and Prof. Nadav Shnerb, Department of Physics, Bar-Ilan University

Dissertation topic: A Theoretical and Empirical Analysis of Factors Affecting the Dynamics and Structure of Ecological Communities.



### **Michal Natan**

PhD student of Prof. Ehud Banin and Prof. Shlomo Margel, Institute of Nanotechnology and Advanced Materials, Bar-Ilan University

Dissertation topic: Synthesis of Rechargeable N-halamine Nanoparticles and Determination of Their Antibacterial and Antibiofilm Activities



### **Eran Sagi**

PhD student of Prof. Yuval Oreg, Department of Condensed Matter Physics, Weizmann Institute of Science

Dissertation topic: Strongly Interacting Topological Phases



## Ido Sagi

PhD student of Prof. Nissim Benvenisty, Azrieli Center for Stem Cells and Genetic Research, The Hebrew University of Jerusalem  
Dissertation topic: Genetic and Epigenetic Regulation in Human Pluripotent Stem Cells



## Yinon Spinka

PhD student of Prof. Ron Peled, Pure Mathematics Department, Tel-Aviv University  
Dissertation topic: Mathematical Models of Statistical Mechanics

## ANNUAL ADAMS SEMINAR

July 2017



Professor Menahem Yaari, Israel Prize Laureate, Former Academy President and Professor of Economics at the Hebrew University of Jerusalem, delivering his lecture on "Justice and the Market".



Professor Moti Segev, Israel Prize Laureate and Distinguished Professor of Physics at the Technion and Chair of the Adams Fellowship Committee, speaking about the importance of innovation and thinking beyond the horizon.



### **Rivka Bekenstein**

PhD student of Prof. Mordechai Segev, Faculty of Physics,  
Technion-Israel Institute of Technology

Dissertation topic: Gravitational Phenomena and Complex  
Wavepackets in Nonlinear Optical Systems



### **Sharon Fleischer**

PhD student of Dr. Tal Dvir, Dept. of Molecular Microbiology and  
Biotechnology, Faculty of Life Science, Tel-Aviv University

Dissertation topic: Engineering 3D Cardiac Stem Cell-Based Patches for  
Treating Heart Diseases



### **Yannai A. Gonczarowski**

PhD student of Prof. Sergiu Hart and Prof. Noam Nisan, Institute of Mathematics,  
School of Computer Science & Engineering and Center for the Study of Rationality,  
The Hebrew University of Jerusalem

Dissertation topic: Game Theory and Mechanism Design



### **Ouri Karni**

PhD student of Prof. Gadi Eisenstein, Faculty of Electrical Engineering,  
Technion-Israel Institute of Technology

Dissertation topic: Ultra-Fast Non-Linear Dynamic Processes in  
Nanometric Semiconductor Lasers and Optical Amplifiers



### **Jonathan Mosheiff**

PhD student of Prof. Nati Linial, Institute of Computer Science,  
The Hebrew University of Jerusalem

Dissertation topic: Forbidden Induced Subgraphs and their Structural  
Implications



### **Omri Ram**

PhD student of Prof. Oren Sadot, Department of Mechanical Engineering,  
Ben-Gurion University of the Negev

Dissertation topic: Experimental Study of Shock and Blast Wave  
Interaction with a Rigid Porous Medium.



### Einat Seidel Posner

PhD student of Prof. Ofer Mandelbaum, Lautenberg Center for Immunology and Cancer Research, The Hebrew University of Jerusalem

Dissertation topic: Viral Immune Evasion Mechanisms



### Eliran Subag

PhD student of Prof. Ofer Zeitouni, Department of Mathematics, Weizmann Institute of Science

Dissertation topic: Extreme Values and Extremal Processes of Gaussian Fields

## ANNUAL ADAMS CONFERENCE

January 2018



Top: Yael Korem and Evgeniy Boyko explaining their posters,

Middle (left to right): Prof. Oded Aharonson, Prof. Elie Podeh and Prof. Igor Schapiro and

Bottom: Prof. Yonina Eldar, lecturing to the students.





### Ariel Afek

PhD student of Dr. David Lukatsky, Department of Chemistry, Ben-Gurion University of the Negev

Dissertation topic: Design Principles and Consequences of Nonconsensus Protein-DNA Binding



### Yoav Bauman

PhD student of Prof. Ofer Mandelboim, Lautenberg Center for General and Tumor Immunology, the Hebrew University of Jerusalem

Dissertation topic: Pathogen Recognition by Natural Killer Cells



### Ronen Dar

PhD student of Prof. Meir Feder and Prof. Mark Shtaif, School of Electrical Engineering, Tel-Aviv University

Dissertation topic: Information Theory in Optical-Fiber Communications



### Anna Frishman

PhD student of Prof. Gregory Falkovich, Department of Physics of Complex Systems, Weizmann Institute of Science

Dissertation topic: A Search for Statistical Laws in Turbulent Systems



### Livnat Jerby Arnon

PhD student of Prof. Eytan Ruppin, School of Computer Science, Tel-Aviv University

Dissertation topic: Genome-scale Modelling of Cancer Genetics and Metabolism Towards the Identification of Selective Anticancer Treatments



### Assaf Manor

PhD student of Prof. Carmel Rotschild, Faculty of Mechanical Engineering, Technion-Israel Institute of Technology

Dissertation topic: Thermodynamic Light Management for 3rd Generation Photovoltaics



### Sivan Refaely-Abramson

PhD student of Prof. Leeor Kronik, Department of Materials and Interfaces, Weizmann Institute of Science

Dissertation topic: A Generalization of the Optimally-tuned Range-separated Hybrid Scheme to the Solid-state



### Liran Rotem

PhD student of Prof. Vitali-Milaman, School of Mathematical Sciences, Tel-Aviv University

Dissertation topic: Asymptotic Geometric Analysis: Log-concavity,  $\alpha$ -Concavity, Quasi-Concavity



### Eitan Schechtman

PhD student of Prof. Hagai Bergman, The Interdisciplinary Center for Neural Computation (ICNC), the Hebrew University of Jerusalem

Dissertation topic: The Neural Correlates of Basal Ganglia Abnormalities in the Chronic Phencyclidine (PCP) Primate Model of Schizophrenia



### Avishay Tal

PhD student of Prof. Ran Raz, Department of Computer Science and Applied Mathematics, Weizmann Institute of Science

Dissertation topic: Analysis of Boolean Functions in Theoretical Computer Science

## ANNUAL ADAMS SEMINAR

July 2017



Festive dinner in the garden



Sharon Fleischer receives the Ruth Arnon Postdoctoral Fellowship for Adams Alumnae. Left to right: Prof. Moti Segev, Prof. Nili Cohen, Prof. Ruth Arnon, Sharon Fleischer, Linda Adams



### **Tslil Ast**

PhD student of Dr. Maya Schuldiner, Department of Molecular Genetics, Weizmann Institute of Science

Dissertation topic: Uncovering the Translocation and Quality Control Mechanisms of Glycosylphosphatidylinositol (GPL) Anchored Proteins



### **Assaf Ben Moshe**

PhD student of Prof. Gil Markovich, Department of Chemical Physics, Tel-Aviv University

Dissertation topic: Chiroptical Effects Induced in Metal and Semiconductor Nanoparticles



### **Miri Krupkin**

PhD student of Prof. Ada Yonath, Department of Structural Biology, Weizmann Institute of Science

Dissertation topic: Towards the Determination of the Structure of Mycobacterium Smegmatis Ribosome and Studies on the Properties of the Prebiotic Ribosome



### **Nir Lazarovich**

PhD student of Prof. Michah Sageev, Department of Mathematics, Technion-Israel Institute of Technology

Dissertation topic: Non-positively Curved Homogeneous Polygonal Complexes



### **Or Ordentlich**

PhD student of Prof. Uri Erez, School of Electrical Engineering, Tel-Aviv University

Dissertation topic: Robust Lattice Schemes for Multi-User Communication Networks



### **Liel Sapir**

PhD student of Prof. Daniel Harries, Institute of Chemistry and The Fritz Haber Research Center, The Hebrew University of Jerusalem

Dissertation topic: Modeling Osmolyte-Induced Conformational Changes in Biomacromolecules



### David Tsivion

PhD student of Prof. Ernesto Joselevich, Department of Material and Interfaces, Weizmann Institute of Science

Dissertation topic: Guided Growth of Horizontal Nanowires



### Erez Zohar

PhD student of Prof. Benni Reznik, School of Physics and Astronomy, Tel-Aviv University

Dissertation topic: Quantum Simulations of Quantum Field Theories

## ADAMS FIELD TRIP TO THE GOLAN HEIGHTS

May 2018





### **Dmitry Batenkov**

PhD student of Prof. Yosef Yomdin, Department of Mathematics, Weizmann Institute of Science

Dissertation topic: Algebraic Reconstruction of Geometric Models from Integral Measurements



### **Avraham Braun**

PhD student of Prof. Jeffrey Gordon, Department of Solar Energy and Environmental Physics, Ben-Gurion University of the Negev

Dissertation topic: The Physics of High Carrier Injection Rates in Concentrator Photovoltaics



### **Sophia Buhbut**

PhD student of Prof. Arie Zaban, Institute of Chemistry, Bar-Ilan University

Dissertation topic: FRET Mechanism Based on Nanomaterials in Dye-Sensitized Solar Cells: Synthesis, Characterization and Applications



### **Amir Erez**

PhD student of Prof. Yigal Meir, Department of Physics, Ben-Gurion University of the Negev

Dissertation topic: Superconductor to Insulator Transition in Thin Films



### **Daphna Nachmani**

PhD student of Prof. Ofer Mandelboim, Lautenberg Center for General and Tumor Immunology, The Hebrew University of Jerusalem

Dissertation topic: MicroRNAs in Immune-Regulation: Viral Mimicry of Host Mechanisms



### **Amir Nevet**

PhD student of Prof. Meir Orenstein, Department of Electrical Engineering, Technion-Israel Institute of Technology

Dissertation topic: Two-Photon Processes in Micro and Nano Semiconductor Structures



### Doron Puder

PhD student of Prof. Nati Linial, Einstein Institute of Mathematics, The Hebrew University of Jerusalem

Dissertation topic: The Combinatorial, Algebraic and Topological Aspects of Word Maps



### Eran Small

PhD student of Prof. Yaron Silberberg, Department of Physics of Complex Systems, Weizmann Institute of Science

Dissertation topic: Statistical Properties of Light Propagating in Non-Linear Systems



### Hadas Soifer

PhD student of Prof. Nirit Dudovich, Department of Physics of Complex Systems, Weizmann Institute of Science

Dissertation topic: Probing Electronic Wavefunctions via High Harmonic Generation



### Amir Wand

PhD student of Prof. Sanford Ruhman, Department of Chemistry, The Hebrew University of Jerusalem

Dissertation topic: Investigation of the Photochemistry of Retinal Proteins and Model Systems Using Novel Techniques of Ultrafast Spectroscopy: Resolving the Dynamics as well as Structural Information of the Excited States

## ADAMS FIELD TRIP TO THE GOLAN HEIGHTS

May 2018



Lt. Col. (Res.) Sarit Zehavi explaining the current situation on Israel's Northern Borders.



Colonel (Res.) Prof Ronnie Kosloff of the Hebrew University explaining the history of the Golan Heights and their defense throughout the ages.

## ADAMS Fellows 2010-2011



### Avital Adler

PhD student of Prof. Hagai Bergman, Interdisciplinary Center for Neural Computation (ICNC), The Hebrew University of Jerusalem

Dissertation topic: Value Encoding in the Striatum in View of Serotonin Neurotransmission



### Leonid Barenboim

PhD student of Prof. Michael Elkin, Department of Computer Science, Ben-Gurion University of the Negev

Dissertation topic: Efficient Network Utilization in Locality-Sensitive Distributed Algorithms



### Arren Bar-Even

PhD student of Prof. Ron Milo, Department of Plant Sciences, Weizmann Institute of Science

Dissertation topic: The Design, Analysis and Testing of Synthetic Carbon Fixation Cycles



### Omer Bobrowski

PhD student of Prof. Robert J. Adler, Department of Electrical Engineering, Technion-Israel Institute of Technology

Dissertation topic: Some Topics in the Algebraic Topology of Random Fields



### Ronit Bustin

PhD student of Prof. Shlomo Shamai, Department of Electrical Engineering, Technion-Israel Institute of Technology

Dissertation topic: The I-MMSE approach for Multi-Terminal Problems in the Gaussian Regime



### Klim Efremenko

PhD student of Prof. Amnon Ta-Shma and Prof. Oded Regev, Department of Computer Science, Tel-Aviv University

Dissertation topic: Algebraic Constructions in Computational Complexity



### Yoav Livneh

PhD student of Prof. Adi Mizrahi, Department of Neurobiology, The Hebrew University of Jerusalem

Dissertation topic: Adult Neurogenesis: From Synapse Formation, Through Sensory Coding to Animal Behavior



### Itai Roffman

PhD student of Prof. Eviatar Nevo and Prof. Avraham Ronin, The International Graduate Center of Evolution, University of Haifa

Dissertation topic: Studying Suite of Homo Traits in Pan: Supporting Cultural and Genetic Evidence for their Inclusion in Homo Genus



### Yoav Oved Rosenberg

PhD student of Prof. Jiwchar Ganor, Department of Geological and Environmental Sciences, Ben-Gurion University of the Negev

Dissertation topic: The Fate of Radium in Evaporitic Systems



### Osip Schwartz

PhD student of Prof. Dan Oron, Department of Physics of Complex Systems, Weizmann Institute of Science

Dissertation topic: Nonlinear Microscopy with Nanoparticles



### Adi Sheinfeld

PhD student of Prof. Avishay Eyal, Electrical Engineering, Tel-Aviv University

Dissertation topic: Optical Detection of Alzheimer's Disease Via Ocular Spectroscopy



### Avital Swisa

PhD student of Prof. Yuval Dor, Department of Developmental Biology and Cancer Research, The Faculty of Medicine, The Hebrew University of Jerusalem

Dissertation topic: Role of LKB1 in Pancreatic Beta Cell Dynamics



### **Monther Abu-Remaileh**

PhD student of Prof. Yehudit Bergman, Human Genetics, The Hebrew University of Jerusalem

Dissertation topic: Understanding the Molecular Mechanism of Oct-3/4 Oncogenicity



### **Danny Ben-Zvi**

PhD student of Prof. Naama Barkai and Prof. Ben-Zion Shilo, Molecular Genetics, Weizmann Institute of Science

Dissertation topic: Scaling and Robustness in Embryonic Development



### **Oded Berger-Tal**

PhD student of Prof. David Saltz, Desert Ecology, Ben-Gurion University of the Negev

Dissertation topic: Movement Ecology of Persian Fallow Deer



### **Ronen Gabizon**

PhD student of Prof. Assaf Friedler, Institute of Chemistry, The Hebrew University of Jerusalem

Dissertation topic: Activating Proteins by Shifting their Oligomerization Equilibrium: A New Approach to Drug Design



### **Alex Hayat**

PhD student of Prof. Meir Orenstein, Faculty of Electrical Engineering, Technion-Israel Institute of Technology

Dissertation topic: Applications of Multi-Photon Processes for Semiconductor for Quantum Photonics.



### **Efrat Mashiach**

PhD student of Prof. Haim Wolfson and Prof. Ruth Nussinov, School of Computer Science, Tel-Aviv University

Dissertation topic: Structural Bioinformatics: Flexible Molecular Docking



### Or Meir

Phd student of Prof. Oded Goldreich, Department of Computer Science and Applied Mathematics,, Weizmann Institute of Science

Dissertation topic: Combinatorial Construction of Probabilistic Proof Systems



### Moshe Mishali

PhD student of Prof. Yonina Eldar, Faculty of Electrical Engineering, Technion-Israel Institute of Technology

Dissertation topic: Compressive Processing of Analog Signals



### Uri Roll

PhD student of Prof. Lewi Stone , Department of Zoology, Tel-Aviv University

Dissertation topic: Spatial Perspectives of Epidemiological and Ecological Problems



### Sivan Sabato

PhD student of Prof. Naftali Tishby, School of Computer Science and Engineering, The Hebrew University of Jerusalem.

Dissertation topic: Supervised Learning with Partial Information



### Efrat Shema

PhD student of Prof. Moshe Oren, Department of Molecular Cell Biology, Weizmann Institute of Science

Dissertation topic: RNF20 as a Novel Tumor Suppressor: Exploring its Roles in Transcriptional Regulation, Formation and Progression of Cancer, Senescence and Development



### **Keren Censor**

PhD student of Prof. Hagit Attiya, Computer Science Department,  
Technion-Israel Institute of Technology

Dissertation topic: Probabilistic Methods in Distributed Computing



### **Emanuele Dalla Torre**

PhD Student of Dr. Ehud Altman, Department of Condensed Matter Physics, Weizmann  
Institute of Science

Dissertation topic: Strongly Correlated States in Ultra-cold Atoms



### **Noam Gross**

PhD Student of Prof. Lev Khaykovich, Department of Physics, Bar-Ilan University

Dissertation topic: Nonlinear Dynamics and Interactions of Bright Matter-wave  
Solitons in a Bose-Einstein Condensate.



### **Ishay Haviv**

PhD Student of Prof. Oded Regev, School of Computer Science, Tel-Aviv University

Dissertation topic: Combinatorics and Theoretical Aspects of Computer Sciences;  
Complexity of Lattice Problems



### **Amir Ingber**

PhD Student of Prof. Meir Feder, School of Electrical Engineering, Tel-Aviv University

Dissertation topic: Coding Methods and Bounds for the Bandwidth Limited Regime



### **Mor Mordechai Peretz**

PhD Student of Prof. Shmuel Ben-Yaakov, Department of Electrical & Computer  
Engineering, Ben-Gurion University of the Negev

Dissertation topic: Time Domain Design of Digital Controllers for PWM Converters



### Michael Orlov

PhD Student of Prof. Moshe Sipper, The Department of Computer Science,  
Ben-Gurion University of the Negev

Dissertation topic: Evolutionary Computation



### Eran Segev

PhD Student of Prof. Eyal Buks, Faculty of Electrical Engineering, Technion-Israel  
Institute of Technology

Dissertation topic: Back-Reaction Cooling and Quantum Phenomena in  
Nanomechanical Resonators



### Gil Segev

PhD Student of Prof. Moni Naor, Department of Computer Science and Applied  
Mathematics, Weizmann Institute of Science

Dissertation topic: The Complexity of Resilient Sketches



### Reut Shema

PhD Student of Prof. Yadin Dudai, Department of Neurobiology,  
Weizmann Institute of Science

Dissertation topic: The Role of PKMzeta in Long Term Memory Storage in the Rat Brain

## ADAMS FIELD TRIP TO THE GOLAN HEIGHTS

May 2018



Lt. Col. Sarit Zehavi



Adams Fellows on Mount Shifon, overlooking a famous battleground  
of the Yom Kippur War

## ADAMS Fellows 2007-2008



### Avraham Ben-Aroya

PhD student of Prof. Oded Regev and Prof. Amnon Ta-Shma,  
School of Computer Science, Tel-Aviv University

Dissertation topic: Quantum Computation and Quantum Information



### Shai Carmi

PhD student of Prof. Shlomo Havlin, Department of Physics, Bar-Ilan University

Dissertation topic: Complex Networks: Theory and Applications



### Chen Davidovich

PhD student of Prof. Ada Yonath, Department of Structural Biology,  
Weizmann Institute of Science

Dissertation topic: Ribosome Structure and Function



### Shahar Dobzinski

PhD student of Prof. Noam Nisan, School of Computer Science and Engineering,  
The Hebrew University of Jerusalem

Dissertation topic: The Power of Approximations in Mechanism Design



### Moshe Goldstein

PhD student of Prof. Richard Berkovits, Department of Physics, Bar-Ilan University

Dissertation topic: Interference Effects in Interacting Mesoscopic Systems



### Amir Goren

PhD student of Prof. Gil Ast, Department of Human Molecular Genetics and  
Biochemistry, Tel-Aviv University

Dissertation topic: Inferring Regulatory Elements of Splicing Using Comparative  
Genomics



### Dan Hermelin

PhD student of Prof. Gad M. Landau, Department of Computer Science,  
University of Haifa

Dissertation topic: Algorithmic Challenges in RNA Comparative Analysis



### Yoav Lahini

PhD student of Prof. Yaron Silberberg, Faculty of Physics,  
Weizmann Institute of Science

Dissertation topic: Disordered Nonlinear Systems



### Guy Ron

PhD student of Prof. Eliezer Piasetzky, Department of Physics, Tel-Aviv University

Dissertation topic: Measurement of the Proton Elastic Form Factors at Low Q<sup>2</sup>



### Avraham Saig

PhD student of Prof. Ehud Ahissar and Dr. Amos Arieli, Department of Neurobiology,  
Weizmann Institute of Science

Dissertation topic: Guiding Principles for Sensory Substitution: From Vision to Touch



### Alexander Sodin

PhD student of Prof. Vitali Milman, School of Mathematical Sciences,  
Tel-Aviv University

Dissertation topic: Probabilistic Methods in Asymptotic Geometric Analysis



### **Haim Beidenkopf**

PhD student of Prof. Eli Zeldov, Faculty of Physics, Weizmann Institute of Science  
Dissertation topic: Vortex Thermodynamics in High-Temperature Superconductors



### **Liat Benmoyal Segal**

PhD student of Prof. Hermona Soreq, Department of Biological Chemistry, and Professor Hagai Bergman, Physiology, The Hebrew University of Jerusalem  
Dissertation topic: The Role of the Cholinergic System in the Pathogenesis of Parkinson's Disease



### **Yael Elbaz**

PhD student of Prof. Shimon Schuldiner, Department of Biological Chemistry, The Hebrew University of Jerusalem  
Dissertation topic: Structure-Function Study of Multidrug Transporters



### **Olga Khersonsky**

PhD student of Prof. Dan Tawfik, Faculty of Chemistry, Weizmann Institute  
Dissertation topic: Mechanistic Enzymology: From Classical Tools to Directed Evolution



### **Dana Moshkovitz**

PhD student of Prof. Ran Raz, Faculty of Mathematics and Computer Science, Weizmann Institute  
Dissertation topic: Probabilistically Checkable Proofs



### **Ariel Procaccia**

PhD student of Prof. Jeffrey S. Rosenschein, School of Computer Science and Engineering, The Hebrew University of Jerusalem  
Dissertation topic: The Theoretical Foundation of Multi-agent Systems (MAS)



### Carmel Rotschild

PhD student of Prof. Moti Segev, Physics Department,  
Technion-Israel Institute of Technology

Dissertation topic: Soliton Interactions in Nonlocal Nonlinear Media



### Ofer Shayevitz

PhD student of Prof. Meir Feder, School of Electrical Engineering, Tel-Aviv University

Dissertation topic: Universal Communications with Feedback



### Amir Shlomai

PhD student of Prof. Yosef Shaul, Faculty of Biochemistry, Weizmann Institute

Dissertation topic: Metabolic Alterations in the Liver and Hepatitis B Virus Gene Expression



### Noam Stern

PhD student of Prof. Ofer Mandelboim, The Lautenberg Center for Immunology and Cancer Research, The Hebrew University of Jerusalem

Dissertation topic: Natural Killer (NK) Cells

## ADAMS FIELD TRIP TO THE GOLAN HEIGHTS

May 2018



Colonel (Res.) Ronnie Kosloff, providing historical military background



At Bental Mountain



**Yael Eshed-Eisenbach**

PhD student of Prof. Elinor Peles, Department of Molecular Cell Biology, Weizmann Institute of Science

Dissertation topic: Neuro-Glial Interactions



**Nathan Keller**

PhD student of Prof. Gil Kalai, Einstein Institute of Mathematics, The Hebrew University of Jerusalem

Dissertation topic: Probabilistic Combinatorics and its Relations with Harmonic Analysis



**Tal Lev-Ami**

PhD student of Prof. Shmuel Sagiv, School of Computer Science, Tel-Aviv University

Dissertation topic: Efficient Transformers for the Verification of Heap Manipulating Programs



**Raz Palty**

PhD student of Dr. Israel Sekler, Department of Physiology and Cell Biology Ben-Gurion University of the Negev

Dissertation topic: Characterization of the Novel Exchanger NCLX – a FLJ2233 Gene Product



**Sharon Schwartz**

PhD student of Prof. Moti Segev, Physics Department, Technion-Israel Institute of Technology

Dissertation topic: Nonlinear Optics in CZT:V

