



כנס אדמס תשפ"ג
ADAMS CONFERENCE 2023

פברואר 2023 February



Adams Conference

Monday, February 27, 2023

כנס אדמס

יום שני, ו' באדר תשפ"ג

	Moderator Prof. Moshe Oren , Academy Member, Chair of the Adams Fellowships Program	מנחה פרופ' משה אורן יו"ר ועדת תוכנית מלגות אדמס
	Morning Session	מושב בוקר
9:05–9:40	Prof. David Harel President of the Academy Opening Remarks, Computational Prosody: How to Understand the "Music" of Speech	פרופ' דוד הרצל נשיא האקדמיה דברי פתיחה, פרוזודיה חישובית: כיצד להבין את ה"מוסיקה" של הדיבור
9:40–10:10	Dr. Efrat Shema & Prof. Guy Ron Adams Alumni, on Multi-Disciplinary Science Collaboration Among Adams Alumni	ד"ר אפרת שמע ופרופ' גיא רון בוגרי אדמס, על שיתוף פעולה מדעי מולטי-דיסציפלינרי בין בוגרי תוכנית אדמס
10:10–11:00	Coffee Break	הפסקת קפה
11:00–12:30	Adams Fellows Class of 2021-2022: Noy Nehmad , Chemistry, Ben-Gurion University Noam Harel , Life Sciences, Tel Aviv University Eyal Weiss , Computer Science, Bar-Ilan University Inbal Weisbord , Chemical Engineering, The Technion Yoav Zigdon , Physics, Ben-Gurion University Yonatan Hamo , Chemistry, Weizmann Institute	מלגאי אדמס מחזור 2021–2022: נוי ברכה נחמד , כימיה, אוניברסיטת בן-גוריון בנגב נועם הרצל , מדעי החיים, אוניברסיטת תל אביב איל וייס , מדעי המחשב, אוניברסיטת בר-אילן ענבל ויסבורד , הנדסת כימיה, הטכניון יואב זיגדון , פיסיקה, אוניברסיטת בן-גוריון בנגב יונתן חמו , כימיה, מכון ויצמן למדע
12:30–13:00	Prof. Nili Cohen , Former Academy President, Professor of Law, Tel Aviv University, on Substance and Ceremony in Law and Literature	פרופ' נילי כהן נשיאת האקדמיה הקודמת, פרופסור למשפטים, אוניברסיטת תל אביב, על מהות וטקס במשפט וספרות
13:00–14:30	Lunch	הפסקת צהריים
	Afternoon Session	מושב אחה"צ
14:30–15:00	Prof. Yossi Loya , Academy Member, Professor Emeritus of Marine Ecology, Tel Aviv University, on The Impact of Global Climate Change on the Biodiversity of Coral Reefs	פרופ' יוסי לוי חבר אקדמיה, פרופסור אמריטוס לאקולוגיה ימית, אוניברסיטת תל אביב על השפעת שינוי אקלים גלובלי על ביוגיוון של אלמוגים
15:00–16:30	Adams Fellows Class of 2022-2023: Matan Eilat , Mathematics, Weizmann Institute Nitzan Aframian , Life Sciences, Tel Aviv University Amir Burshtein , Physics, Tel Aviv University Omer Granek , Physics, The Technion Shir Cohen , Computer Science, The Technion Eliana Steinberg , Pharmacy, Hebrew University	מלגאי אדמס מחזור 2022–2023: מתן אילת , מתמטיקה, מכון ויצמן למדע ניצן אפרמיאן , מדעי החיים, אוניברסיטת תל אביב אמיר בורשטין , פיסיקה, אוניברסיטת תל אביב עומר גרנק , פיסיקה, הטכניון שיר כהן , מדעי המחשב, הטכניון אליענה שטינברג , רוקחות, האוניברסיטה העברית
16:30	Prof. Moshe Oren Closing Remarks	פרופ' משה אורן דברי סיום



Greetings from

Prof. Moshe Oren

Academy Member;
Chair, Adams Fellowships Steering
and Approval Committee

Warm greetings to all our Adams fellows, Adams alumni, Adams committee members, Academy President Prof. David Harel, Academy members and dear members of the Adams family.

Marcel Adams, who generously established the Adams Fellowships Program, was born in 1920 and lived in Europe through the years of the second world war and the Holocaust. He never had a chance to complete his formal education, but this only increased his excitement for learning and his admiration for human knowledge. As a strong supporter of Israel, it was therefore only natural for him to decide that he should invest in advancing knowledge in this country. And what better way is there than investing in our future generation of scientific leaders?

This entrusts you, Adams fellows, with a special mission: you are expected not only to advance your own career, but also to fulfil a dream – Marcel’s dream of making Israel a hub of scientific excellence and a powerhouse of human knowledge.

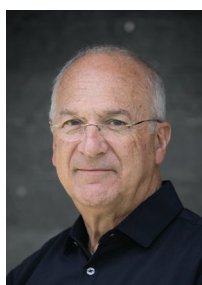


Adams Seminar, 2022

These days are not easy days for our country. As much as we may wish to dedicate our full attention to our research and to intellectual challenges, it is hard to stay disconnected from what is going on outside our laboratory or university. There is a growing amount of mistrust, mutual disrespect and even hatred in the air, and a growing concern that much of what has been achieved here is in danger of being destroyed. As scientists, it is our duty to place facts above emotions, to adhere to the truth and also to listen to each other and respect each other even when we strongly disagree. We should try hard to set a personal example for responsible citizenship, and never give up on our efforts to make this country a better place to live.

The Adams committee makes every effort to ensure that we pick the best of the best. You, in turn, should never let your curiosity and your passion for knowledge fade out. And when your time comes to be mentors to the next generation of students, please make sure that you keep their passion as intense as yours, and that they remain driven by curiosity and not by convenience. Indeed, we are seeing more and more new Adams fellows whose mentors were Adams fellows at their time. As committee members, this gives us great joy. I hope that whoever heads the committee ten or twenty years from now, will be greeting your students. In the meantime, I would like to wish you much fulfilment in your scientific endeavors and success in moving to the next stages of your careers.





Prof. David Harel

President of the Israel Academy
of Sciences and Humanities
Dept. of Computer Science and Applied Mathematics,
Weizmann Institute of Science

Prof. David Harel is a professor of computer science at the Weizmann Institute of Science and is currently the President of the Israel Academy of Sciences and Humanities. He has been at Weizmann since 1980, serving for several years as department head and then as dean of the faculty. After receiving his PhD from MIT he spent two years at IBM Research, and sabbaticals at Carnegie-Mellon University, Cornell University and the University of Edinburgh. He was an adjunct professor at the Open University of Israel, and co-founder of I-Logix, Inc., which was acquired by IBM in 2008.

He previously worked in theoretical computer science (computability, logic, database theory, and automata theory), and later became involved in software and systems engineering, visual languages, biological modelling, odor communication, and the analysis of prosody. He invented the language of Statecharts and co-invented live sequence charts, and was part of the team that designed the tools Statemate, Rhapsody the Play-Engine, and PlayGo. Some of his writing is intended for a general audience; such as *Algorithmics: The Spirit of Computing and Computers Ltd.: What They Really Can't Do*.

Prof. Harel's many awards include the ACM Karlstrom Outstanding Educator Award, the Stevens Award, the Israel Prize, the ACM SIGSOFT Outstanding Research Award, the ACM Software System Award, the Emet Prize, the ABZ Platinum Gold Medal from ETH Zurich and the IEEE Harlan Mills Award. He has received honorary degrees in France, Italy, the Netherlands and Israel. He is a Fellow of ACM, IEEE, AAAS, and EATCS, and a member or foreign member of several additional Academies including Academia Europaea, the American Academy of Arts and Sciences, the US National Academy of Engineering, the US National Academy of Sciences, and the Chinese Academy of Sciences. He is also a Fellow of the Royal Society (FRS).



Dr. Efrat Shema

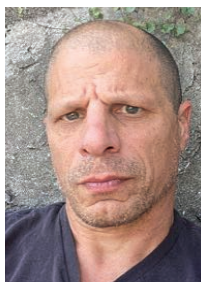
Dept. of Immunology and Regenerative Biology,
Weizmann Institute of Science

Born in Israel, Dr. Efrat Shema graduated with BSc in life sciences at the Hebrew University of Jerusalem in 2005. She completed her MSc (2007) and PhD (2012) in molecular biology at the Weizmann Institute of Science under the mentorship of Prof. Moshe Oren. Following her PhD, she conducted postdoctoral research at Massachusetts General Hospital and Harvard Medical School as part of the Broad Institute of MIT and Harvard. In August 2017, she joined the Weizmann Institute of Science. She is the incumbent of the Lisa and Jeffery Aronin Family Career Development Chair.

In her lab at the Weizmann Institute, Dr. Shema's research passion is to understand human genome regulation by the development and application of novel single-molecule and single-cell technologies to visualize the epigenome. Her goal is to reveal basic mechanisms of epigenetic deregulation in cancer, identify epigenetic vulnerabilities of cancer cells, and pave the way to new therapeutic opportunities that would benefit patients.

Dr. Shema received the UNESCO-L'OREAL national award for young women in life sciences and a fellowship from the Israel National Postdoctoral Award Program for Advancing Women in Science. Since starting her lab at Weizmann, Dr. Shema secured several prestigious grants and awards, such as the European Research Council Grant for Young Investigators (ERC), the Minerva Foundation award, and the Israel Science Foundation (ISF) grant. She also secured the distinguished European Research Council Proof of Concept grant (ERC-PoC-2020) for the development and commercialization of a novel liquid biopsy diagnostic technology, recently published by her lab in nature biotechnology. Dr. Shema authored numerous publications in notable journals, with over 2,500 citations.

Dr. Shema has a genetically identical twin sister, which explains her life passion in understanding genetic vs. epigenetic drivers in dictating cell-fate decisions.



Prof. Guy Ron

The Racah Institute of Physics,
The Hebrew University of Jerusalem

Prof. Guy Ron graduated with a BSc in physics from Tel Aviv University in 2003 which he completed during his army service. During his BSc he took part in an internship at a national lab in the US and continued to work on projects taking place at that lab during his studies. He then returned to the army for an additional few years. During his PhD studies he worked on electron scattering experiments under the supervision of Prof. Eli Piasetzky, and received his PhD in 2009. After a short stay as a postdoctoral researcher at the Weizmann Institute (with Profs. Micha Hass and Nir Davidson) he performed his postdoctoral research at the Lawrence Berkeley National Lab in Berkeley, CA, with Prof. Stuart Freedman, working on trapping experiments for radioactive atoms and ions.

In 2011, Prof. Ron returned to Israel and joined the faculty at the Hebrew University where he is currently a full professor and holds the Cooper Chair of Experimental Nuclear Physics. Prof. Ron is also an adjunct research professor at The George Washington University, Washington DC.

Prof. Ron works on several areas of research, among which are: beyond standard model physics using trapped atoms and ions, lepton scattering for charge radii measurements, material science using positrons, and biostatistics mostly in the field of cancer epigenetics.

Prof. Ron has mentored over 30 students and postdocs; many of them currently holding faculty positions at various universities and research labs.



Adams Conference, 2022



Prof. Nili Cohen

Former Academy President,
Professor of Law, Tel Aviv University

Nili Cohen, Former President of the Israel Academy of Sciences and Humanities and Israel Prize laureate, received her LLB *magna cum laude*, LLM *summa cum laude*, and PhD from Tel Aviv University. As a student, she was the co-founding editor of Tel Aviv University Law Review. She is the author of *Interference with Contractual Relations, Inducing Breach of Contract* and co-author of *Contracts A, B, C, D*. She edited (with Ewan McKendrick) *Comparative Remedies for Breach of Contract* and contributed a chapter to the book. She was awarded the Sussman Prize in 1986 and again in 1991, the Zeltner Prize in 1989, the Minkoff Prize for Excellence in Law in 2002, and the Rector Prize for Excellence in Teaching in 2003/4, 2004/5 and 2014/5. She served as Vice-Rector (1994-1997) and subsequently as Rector of Tel Aviv University (1997-2001).

Prof. Cohen is a member of Academia Europaea and the American Philosophical Society, an Honorary Professor at the University of Buenos Aires, and an Honorary Doctor at both Haifa University and Ben-Gurion University. She was a member of the Committee of the Codification of Israeli Law. She is an Associate Member of the International Academy for Comparative Law and a member of the American Law Institute. Prof. Cohen was instrumental in establishing the relations between TAU and Venice International University and served as a member of its Academic Council.



Left: Mr. Sylvan Adams, benefactor of the Adams Fellowships Program

Right: Poster presentation at the Adams Conference, 2022



Prof. Yossi Loya
Academy Member,
Professor Emeritus of Marine Ecology,
Tel Aviv University

Yossi Loya is a Professor Emeritus at Tel Aviv University (TAU), where he has been a faculty member at the School of Zoology for over 40 years. He completed his BSc in Biology and MSc in Zoology in 1967 at TAU. In 1971 he completed his PhD at SUNY Stony Brook, USA and a post-doctorate at the Woods-Hole Oceanographic Institute. In 1972 he returned to Israel and was appointed lecturer at Tel Aviv University. In 1985 he became a full professor.

He has served as Chair of the Zoology Department (1989-90), Dean of the Faculty of Life Sciences (1990-95) and Founder and Chairman of the Porter School for Environmental Studies (1996-2000). In 1996, he was appointed the Raynor Chair for Environmental Conservation Research. In 2009, he was elected member of the Israel National Academy of Sciences and Humanities.

Prof. Loya served in many national and international scientific committees and professional tasks such as Founding Co-Editor of the journal *Coral Reefs* (1982-1986), Co-Chair of the GEF/IOC/World Bank Working Group on Coral Bleaching (2004- 2011) and Chair of the Scientific Committee of the Australian Research Council (ARC) Centre of Excellence for Coral Reef Studies (2006-2014). Under the auspices of the Israel National Academy of Sciences, he is Chair of the National Biological Collections (since 2012), Chair of the Committee of the Batsheva de Rothschild Fund for the Advancement of Science in Israel (since 2015) and member of the recently established Academy Climate Change Committee.



Award ceremony at the Adams Seminar, 2022

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THE ISRAEL ACADEMY OF SCIENCES AND HUMANITIES



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