Department of Statistics and Operations Research

School of Mathematical Sciences

Eilon SOLAN, Ph.D. Tel Aviv University

#### **CURRICULUM VITAE**

Email: eilons@tauex.tau.ac.il

#### **EDUCATION**

1986-1989 B.Sc., Mathematics and Computer Sciences (summa cum laude)

The Hebrew University of Jerusalem

Date of award: 1989

1991-1993 M.Sc., Mathematics (summa cum laude)

> Tel Aviv University Date of award: 1993

Title of Masters Thesis: Discounted Stochastic Games

Name of Supervisor: Professor Ehud Lehrer

1994-1998 Ph.D., Mathematics (summa cum laude)

The Hebrew University of Jerusalem

Date of award: 1998

Title of Doctoral Dissertation: Stochastic Games Name of Supervisor: Professor Abraham Neyman

#### ACADEMIC AND PROFESSIONAL EXPERIENCE

1989-1996	Research and Development in I.D.F.
1996-1997	Teaching Assistant, The Hebrew University of Jerusalem, Israel.
1996-1997	Mathematical Consultant, Israeli Ministry of Defense.
1997-1998	Founder and Consultant of Perfecto Technologies, a start-up company working on network security.
1998-2001	Assistant Professor, MEDS Department, Kellogg Graduate School of Management, Northwestern University, USA.
2000-2003	Senior Lecturer, Department of Statistics and Operations Research, The School of Mathematical Sciences, Tel Aviv University, Israel.

2001-2004	Associate Professor, MEDS Department, Kellogg School of Management, Northwestern University, USA.
2003-2006	Associate Professor, Department of Statistics and Operations Research, The School of Mathematical Sciences, Tel Aviv University, Israel.
2006-2008	Director of the Mathematical Research Institute, Tel Aviv University.
2006-present	Professor, Department of Statistics and Operations Research, The School of Mathematical Sciences, Tel Aviv University, Israel.
2010-2011	Department Chair, Department of Statistics and Operations Research, School of Mathematical Sciences, Tel Aviv University.
2013-2019	Director of the training program of the Israeli team to the International Mathematics Olympiad.
2013-2020	Director of the Beno Arbel Program for Gifted Young Students, School of Mathematical Sciences, Tel Aviv University.
2016-present	Director of the "Good to Know" project at Tel Aviv University.

## ORGANIZATION OF SCIENTIFIC MEETINGS

2004	Co-organizer. The first Israel Conference on Game Theory, Tel Aviv University, Israel.
2007	Organizing committee. GAMES-COMM 2007. Nantes, France.
2007	Program Committee. Conference in honor of Ehud Kalai. Jerusalem, Israel.
2008	Technical Program committee. Wi-OPT 2008. Berlin, Germany.
2008	Technical Program committee. ValueTools 2008. Athens, Greece.
2010	Co-organizer. Workshop on "Stochastic Methods in Game Theory", Erice, Sicily, Italy.
2010	Co-organizer. The Game Theory Conference, SUNY Stony Brook, Stony Brook, NY, USA.
2011	Co-organizer. An ISF Research Workshop at Tel Aviv, Tel Aviv University, Israel.
2012	Co-organizer. The fourth Israel Game Theory Conference at Tel Aviv, Tel Aviv University, Israel.
2013	Co-organizer. The fifth Israel Game Theory Conference at Tel Aviv, Tel Aviv University, Israel.
2014	Co-organizer. The sixth Israel Game Theory Conference at Tel Aviv, Tel Aviv University, Israel.

2015	Program Committee. 2015 Econometric Society World Congress at Montreal, Canada.
2015	Co-organizer. The seventh Israel Game Theory Conference at Tel Aviv, Tel Aviv University, Israel.
2015	Co-organizer. Conference in honor of Abraham Neyman, Hebrew University of Jerusalem, Israel.
2015	Co-organizer. Conference in honor of Sergiu Hart, Hebrew University of Jerusalem, Israel.
2016	Co-organizer. The eights Israel Game Theory Conference at Tel Aviv, Tel Aviv University, Israel.
2016	Co-organizer. NETGCOOP 2016, Avignon, France.
2017	Co-organizer. The ISF Research Workshop "Games and Economic Behavior", Tel Aviv University, Israel.
2018	Co-organizer. The ISF Research Workshop "Beliefs and Economic Behavior", Tel Aviv University, Israel.
2019	Co-organizer. Workshop "Recent Advanced in Stochastic Games", Budapest University of Technology and Economics, Hungary.
2020	Co-organizer. Workshop "Dynamics and Information", Tel Aviv University, Israel.
2020	Co-organizer. Workshop "Stody+games, the Meeting on Games, Stochastics, and Dynamics", Budapest University of Technology and Economics, Hungary.
2022	Scientific Committee. Satellite to ICM2022 Conference "Game Theory and Applications", St. Petersburg, Russia.

# ACTIVE PARTICIPATION IN SCIENTIFIC MEETINGS

Starred entries are for invited talks.

1997	" $n$ -Players Stochastic Games", The Israeli Meeting of Mathematicians, Bar Ilan University.
1997	"3-Player Absorbing Games", The International Conference on Game Theory, Stony-Brook, NY.
1997*	"3-Player Absorbing Games", Workshop on Non-Cooperative Games and Stochastic Games, Chicago, Illinois.
1999*	"General Tools Perturbations of Markov Chains" and "Uniform Equilibrium: More Than Two Players", The NATO Advanced Studies Institute on stochastic games at Stony-Brook.

1999*	"Stochastic Games with More than Two Players", Plenary lecturer at the International Conference on Game Theory, Stony-Brook.
2000	"Randomization and Simplification", The International Conference on Game Theory, Stony-Brook.
2001*	"Blackwell Optimality in Markov Decision Processes with Partial Information", Conference of the Israeli Society of Operations Research, Israel.
2002*	"Stochastic Games - a Survey" and "Stopping Games - a Survey", Workshop "Stochastic Methods in Decision and Game Theory", Erice, Sicily.
2004	"A Stochastic Variation of Ramsey's Theorem with an Application to Stopping Games", Conference of the Israeli Mathematical Union.
2004*	"Timing Games with Informational Externalities", Conference of the Operations Research Society in Israel.
2005*	"Timing Games - a Survey", Mini-conference on "Competition with Delays (Queueing Games)", Washington University in St. Louis, MI.
2006	"Markov Games with Incomplete Information on One Side", The second Israeli Game Theory Conference in Ra'anana.
2006	"Social Learning: What Does my Neighbor Think of Me?", Conference of the Israeli Mathematical Union.
2006	"The Effects of Anti-Spam Methods on Spam Mail", CEAS-2006. July 2006. Mountain View, California.
2007	"Social Networks: Convergence of Behavior", TARK-2007. June 2007. Brussels, Belgium.
2007	"Internal No-Regret with Imperfect Monitoring", Conference in Honor of Ehud Kalai. Jerusalem.
2008	"Internal No-Regret with Imperfect Monitoring", The International Conference on Game Theory, Stony-Brook, NY.
2008	"Bandit Problems", Workshop on Strategic Information Acquisition, Munich, Germany.
2008*	"Bandit Problems", Workshop on Differential Games and Stochastic Games, Roscoff, France.
2009	"The Averaging Principle", The Second Israeli-Turkish Murat Memorial Conference on Economic Theory, Jerusalem.
2011*	"Attainability in Repeated Games with Vector Payoffs", Game Theory Toulouse 2011, Toulouse, France.

2013*	"Randomized Stopping Times in Stopping Problems and Stopping Games", Workshop on "Stochastic Dynamic Games", Bonn, Germany.
2013*	"Social Learning and the Emergence of Consensus", Workshop on "Advances in Experimentation", Paris, France.
2013*	"On the Optimal Amount of Experimentation in Sequential Decision Problems", Workshop on "Likelihood and Simplicity", Bar Ilan University, Israel.
2014*	"Stopping Games", ORSIS 2014, Tel Aviv.
2014*	"Stopping Games with Termination Rates", Second Joint International Meeting of the Israel Mathematical Union and the American Mathematical Society, Bar Ilan University.
2014*	"Stopping Games with Termination Rates", MAGTA 2014, Roscoff, France.
2014*	"Stochastic Games", 16th Symposium of the ISDG, Amsterdam, Netherlands.
2015	"Acceptable Strategies in Stochastic Games", Conference in honor of Abraham Neyman, Hebrew University of Jerusalem, Israel.
2015*	"The Value Functions of Markov Decision Processes", Stochastic Methods in Game Theory, Singapore.
2016*	"The Modified Stochastic Game", GEL 2016 - Geometry, Evolution and Learning in Games, Luchon, France.
2016*	"Multiplayer Stochastic Games: Techniques, Results, and Open Problems", International Conference on Game Theory and Management, St. Petersburg, Russia.
2016*	"Multiplayer Stochastic Games: Techniques, Results, and Open Problems", semi-plenary talk, World Congress of the Game Theory Society, Maastricht, Netherlands.
2017*	"Sunspot Equilibrium in Quitting Games", Workshop "Stochastic Methods in Decision and Game Theory", Erice, Sicily.
2018	"Sunspot Equilibrium in General Quitting Games", The 10'th Annual Conference of the Israeli Chapter of the Game Theory Society, IDC, Herzliya, Israel.
2018*	"Quitting Games - a Survey", The Annual Meeting of the Israeli Mathematical Union, Technion, Israel.
2018	"Jointly Controlled Lotteries with Biassed Coins", The ISF Research Workshop "Beliefs and Economic Behavior", Tel Aviv University, Israel.

2019*	"A Survey on Stopping Games", SING15, University of Turku, Finland.
2019*	"Dynamic Inspection with Resource Constraints", Nanjing International Conference on Game Theory, Nanjing, China.
2019*	"Absorbing Games", Conference in Honor of the 80'th Birthday of Shmuel Zamir, Hebrew University of Jerusalem, Israel.

# GRANTS AND AWARDS

1988, 1989	Provost Award for Distinguished Students, The Hebrew University of Jerusalem
1993	The Bollotin Award for distinguished research student, Tel Aviv University
1999	The Kennedy-Leigh Award for an outstanding Ph.D. dissertation, The Hebrew University of Jerusalem
2001	Visiting Professor, Laboratoire d'Econometrie, Ecole Polytechnique.
2001-2002	Arc en Ciel / Keshet program, Israel - France bi-national scientific cooperation. Project "competitive Markov decision processes with partial observation". $\$5,000 \times 2 \text{ years} \times 2 \text{ countries}$ . PI at the Israeli side: Eilon Solan. No other researchers at the Israeli side.
2001-2004	Israel Science Foundation. Project "value and equilibrium in stochastic games", \$27,000 $\times$ 3 years. No other researcher.
2005-2007	Israel - France bi-national scientific cooperation. Project "Strategic use of information in dynamic games". $\$5,000 \times 2$ years $\times$ 2 countries. PI at the Israeli side: Eilon Solan. One additional researcher and 4 students at the Israeli side.
2005-2006	Outstanding Lecturer, Tel Aviv University.
2006	Visiting Professor, Laboratoire d'Econometrie, Ecole Polytechnique.
2009-2013	Israel Science Foundation. Project "Equilibrium in dynamic games", $\$29,000\times 4$ years. No other researcher.
2011	Award for being among the top 100 lecturers, Tel Aviv University.
2012	Outstanding Lecturer, Tel Aviv University.
2011-2013	Google Inter-university center for Electronic Markets and Auctions, Co-PI, $\$30,000\times3$ years $\times$ 15 researchers.
2014	Award for being among the top 100 lecturers, Tel Aviv University.
2013-2017	Israel Science Foundation. Project "Repeated games with scalar and vector payoffs", \$28,000 $\times$ 4 years. No other researcher.

2016	Semi-plenary	talk,	World	Congress	of the	Game	Theory	Society,
	Maastricht N	ether	lands					

2017-2021 Israel Science Foundation. Project "Uniform Equilibrium in Stochas-

tic Games", 215,000 NIS  $\times$  4 years. No other researcher.

2019-present Fellow of the Game Theory Society.

2020-present The Nathan and Lily Silver Chair in Stochastic Models.

## SERVICE TO THE COMMUNITY

2002-2004	Mathematics of Operations Research, Associate Editor.
2005-2010	Mathematics of Operations Research, Area Editor for Game Theory.
2008-present	International Journal of Game Theory, Associate Editor.
2009-2018	Dynamic Games and Applications, Associate Editor.
2010-2018	Mathematics of Operations Research, Associate Editor.
2010-2013	Journal of Mathematical Economics, Associate Editor.
2012-2016	Executive Officer of the Israeli Chapter of the Game Theory Society.
2013	Co-editor of a special issue of Dynamic Games and Applications in honor of Shapley's paper "Stochastic Games".
2013-2015	Member of the Council of the Game Theory Society.
2013-present	Games and Economic Behavior, Associate Editor.
2014-present	Steering Committee. NetGCOOP.
2015	Co-editor of a special issue of International Journal of Game Theory in honor of Prof. Abraham Neyman.
2016	Member of a committee to select a Professor at Université Paris 6 (position 26PR3236(4361)).
2017-present	Centre for Mathematical Research in Economics and Finance (CM-REF) at the University of Manchester, International Advisory Board.
2017-2021	Cost Action CA16228: Management Committee member and Work Group Co-Leader.
2018-present	Member of the Steering Committee of the Forum of Cities of Excellence.
2018-present	Member of the Academic Board, Israel Math Museum Initiative.
2018-2019	Member of the Committee of Mathematics at the Ministry of Education.
2018-2019	Member of the Subcommittee for Gifted Students in Mathematics of the Committee of Mathematics at the Ministry of Education.

2020- Member of the Steering Committee of the "First Steps in Science"

project, Tel Aviv University.

#### **PATENTS**

2001 Method and system for maintaining restricted operating environ-

ments for application programs or operating systems, with Gil Raanan

and Eran Reshef. US Patent 6199181.

2001 Method and system for protecting operations of trusted internal net-

works, with Gil Raanan and Eran Reshef. US Patent 6321337, Eu-

ropean Patent 1118056.

#### M.Sc. STUDENTS SUPERVISED

2001	Eran Shmaya (Professor, State University of New York at Stony Brook)
2002	Ori Gurel-Gurevich (Senior Lecturer, Hebrew University of Jerusalem)
2004-2006	Danny Tweig
2005-2006	Ayala Mashiah
2005-2008	Olga Spivak
2006-2008	Asaf Cohen (Assistant Professor, University of Michigan)
2009-2011	Cy Maor (Senior Lecturer, Hebrew University of Jerusalem)
2012	Barak Shani (Ph.D. student, University of Auckland, New Zealand)
2015-2020	Avishay Weinbaum
2016-2017	Oren Yuval (Ph.D. student, Tel Aviv University)
2016-2019	Orin Munk (Ph.D. student, Tel Aviv University)
2017-2020	Navot Yaari

#### Ph.D. STUDENTS SUPERVISED

2006-2010	Ayala Mashiah
2006-2010	Yuval Heller (Associate Professor, Bar Ilan University; Associate Member, Nuffield College, Oxford University)
2008-2013	Asaf Cohen (Assistant Professor, University of Michigan)
2019-present	Orin Munk

## POST DOCTORATE STUDENTS SUPERVISED

Ron Peretz (Senior Lecturer, Bar Ilan University, Israel)
Omer Ehdan (Senior Lecturer, University of Manchester, UK)
Ziv Hellman (Senior Lecturer, Bar Ilan University, Israel)
Xavier Venel (Maître de Conférence, Université Paris 1, France)
Gilad Bavli (Researcher, Bar Ilan University, Israel)
Gaëtan Fournier (Maître de Conférence, Marseille School of Economics, France)
Ilan Nehama (Post Doctorate Fellow, Bar Ilan University, Israel)
Chang Zhao (Assistant Professor, Nanjing Audit University, China)
Tao Wang (Assistant Professor, Nanjing Audit University, China)
Anna Zseleva (Assistant Professor, Maastricht University, Netherlands)
Siyu Ma (Assistant Professor, University of Political Sciences and Law, Beijing, China)
Ilia Krasikov (Assistant Professor, National Research University Higher School of Economics, Moscow, Russia)

## EXAMINER OF DOCTORAL THESIS

2011	Antoine Salomon, HEC, France.
2012	Alejandro Barrachina Monfort, Universitat De Valencia, Spain.
2012	Xavier Venel, Université Toulouse 1, France.
2013	Omer Tamuz, Weitzmann Institure.
2013	Andrey Bernstein, Technion.
2014	Kirill Dyagilev, Technion.
2015	Xiaoxi Li, Université Paris 6.
2015	Gaëtan Fournier, Université Paris 1.

# **EXAMINER OF HABILITATION**

2017 Guillaume Vigeral, Université Paris Dauphine.

## ADVISOR TO HIGHSCHOOL STUDENTS IN FINAL MATH PROJECT

2014

Hadar Kaish. Title of final project: "Game Theory and the Ultimatum Game" (in Hebrew).

Date: November 2020