Curriculum Vitae and List of Publications

PROF. MINA TEICHER

Emmy Noether Research Institute for Mathematics and Gonda Brain Research Center Bar-Ilan University, Ramat-Gan, Israel

1. Education

Date	Institute	Field	Degree
1974	Tel-Aviv University	Mathematics	B.Sc., Highest Honors
1976	Tel-Aviv University	Mathematics	M.Sc., Highest Honors
1981	Tel-Aviv University	Mathematics	Ph.D.

Doctoral Thesis: "Factorization of birational morphisms between 4-folds"

Thesis advisor: Prof. Piatetski-Shapiro

2. Research Topics

a. Geometry and Topology

Birational Methods in Algebraic Geometry Topology of Algebraic Surfaces Fundamental Groups Arrangements Braid Groups

b. Neuro-Mathematics

Algebraic-Geometrical Methods in Robotics Compositionality and Synchronization in Neural Activity of Behaving Animals Data Mining and Singularities in Sleeping Phases Voice Recognition Genetic Algorithms and Wavelets in Epilepsy

c. Applied Mathematics and Computer Science

Algebraic-Geometrical Methods in Computer Vision and Electro-optics Braid Group in Cryptography Surface Reconstruction and CAD-CAM Networks and Graphs

d. Math Education

3. Short Term Professorships and Visiting Positions

University/Institute	Date
Institute for Advanced Study, Princeton, USA	1981, 1986, 2007, 2011-2013
Oklahoma State University, USA	1982
Columbia University, New York, USA	1984, 1987, 1988, 2013
Pisa University, Italy	1986, 1990
Kyoto University, Japan	1987
Lahssa University, Tibet	1987
Max Planck Institute, Bonn, Germany	1988, 1998
Columbia University, New York, USA	1988
Academia Dei Lincei, Rome, Italy	1996
Scuola Normale Superiore, Pisa, Italy	1998, 2000
Hong Kong University	2000, 2013
Tata Institute, Bombay, India	2000
Scuola Normale Superiore, Pisa, Italy	1988, 2000
East China Normal University, Shanghai, China	2002, 2011
De-Giorgi Center, Pisa, Italy	2008, 2010
University of Quito, Ecuador	2010
Auckland University, New Zealand	2010, 2011
University of Alberta, Edmonton, Canada	2010, 2011
NYU-Polytechnic School of Engineering, NY	2013- 2016
Tandon School of Engineering, NYU, NY	2016-2017
East China Normal University, Shanghai, China	2017, 2018
NYUAD, Brain Center, Abu Dhabi, UAE	2017, 2018

4. Prizes, Awards, Grants

1973,1974,1975,1976,1977 1976 Delek Foundation Award for Young Researchers 1977 Landau Prize, Research Award for M.Sc. Thesis 1981-1982 Rothschild Postdoctoral Prize 1985-1988 American-Israel Binational Science Foundation Grant 1987-1988 Batsheva de Rothschild Award 1987-1990 Fund for Basic Research, Israel Science Foundation 1989-1992 American-Israel Binational Science Foundation Grant 1993-1996 American-Israel Binational Science Foundation Grant 1994-2000 Internal Research Fund, Bar-Ilan University 1998-2001 INTAS (European Commission Grant) 1999-2002 Excellency Center of the Israel National Science Foundation 1999-2020 Minerva Center 2000-2004 IHP (European Commission) Grant "Algebraic Geometry" 2001 NATO Research Grant 2001 Emmy Noether Prize, Göttingen Germany 2001 Bar-Ilan Gonda Award (waived) 2001-2003 INTAS (European Commission) Grant "Galois Covers" 2002-2004 IHP (European Commission) Grant "Galois Covers" 2002-2005 Excellency Center of the Israel National Science Foundation DIP (Deutsche Israelischen Projecten)	Date	Prize, Award or Grant
1977 Landau Prize, Research Award for M.Sc. Thesis 1981-1982 Rothschild Postdoctoral Prize 1985-1988 American-Israel Binational Science Foundation Grant 1987-1988 Batsheva de Rothschild Award 1987-1990 Fund for Basic Research, Israel Science Foundation 1989-1992 American-Israel Binational Science Foundation Grant 1993-1996 American-Israel Binational Science Foundation Grant 1994-2000 Internal Research Fund, Bar-Ilan University 1998-2001 INTAS (European Commission Grant) 1999-2002 Excellency Center of the Israel National Science Foundation 1999-2020 Minerva Center 2000-2004 IHP (European Commission) Grant "Algebraic Geometry" 2001 Emmy Noether Prize, Göttingen Germany 2001 Emmy Noether Prize, Göttingen Germany 2001 Bar-Ilan Gonda Award (waived) 2001-2003 INTAS (European Commission) Grant "Galois Covers" 2002-2004 IHP (European Commission) Grant "Galois Covers" 2002-2005 Excellency Center of the Israel National Science Foundation	1973,1974,1975,1976,1977	Tel Aviv University
1981-1982Rothschild Postdoctoral Prize1985-1988American-Israel Binational Science Foundation Grant1987-1988Batsheva de Rothschild Award1987-1990Fund for Basic Research, Israel Science Foundation1989-1992American-Israel Binational Science Foundation Grant1993-1996American-Israel Binational Science Foundation Grant1994-2000Internal Research Fund, Bar-Ilan University1998-2001INTAS (European Commission Grant)1999-2002Excellency Center of the Israel National Science Foundation1999-2020Minerva Center2000-2004IHP (European Commission) Grant "Algebraic Geometry"2001Emmy Noether Prize, Göttingen Germany2001Bar-Ilan Gonda Award (waived)2001-2003INTAS (European Commission) Grant "Galois Covers"2002-2004IHP (European Commission) Grant "Galois Covers"2002-2005Excellency Center of the Israel National Science Foundation	1976	Delek Foundation Award for Young Researchers
American-Israel Binational Science Foundation Grant 1987-1988 Batsheva de Rothschild Award 1987-1990 Fund for Basic Research, Israel Science Foundation 1989-1992 American-Israel Binational Science Foundation Grant 1993-1996 American-Israel Binational Science Foundation Grant 1994-2000 Internal Research Fund, Bar-Ilan University 1998-2001 INTAS (European Commission Grant) 1999-2002 Excellency Center of the Israel National Science Foundation 1999-2020 Minerva Center 2000-2004 IHP (European Commission) Grant "Algebraic Geometry" 2001 NATO Research Grant 2001 Emmy Noether Prize, Göttingen Germany 2001 Bar-Ilan Gonda Award (waived) 2001-2003 INTAS (European Commission) Grant 2002-2004 IHP (European Commission) Grant 2002-2004 Excellency Center of the Israel National Science Foundation	1977	Landau Prize, Research Award for M.Sc. Thesis
1987-1988 Batsheva de Rothschild Award 1987-1990 Fund for Basic Research, Israel Science Foundation 1989-1992 American-Israel Binational Science Foundation Grant 1993-1996 American-Israel Binational Science Foundation Grant 1994-2000 Internal Research Fund, Bar-Ilan University 1998-2001 INTAS (European Commission Grant) 1999-2002 Excellency Center of the Israel National Science Foundation 1999-2020 Minerva Center 2000-2004 IHP (European Commission) Grant "Algebraic Geometry" 2001 NATO Research Grant 2001 Emmy Noether Prize, Göttingen Germany 2001 Bar-Ilan Gonda Award (waived) 2001-2003 INTAS (European Commission) Grant 2002-2004 IHP (European Commission) Grant 2002-2005 Excellency Center of the Israel National Science Foundation	1981-1982	Rothschild Postdoctoral Prize
Fund for Basic Research, Israel Science Foundation American-Israel Binational Science Foundation Grant American-Israel Binational Science Foundation Grant Internal Research Fund, Bar-Ilan University Internal Research Grant Internal Research Fund, Bar-Ilan University Internal Research F	1985-1988	American-Israel Binational Science Foundation Grant
American-Israel Binational Science Foundation Grant American-Israel Binational Science Foundation Grant Internal Research Fund, Bar-Ilan University Internal Research Grant Excellency Center of the Israel National Science Foundation Minerva Center Internal Research Grant Geometry Center of the Israel National Science Foundation Internal Research Grant Internal Research Grant Center Control Internal Research Fund, Bar-Ilan University Internal Research Grant Center Control Internal Research Fund, Bar-Ilan University Internal Research Fund, Bar-Ilan Grant Center of the Israel National Science Foundation Internal Research Fund, Bar-Ilan University Internal Research Fund, Bar-Ila	1987-1988	Batsheva de Rothschild Award
American-Israel Binational Science Foundation Grant 1994-2000 Internal Research Fund, Bar-Ilan University 1998-2001 INTAS (European Commission Grant) 1999-2002 Excellency Center of the Israel National Science Foundation 1999-2020 Minerva Center 2000-2004 IHP (European Commission) Grant "Algebraic Geometry" 2001 NATO Research Grant 2001 Emmy Noether Prize, Göttingen Germany 2001 Bar-Ilan Gonda Award (waived) 2001-2003 INTAS (European Commission) Grant 2002-2004 IHP (European Commission) Grant 2002-2005 Excellency Center of the Israel National Science Foundation	1987-1990	Fund for Basic Research, Israel Science Foundation
Internal Research Fund, Bar-Ilan University 1998-2001 INTAS (European Commission Grant) 1999-2002 Excellency Center of the Israel National Science Foundation 1999-2020 Minerva Center 2000-2004 IHP (European Commission) Grant "Algebraic Geometry" 2001 NATO Research Grant 2001 Emmy Noether Prize, Göttingen Germany 2001 Bar-Ilan Gonda Award (waived) 2001-2003 INTAS (European Commission) Grant 2002-2004 IHP (European Commission) Grant Excellency Center of the Israel National Science Foundation	1989-1992	American-Israel Binational Science Foundation Grant
1998-2001 INTAS (European Commission Grant) 1999-2002 Excellency Center of the Israel National Science Foundation 1999-2020 Minerva Center 2000-2004 IHP (European Commission) Grant "Algebraic Geometry" 2001 NATO Research Grant 2001 Emmy Noether Prize, Göttingen Germany 2001 Bar-Ilan Gonda Award (waived) 2001-2003 INTAS (European Commission) Grant 2002-2004 IHP (European Commission) Grant "Galois Covers" 2002-2005 Excellency Center of the Israel National Science Foundation	1993-1996	American-Israel Binational Science Foundation Grant
Excellency Center of the Israel National Science Foundation Minerva Center HP (European Commission) Grant "Algebraic Geometry" NATO Research Grant Emmy Noether Prize, Göttingen Germany Bar-Ilan Gonda Award (waived) NTAS (European Commission) Grant HP (European Commission) Grant Emmy Noether Prize, Göttingen Germany Bar-Ilan Gonda Award (waived) Coult-2003 INTAS (European Commission) Grant HP (European Commission) Grant "Galois Covers" Excellency Center of the Israel National Science Foundation	1994-2000	Internal Research Fund, Bar-Ilan University
1999-2020 Minerva Center 2000-2004 IHP (European Commission) Grant "Algebraic Geometry" NATO Research Grant 2001 Emmy Noether Prize, Göttingen Germany 2001 Bar-Ilan Gonda Award (waived) 2001-2003 INTAS (European Commission) Grant 2002-2004 IHP (European Commission) Grant "Galois Covers" Excellency Center of the Israel National Science Foundation	1998-2001	INTAS (European Commission Grant)
2000-2004 IHP (European Commission) Grant "Algebraic Geometry" 2001 NATO Research Grant 2001 Emmy Noether Prize, Göttingen Germany 2001 Bar-Ilan Gonda Award (waived) 2001-2003 INTAS (European Commission) Grant 2002-2004 IHP (European Commission) Grant "Galois Covers" 2002-2005 Excellency Center of the Israel National Science Foundation	1999-2002	Excellency Center of the Israel National Science Foundation
2001 NATO Research Grant 2001 Emmy Noether Prize, Göttingen Germany 2001 Bar-Ilan Gonda Award (waived) 2001-2003 INTAS (European Commission) Grant 2002-2004 IHP (European Commission) Grant "Galois Covers" 2002-2005 Excellency Center of the Israel National Science Foundation	1999-2020	Minerva Center
2001 Emmy Noether Prize, Göttingen Germany 2001 Bar-Ilan Gonda Award (waived) 2001-2003 INTAS (European Commission) Grant 2002-2004 IHP (European Commission) Grant "Galois Covers" 2002-2005 Excellency Center of the Israel National Science Foundation	2000-2004	IHP (European Commission) Grant "Algebraic Geometry"
2001 Bar-Ilan Gonda Award (waived) 2001-2003 INTAS (European Commission) Grant 2002-2004 IHP (European Commission) Grant "Galois Covers" 2002-2005 Excellency Center of the Israel National Science Foundation	2001	NATO Research Grant
2001-2003 INTAS (European Commission) Grant 2002-2004 IHP (European Commission) Grant "Galois Covers" 2002-2005 Excellency Center of the Israel National Science Foundation	2001	Emmy Noether Prize, Göttingen Germany
2002-2004 IHP (European Commission) Grant "Galois Covers" 2002-2005 Excellency Center of the Israel National Science Foundation	2001	Bar-Ilan Gonda Award (waived)
2002-2005 Excellency Center of the Israel National Science Foundation	2001-2003	INTAS (European Commission) Grant
y	2002-2004	IHP (European Commission) Grant "Galois Covers"
2004-2010 DIP (Deutsche Israelischen Projecten)	2002-2005	Excellency Center of the Israel National Science Foundation
	2004-2010	DIP (Deutsche Israelischen Projecten)

2005	European Union Conference Series (EMS)
2005-2007	European Union Coordinating Action (GIACS)
2005-2007	European Union NEST (MATHFSS)
2005-2006	Excellency Center of the Israel National Science Foundation
2006	One of the 50 most influential women in Israel (Globes Magazine)
2006	Woman of the City - Tel-Aviv City Municipality Award
2008-2011	European Union Coordinating Action (ASSYST)
2010-2012	Science in Society – Excellency, European Commission Grant
2014	Service Award of the Complex System Society
2017-2020	ISF via Sami Shamoon
2019-2023	ISF China-Israel

5. Supervising Post-Doctoral Fellows and Graduate Students

Name of Post-Doc	Years Supervised
1) Laure Barthel	1992-1994
2) Arthur Robb	1994-1996
3) Paul Freitag	1994-1995
4) Bernd Steinert	1995-1996
5) Ari Belinkiy	1996-1998
6) Alexander Schmitt	1998-1999
7) Sheng-Li Tan	1999-2000
8) Michael Fryers	2000
9) Muhammed Uludag	2001
10) David Goldberg	2001
11) Helge Maakestad	2001-2002
12) Pho Duc Tai	2001-2002
13) Jeremy Kaminski	2000-2004
14) Alexander Shapiro	2003-2005
15) Shamgar Gurevich	2004-2005
16) Israel Moreno	2004-2006
17) Yann Sepulcre	2004-2007
18) Maxim Layenson	2005-2008
19) Meirav Amram	2005-2009
20) Arkadius Kalka	2007-2011
21) Dimitry Kerner	2007-2008
22) Robert Shwartz	2007-2010
23) Rebecca Lehman	2008-2009
24) Oded Shor	2009-2011
25) Moshe Cohen	2010-2013
26) Fei Yi	2011-2012

Name of Ph.D. Student	Years	Title of Thesis
Pure and Applied Mathematics:		
1) Yair Halevi	1990-1997	Foundations of Expert Systems in Projective Geometry
2) Meirav Amram3) David Garber	1996-2002 1997-2002	On Galois Covers of Algebraic Surfaces On the Fundamental Group of Complement of Plane
3) David Garber	1991-2002	Curves
4) Tzachi Ben-Itzhak	1998-2003	Computation of HE Factorizations
5) Shmuel Kaplan	1998-2005	On Factorization of the Generator of B_n induced from Curves:
6) Amiel Ferman	2003-2009	Computational Method Algebraic Topological Invariants of Symplectic 4-Manifolds
7) Arthur Muftachov	2003-2010	Using the Braid Monodromy Technique Identification of Boundary Conditions Using Natural
/) Armur Murtachov	2003-2010	Frequencies - Algebraic and Geometric Methods
8) Dvora Cohen	2004-2010	Resolution of Singularities and Monodromies and Braid
		Groups
9) Meital Eliyahu	2006-2011	The Effect of Perturbation on the Fundamental Group of the
10) Michael Friedman	2006-2011	Complement of Real Line Arrangements On the Braid Monodromy Type Invariant: Properties and
- 0 / - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -		Applications
11) Evgeniy Beiderman	2004-2012	Remote Optical Estimation of Sound Sound Sources and
12) Eran Liberman	2006-2013	Medical Parameters (co-advisor with Zeev Zalevsky) Regeneration of Conic Sections and a (Double) Tangent
Math Education		
Math Education13) Miriam Dagan	2015-2020	The Gap between High School and University Mathematics
13) Miriam Dagan		Syllabus (revised)
	2015-2020 2018- 2020-	
13) Miriam Dagan14) Erez Nachmias	2018-	Syllabus (revised)
13) Miriam Dagan14) Erez Nachmias15) Tania Badarna	2018- 2020-	Syllabus (revised)
13) Miriam Dagan14) Erez Nachmias15) Tania Badarna16) Michal Holshtein	2018- 2020-	Syllabus (revised) Self Learning in Math Education (revised) Computerized Mathematical Morphology for Analysis of
13) Miriam Dagan14) Erez Nachmias15) Tania Badarna16) Michal HolshteinNeural Computation	2018- 2020- 2020-	Syllabus (revised) Self Learning in Math Education (revised) Computerized Mathematical Morphology for Analysis of Cognitive Processes and Brain Waves Computerized Geometrical Methods for Analysis of Subconscious Activities and Processes Recognition at Sleeping
 13) Miriam Dagan 14) Erez Nachmias 15) Tania Badarna 16) Michal Holshtein Neural Computation 17) Tomer Shmiel 	2018- 2020- 2020- 1999-2006	Syllabus (revised) Self Learning in Math Education (revised) Computerized Mathematical Morphology for Analysis of Cognitive Processes and Brain Waves Computerized Geometrical Methods for Analysis of Subconscious Activities and Processes Recognition at Sleeping Phases The EEG as a Function of the Dynamics of its Generator
 13) Miriam Dagan 14) Erez Nachmias 15) Tania Badarna 16) Michal Holshtein Neural Computation 17) Tomer Shmiel 18) Oren Shmiel 	2018- 2020- 2020- 1999-2006 2003-2009	Syllabus (revised) Self Learning in Math Education (revised) Computerized Mathematical Morphology for Analysis of Cognitive Processes and Brain Waves Computerized Geometrical Methods for Analysis of Subconscious Activities and Processes Recognition at Sleeping Phases The EEG as a Function of the Dynamics of its Generator Populations Analysis of Epileptic EEG Signals with Different Kinds of
 13) Miriam Dagan 14) Erez Nachmias 15) Tania Badarna 16) Michal Holshtein Neural Computation 17) Tomer Shmiel 18) Oren Shmiel 19) Lilach Avitan 	2018- 2020- 2020- 1999-2006 2003-2009	Syllabus (revised) Self Learning in Math Education (revised) Computerized Mathematical Morphology for Analysis of Cognitive Processes and Brain Waves Computerized Geometrical Methods for Analysis of Subconscious Activities and Processes Recognition at Sleeping Phases The EEG as a Function of the Dynamics of its Generator Populations Analysis of Epileptic EEG Signals with Different Kinds of Mother Wavelets Temporal Representations in Evolved Complex Virtual
 13) Miriam Dagan 14) Erez Nachmias 15) Tania Badarna 16) Michal Holshtein Neural Computation 17) Tomer Shmiel 18) Oren Shmiel 19) Lilach Avitan 20) Yaki Stern 21) Uri Yerushalmi 22) Yakir Berchenko 	2018- 2020- 2020- 1999-2006 2003-2009 2003-2010 2004-2010 2004-2010 2005-2011	Syllabus (revised) Self Learning in Math Education (revised) Computerized Mathematical Morphology for Analysis of Cognitive Processes and Brain Waves Computerized Geometrical Methods for Analysis of Subconscious Activities and Processes Recognition at Sleeping Phases The EEG as a Function of the Dynamics of its Generator Populations Analysis of Epileptic EEG Signals with Different Kinds of Mother Wavelets Temporal Representations in Evolved Complex Virtual Organisms Structure and Dynamics of Cluster Networks
 13) Miriam Dagan 14) Erez Nachmias 15) Tania Badarna 16) Michal Holshtein Neural Computation 17) Tomer Shmiel 18) Oren Shmiel 19) Lilach Avitan 20) Yaki Stern 21) Uri Yerushalmi 	2018- 2020- 2020- 1999-2006 2003-2009 2003-2010 2004-2010 2004-2010	Syllabus (revised) Self Learning in Math Education (revised) Computerized Mathematical Morphology for Analysis of Cognitive Processes and Brain Waves Computerized Geometrical Methods for Analysis of Subconscious Activities and Processes Recognition at Sleeping Phases The EEG as a Function of the Dynamics of its Generator Populations Analysis of Epileptic EEG Signals with Different Kinds of Mother Wavelets Temporal Representations in Evolved Complex Virtual Organisms

24) Inhal Chanira Lata	2009-2016	MEG Analysis of Auditory Object Perception and Methods
24) Inbal Shapira-Lots	2009-2010	Development
25) Amir Kleks	2009-	Analysis of Synchronization Patterns of MEG Signals
26) Zohar Noy	2012-	MEG Analysis
27) Ahmed Soleman	2015-	MEG Analysis for Numeration
28) Nili Wilkin	2018-	MEG Analysis for Numeration
29) Zeev Hananis	2020-	Development of Brain Tumors
30) Noy Hale	2021-	Concept of a Number in the Brain
31) Alon Katz	2021-	Concept of Color in the Brain
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Name of MSc. Student	Years	Title of Thesis
1) Shira Zur	1990-1993	Braid Monodromy
2) Meirav Amram	1993-1995	Braid Group and Braid Monodromy
3) David Garber	1993-1997	On the Fundamental Group of the Complement of Real Line
c) Zuriu Curcur	1,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Arrangements
4) Hussam Aresha	1994-1995	Fundamental Groups of Complements of Algebraic Curves
5) Tzachi Ben-Itzhak	1996-1998	Combined track
6) Avi Zulti	1997-1998	About Grid for Numerical Control on CAD/CAM Programs
7) Shmuel Kaplan	1997-1998	Combined track
8) Amir Kleks	1997-1999	Computational Braid Monodromy
9) Alex Fish	1998-1999	Locally Nilpotent Derivations
10) Ido Shamir	1998-1999	Automatic Prover for Euclidean Geometry
11) Oren Shmiel	1999-2002	Combined track
12) Dvora Cohen	1999-2003	Special Examples of Braid Monodromy
13) Eran Liberman	2001-2004	Combined track
14) Shirly Baranes	2001-2005	Line Arrangements and the Braid Monodromy
15) Meital Eliyahu	2002-2005	Fundamental Groups of Complements of Similar Real Line Arrangements
16) Neta Rozen	2004-2005	Hurwitz Equivalence in the Symmetric Group
17) Dani Shitrit	2004-2006	Hurwitz Equivalence in the Braid Group
18) Shai Hamama	2005-2007	Comparison of Four Fundamental Groups of Four Line
		Arrangements with Nine and Ten Lines
19) Yoel Pinchas	2005-2008	Acoustic Detection of Insects in Plants
20) Dor Klar	2010-2012	Wide Baseline Dense Matching
21) Anna Zarkh	2011-2013	Visualization of Braid Monodromy
22) Ahmed Soleman	2012-2013	Studying Mathematics with Tables and Graphs
23) Erez Nachmias	2016-2017	Auto Cognition
24) Sivan Cohen	2017-	
25) Tamar Rizmovitch	2017-2020	Technology in Math Education
26) Yael Odeya	2018-2020	Identification of Brain Tumors
27) Hila Pinievski	2020-	Sleep Disorders

6. Editor, Referee and Reviewer

Editorships of volumes:

1. M. Teicher, Editor, *Hirzebruch 65*, Israel Mathematics Conference Proceedings, vol. 9, 1995.

- 2. M. Teicher, Editor, *The Heritage of Emmy Noether*, Israel Mathematics Conference Proceedings, vol.12, 1999.
- 3. C. Ciliberto, F. Hirzebruch, R. Miranda and M. Teicher, Editors, *Applications of Algebraic Geometry to Coding Theory, Physics, and Computation*, NATO Science Series II: Mathematics, Physics and Chemistry, vol. 36, Kluwer Publishing House, 2001.
- 4. Bolibruch, Hazewinkel, Kulikov and M. Teicher, Editors, *Acta Appl. Math.*, vol. 75, Kluwer Academic Pub., 2003.
- 5. Recent Advances in Pure and Applied Mathematics, in Symmetry, in preparation

Membership in Editorial Boards:

Journal of the European Mathematical Society (JEMS), 2004-2012 Book series 'Algebras and Applications', Springer, 2005-Transactions Amer. Math. Soc., 2006-2012 Memoirs, Amer. Math. Soc., 2006-2012 Bulletin of the Manifold Atlas, 2009-

Referee for Journals:

Inventiones Math., Topology, Journal of Algebra, Journal of Algebraic Geometry, Israel Journal of Mathematics, Israel Mathematics Conference Proceedings (IMCP), Annali di Matematica, Proceedings of Symposia in Pure Mathematics, Topology and its Applications, Discrete and Computational Geometry, Pisa Graduate Program, Annals of Mathematics, Compositio Mathematica, Geometry and Topology, Advances in Applied Mathematics

Reviewer: Mathematical Reviews, Zentralblatt für Mathematik

Referee for Funding Agencies: Binational Science Foundation (BSF); German Israeli Foundation (GIF); Israel Science Foundation (ISF); Deutsche Forschung Geseltshaft (DFG); Italian Science Foundation (CNR), National Science Foundation (NSF), National Institute of Health (NIH)

7. Academic Administrative Positions in Bar-Ilan University

Date	Position and Institute
1992-1998	Member of the Beirat, Emmy Noether Research Institute for Mathematics (Minerva Center)
1997-2000	Member, Research Committee of the Faculty of Exact Sciences
1997-2000	Chairman, Department of Mathematics and Computer Science
1997-2001	Member, Founding and Program Committees, School of Engineering
1998, 2018-	Member, Senate Committee for Honorary Degrees
1998, 2018-	Director, Emmy Noether Research Institute for Mathematics
2001-2005	Vice President for Research

8. Organizer of Conferences

Name of Conference	Place and Date
Cohomology on Groups	Bar-Ilan University, May 1985
Conference in Honor of 65th Birthday of F. Hirzebruch	Bar-Ilan University, May 1993
Moduli Problem and the Braid Group	Cetraro, Italy, September 1993
Emmy Noether Annual Lectures	Bar-Ilan University, 1993-present
Israel Mathematical Union Meeting, Geometry Session	Ben-Gurion University, May 1994

AMS-IMU Meeting, 2 Special Sessions Algebraic Surfaces and Moduli Problems The Heritage of Emmy Noether Fundamental Groups in Geometry The 4th Amitsur Symposium Topology of Algebraic Varieties	Jerusalem, May 1995 Eilat, Israel, January 1996 Bar-Ilan University, December 1996 Oberwolfach, Germany, May 1998 Bar-Ilan University, June 1998 MPI, Bonn, July 1998
Chairman, Algebraic Geometry Session, International Congress of Mathematics (ICM)	Berlin, August 1998
International Conference on Geometry (with Haifa Univ.)	Israel, March 1999
The 5th Annual Meeting of the European Network in Algebraic Geometry (Europroj)	Israel, September 1999
Looking Back at the 20th Century	Bar-Ilan University, March 2000
International Conference on Brain Research	Bar-Ilan University, June 2000
Applications of Algebraic Geometry to Coding Theory, Physics & Computation (NATO Advanced Research Workshop)	Eilat, Israel, February 2001
Singularities	Moscow, June 2001
Computational Algebraic Geometry	Eilat, February 2002
Fundamental Groups in Geometry	Oberwolfach, Germany, September 2002
Coding Theory	Eilat, January 2003
School on Applications of Braid Groups	Eilat, February 2005
School on Applications of Braid Groups – Phase 2	Sea of Galilee, September 2005
Mathematical Neuroscience	Rome, October 2006
Hirz80	Ramat-Gan, May 2008
Popularization and Education of Math (ICM session)	Seoul, Korea, August 2014
Geometry and Physics: Mirror Symmetry, Hodge Theory, and Related Topics Ron Donagi's 60th Birthday	University of Miami, January 2015
International Women's Forum: Seek Solve Soar	Tel Aviv, May 2016
Griffiths 80	University of Miami, March 2018
Hirz90	Bar-Ilan University, June 2018

9. Boards and Committees

Date	Type of Activity or Appointment
1992-1996	Chairman, Italian-Israeli Binational Conferences Program Committee
1993-1994	Member of the Board, "Moishezon Memorial Foundation for the
	Advancement of Mathematics", Columbia University
1998	Organizer, Special Semester on "Topology of Algebraic Varieties", MPI, Bonn
1998-2008	Israel Delegate to the Council of the European Mathematical Society
1998-	Member, Advisory Committee, Midrasha Mathematica, Hebrew University, Jerusalem
1999	Member, Evaluation Com. of the Israel Ministry of Science in Applied Math.
1999-2002	Member, Council for Higher Education, Israel (MALAG), including member of:
	Permanent Subcommittee for the Technological Colleges
	Permanent Subcommittee to the Universities and Teachers Seminaries
	Special Committee for Higher Education in the Orthodox Community
	Special Committee for Higher Education in the Arab Sector
	Subcommittee for Broadening the Basis of Higher Education for the 30+ w.o Bagrut
1999-2002	Evaluator for the European Union Fellowship Program
2000-2005	Member, Evaluation Committee of the German Science Foundation (DFG)
2001	Member, Legal Forum of Heads of Universities of Israel
2001-2005	Member, Executive Committee of the European Mathematical Society (EMS)
	Member, Subcommittees of the EMS:

	European Prize for Young Mathematicians
	Review of Status and By-laws of EMS
	EMS Summer Schools
	Relationship with European Union
	General Meeting Committee
2001-2005	Chair, Patent Committee, Bar-Ilan University
2001-2009	Member, Fachbeirat of the Max-Planck Institute for Mathematics, Bonn
2001-2005	Member, Acting Committee of BASHAR Association
2001-2003	Member, Council for Higher Education of Judea and Samaria
2001	Subcommittee for the B.Sc. Degree in Computer Science, College of Judea and Samaria
2002-2006	Member, Executive Committee of Israel Chapter of the International Women's Forum
2002-2000	Member of the Board, Wolf Foundation
2002	Member, Committee of Ministry of Education for establishing the Elite School "Mikveh"
2003-2008	Member, Highest Steering Committee for Science & Technology, Ministry of Education
2003-2008	Member, Committee of Officers in Science & Technology of Europe (COST)
2004	Chairman, Israel Prize in Mathematics
2004	Member, Advisory Board of EMANI (Electronic Mathematics Archives Network
2004	Initiative)
2004-2007	Chairman, Education Committee of the EMS
2004-2010	Chairman, Council for the Advancement of Women in Science & Technology, Israel
2005-2007	Chief Scientist, Ministry of Science and Technology / Ministry of Science, Culture and
2003-2007	Sport
2005-2007	Chair of Science Committee, UNESCO, Israel
2005-2007	Vice President, European Complex System Society
2006	Delegate of Israel to the GA of IMU
2006	Director General (Acting), Ministry of Science and Technology
2006-2007	Co-chair of the German Israeli Foundation Board
2007-2008	President, Israel Chapter of the International Women's Forum
2007-2009	Member, Board of the Leadership Foundation of the International Women's Forum
2007-2019	Member, Advisory Board of Center for Advanced Study, Göttingen University
2007-	Member, Acting Committee of BASHAR Association
2008	Member, Selection Committee for Industry Projects by Ministry of Trade and Industry
2008	Co-chair of the BSF Board
2008-	Member, Scientific Committee of RNSC (French Nat'l Network on Complex Systems)
2009	Chair, BSF Board
2009-	Chair, National Committee for International Relations in R&D
2009-	Member, Government High Nomination Committee
2010-2013	Member, IWF International Board
2010-2012	Vice President, International Commission for Mathematical Instruction (ICMI)
2010-2013	Member, National Council for Research and Development
2010-2013	Advisory Board of the Commercialization Unit of Auckland Univ.
2010-2014	Member, National Council for the Film Industry
2011	Panel for Innovation, New Zealand Government
2011-	Member. Board of MEDCPU, Ltd
2011	Vice Chair, BSF Board
2012-2013	Chair, BSF Board
2013-2018	Member, Advisory Group to the European Union Program on "Future Technologies"
2013-2017	Member, Advisory Board to the European Union on Gender Issues
2016	Member, Israel Prize in Mathematics, Selection Committee
2017-	Member, International Think Tank on Brain-Machine Interface
2017-2018	Vice President, International Women's Forum

2017-2019	Member, Advisory Board of AirSwap
2018	Delegate of Israel to the GA of IMU
2018-	Member, Advisory Board of the Brain Center in NYUAD, Abu Dhabi,
2019	Member, Advisory Board of Institute of Math Sciences in the Americas (IMSA), UMiami
2019-	Member, SEED Award Jury Member, China,
2019-	Chair, Advisory Board, OMNIQ Technologies Ltd.
2020-	Member, Advisory Board, Hydroplan
2020	Chair, SNE Technologies
2021-2025	Member, MOLMOP (Israel National Council for Research and Development)
2021-2025	Chair, National Committee for Excellency in Science

10. Participation in Scientific Conferences and Invited Talks (selected list)

Conference / Invited Talk	Place and Date	Title of Lecture
Colloquium	Princeton University, USA 1982	Factorization of birational maps between algebraic varieties
Series of Lectures	University of Oklahoma, USA 1982	On factorization of birational maps
Conference to Inaugurate Abe Gelbart Chair	Bar-Ilan University, Israel 1983	Multiplicity one theorem for $GS_p(2n)$
Annual Conference of Israel Mathematical Union	Jerusalem, Israel 1983	Combinatorial methods in algebraic geometry
Colloquium	Hebrew University, Israel 1984	Multiplicity one theorem for $O(n,k)$
Geometry Seminar	Columbia University, USA 1984	Existence of simply connected algebraic surfaces of positive index
Conference on Cohomology,	Bar-Ilan University, Israel	Finite representation of
Groups & Algebraic Geometry	1985	algebraic geometry
Special Series of Lectures	Pisa University, Italy February 1986	On moduli space of surfaces of general type
Colloquium	University of Oklahoma, USA 1987	Braid groups and algebraic surfaces
Algebra Seminar	Colorado State University, USA 1987	Geometric outlook on braid groups
Algebra Seminar	Kyoto University, Japan 1987	Algebraic surfaces with finite fundamental group
Öber Seminar	MPI, Bonn, Germany 1988	Special surfaces of general type
Russian-American Meeting	Chicago, USA July 1989	Simply connected algebraic surfaces
Conference in Honour of	Pisa, Italy	Braid monodromy of almost real
Andreotti	1990	curves
Humboldt Seminar	Berlin, Germany June 1991	Fundamental groups of surfaces of general type
Schur Gedenkkoloquium	Berlin, Germany November 1991	Multiplicity one theorems for algebraic groups
Colloquium	Ulm University, Germany 1992	Surfaces of general type

Workshop on Algebraic Geometry, Connections with Topology and Number Theory	Landau Center, Jerusalem, Israel November 1992	Braid group techniques in algebraic geometry
Meeting on Analysis and Complex Varieties Meeting on Algebraic	Oberwolfach, Germany June 1993 Oberwolfach, Germany	On the Galois cover of Hirzebruch surfaces
Geometry Italian-Israeli Binational Conference Conference on Affine Algebraic Geometry AMS Summer Research Inst. in Algebraic Geometry	August 1993 Cetraro, Italy September 1993 Technion, Haifa, Israel December 1994 Santa Cruz, USA July 1995	Moduli problems and algebraic surfaces Braid group techniques in affine algebraic geometry Braid groups and algebraic surfaces
Jerusalem Topology and Geometry Seminar Meeting on 4-dimensional Manifolds	Hebrew University, Israel April 1996 Oberwolfach, Germany May 1996	Applications of braid group techniques to algebraic surfaces New invariants for complex surfaces
Workshop on Algebraic Surfaces	Accademia Nazionale Dei Lincei, Rome, Italy May 1996	Fundamental groups of complements of branch curves
Meeting on Complex Geometry, Topological and Transcendental Methods	Oberwolfach, Germany August 1996	(invited, unable to attend)
Meeting on Complex Analysis	Oberwolfach, Germany August 1996	(invited, unable to attend)
Enumerative Geometry	Rome, Italy April 1997	(invited, unable to attend)
The 3rd Amitsur Symposium	Jerusalem, Israel June 1997	On the quotient of the braid group
Jerusalem Topology and Geometry Seminar	Hebrew University, Israel April 1997	Applications of braid group group techniques to algebraic surfaces
Meeting on Hodge Theory, Mirror Symmetry and	Scuola Normale Superiore Pisa, Italy	Special surfaces of general type
Quantum Cohomology Conference in Honor of Hirzebruch's 70th Birthday	April 1998 Polish Academy of Science Warsaw, Poland May 1998	On Galois covers of Hirzebruch surfaces
International Conference in Topology	Tel-Aviv University, Israel June 1998	Surfaces with $C_1^2 > 2C_2$
Colloquium	Mainz University, Germany July 1998	New invariants for surfaces
Knots in Hellas	Delphi, Greece August 1998	Braid group techniques in algebraic geometry
Colloquium	Haifa University, Israel February 1999	Word problem in the braid group and classification of algebraic surfaces
Conference in Honor of Geyer's	Tel Aviv University, Israel	Polycyclic fundamental groups as
60th Birthday	March 1999	invariants of surfaces
Meeting on Singularities	Oberwolfach, Germany May 1999	Braid monodromy of singular branch curves
Annual Meeting of the Israel	University of Haifa, Israel	Diffeomorphism types

May 1999

Mathematical Union		
Conference on Arrangements	Boston, USA June 1999	From arrangements to branch curves
Meeting on Low-Dimensional Algebraic Varieties	Oberwolfach, Germany August 1999	New symplectic invariants
Meeting on Recent Developments in the Theory of Algebraic Surfaces	Costiera Amalfitana, Italy September 1999	Braid monodromy invariants of surfaces
Conference on Complex Manifolds	Hong Kong January 2000	Diffeomorphism type and BMT type
Algebra Seminar	Tata Institute, Bombay, India February 2000	Word problem and BMT type
Geometry Seminar	University of Pisa, Italy April 2000	On quotients of braid groups
Meeting on Complex Analysis	Oberwolfach, Germany August 2000	
C.C. Conference	Beijing, China October 2000	(unable to attend)
Conference on Perspectives in Geometry	Leipzig, Germany November 2000	BMT invariants and diffeomorphism types
Annual Meeting of the Israel Mathematical Union	Hebrew University, Israel May 2001	BMT invariants and diffeomorphism types
Conference on Exterior Algebra Methods and Other New Directions in Algebraic Geometry, Commutative Algebra and Combinatorics	Erice, Sicily September 2001	Topological vs. combinatorial properties of line arrangements
Emmy Noether Professorship	Göttingen, Germany November 2001	Braid groups and applications
Cryptography Colloquium Satellite Conference on Algebraic Geometry, ICM02	New York, USA November 2001 Shanghai, China August 2002	Encryptography using braid groups
Meeting on Complex Analysis Fano Conference	Oberwolfach, Germany September 2002 Torino, Italy	On Galois covers of algebraic surfaces
Singularity Conference	September 2002 Lille, France , June 2003	Singulariites and braid monodromy
Topology Colloquium	Canberra, Australia July 2003	Braid word problems
Meeting on Singularities	Oberwolfach, Germany September 2003	
Slodway Colloquium	Hamburg, Germany October 2003	Algebraic surfaces
Conference on Algebraic Methods in Cryptology	Dortmund, Germany March 2004	Braid groups and cryptography
60 Years of Oberwolfach	Oberwolfach Germany	Presentation of the Prize Winner

Presentation of the Prize Winner

Oberwolfach, Germany

July 2004

60 Years of Oberwolfach

Meeting on Complex Analysis Oberwolfach, Germany August 2004 Rome University, Italy Colloquium Degenerations and braid monodromy November 2005 Conference in Honor of Miami University, USA Fundamental groups - new examples December 2005 and applications to cryptography **Bogomolov** Colloquium Seoul, Korea **Braid Monodromy Type** July 2006 Conference in Andorra Synchronization **Neuromathematics** September 2006 Seoul, Korea Colloquium EEG and more October 2006 Conference in Honor of Benno Technion. Israel Applications of braid monodromy and fundamental groups to the formation Eckmann April 2007 of surfaces **Brain Motion Conference** Synchronization Tel-Aviv University, Israel July 2007 Colloquium University of Buenos Aires, EEG and more Argentina, May 2008 Technical University of Keynote Opening Lecture Emmy Noether Year Catalonia, Catalonia September 2008 Colloquium Barcelona, Catalonia Mathematics in neuroscience September 2008 University of Pisa, Italy Conference on Algebraic Groups related to K3 surfaces October 2008 Surfaces Conference on Topology of Jaca, Spain Singularities and braids June 2009 Algebraic Varieties in honor of Libgober's 60th birthday Colloquium University of Miami, USA Mathematical models in neuroscience October 2009 Colloquium University of Christchurch, Braid group techniques in geometry New Zealand, April 2010 Colloquium University of Wellington, How does the brain work? New Zealand, April 2010 Colloquium University of Auckland, Braids in arrangements New Zealand, May 2010 Colloquium University of Auckland, EEG and more New Zealand, May 2010 Colloquium Scuola Normale Superiore, Line arrangements and related groups Pisa, Italy June 2010 University of Rome III, Italy Colloquium Braid group techniques in algebraic September 2010 surfaces Colloquium University of Alberta, Canada How does the brain work? October 2010 Conference on Complexity Venice, Italy Mathematics in complex systems

February 2011

Conference on Math Education	Beijing, China	Gifted students in Israel
	February 2011	
Colloquium	Shanghai, China February 2011	Braid group techniques
Conference in Algebraic	Moscow, Russia	Topology vs combinatorics for line
Geometry	September 2011	arrangements
Colloquium	Warsaw, Poland	Braid group techniques
Colloquium	September 2011 Warsaw, Poland	How does the brain work?
-	September 2011	
Mathematical Conversations	Institute for Advanced Study, Princeton, USA	From algebraic geometry to neural computations and back – A personal
	January 2012	perspective
Colloquium	Rutgers University, NJ, USA	Braid theory and surfaces
Manchana Caminan	February 2012	Tanala avera a ambinatarias of line
Members Seminar	Institute for Advanced Study, Princeton, USA	Topology vs. combinatorics of line arrangements
	February 2012	
Algebraic Geometry Seminar	Princeton University, USA	3K surfaces
Computer Science/Discrete	February 2012 Institute for Advanced Study,	Computational aspects in the braid
Mathematics Seminar	Princeton, USA	group and applications to
	March 2012	cryptography
Seminar in Biological Systems	Institute for Advanced Study,	Synchronization
	Princeton, USA	
	March 2012	
Colloquium	Polytechnic Inst., NYU, USA November 2012	Synchronization in brain activity
Conference "KULFEST"	Steklov Inst., Moscow, Russia	The K3 case
dedicated to the 60th anniversary of Vik. S. Kulikov	December 2012	
Mathematical Conversations	Institute for Advanced Study,	Why braids
	Princeton, USA	
	March 2013	
Algebra Seminar	Rutgers University, USA	The 3 most difficult problems in the
Arbeitstagung in Memory of	March 2013 MPI Bonn, Germany	braid group Line arrangements in the study of
Hirzebruch	May 2013	surfaces
Complex Geometry	Hong Kong Univ, China	Combinatory vs. topology of line
Conference in Honor of Siu	June 2013	arrangements
Colloquium talk	Miami, Florida, USA	Line arrangements and applications
Toint Mathamatica Mastings	January 2014	New ten line amon consents mellections
Joint Mathematics Meetings Program (joint with M. Cohen)	Baltimore, Maryland, USA January 2014	New ten-line arrangements: reflections and a notion of distance.
Department of Finance and	NYU, New York, USA	From neuroscience to complex
Risk Engineering Seminar	November 2014	systems to financial markets
Biomath Forum Lecture Series	University of Pretoria,	How does the brain work?
	South Africa, May 2015	

Seminar	University of Johannesburg, South Africa, May 2015	How does the brain work?
World e-Conference on Complex Systems	Arizona State University, USA September 2015	From brain activity to financial markets via complex systems science
Seminar	NYU, New York, USA November 2015	Cyber crypto risks
Colloquium	Yeshiva University New York, USA November 2015	How does the brain work?
NetSci-X conference	Tel Aviv, Israel January 2017	Chair of Opening Session
Conference in honour of Moshe Abeles	Ein Gedy, February 2017	On Moshe Abeles
Conference on Singularitites	Hainan, China , December 2017	The brain as a complex system
Colloquium in Mathematics Education	Shanghai, China , December 2017	Gifted high school students education
Conference in Honor of David Mumford	Harvard Univ. Cambridge, USA, August 2018	On David Mumford
Colloquium	Univ of Montreal, Canada February 2019	How does the brain work
Colloquium	Yeshiva University, USA March 2019	Line arrangements
Conf. on Neuro Linguistics Conf. on Emmy Noether	NYUAD Abu Dhabi , 2019 Berlin , Frei Univ., June 2019	Numeration From Algebraic Geometry to Braids, Robotics and Neuroscience
Math and the Brain	University of Miami September 2019	How Does the Brain Work
Colloquium on Emmy Noether Public Lecture Women in South East Europe	Gottingen Univ., Dec. 2019 Univ. of Miami, January 2020 Bulgarian Academy of	Math and Beauty Math and the Brain
Erasmus Conference	Science, December 2020 Paphos, Cyprus June 2021	Math for the Future

11. Science policy and popularization of mathematics (selected list)

International Presentations:

"Session on Politics in Academia", IWF Conference, Toronto, Canada, October 2003.

"The Future of Nano-Technology", US-Israel S&T Commission (USISTC) Roundtable, **D.C**, Feb 2004. Round Table Chair, "The Place of Mathematics in New and Emerging Science and Technology", ICM (International Congress of Mathematics), **Madrid**, **Spain**, August 2006.

"Science and Higher Education Policy", KOFST Congress, **Seoul, Korea**, July 2006.

Roundtable on "Dual Use of Biological Research", Washington, D.C. USA, February 2007.

"International R&D", Joint Taiwan - Israel Forum, Tapei, Taiwan, July 2007.

"How to Attract Girls to Science", World Women's Forum, Seoul, Korea, September 2007.

Plenary Panel in the International Women's Forum, Chicago, USA, October 2007.

Round Table, "Academic Freedom", World Justice Project, Vienna, Austria, November 2009.

"How to attract Women to Science", UCLA, Los Angeles, USA, February 2010.

"Science for Growth, Ministry of Finance, Wellington, New Zealand, April 2010.

"Vertical and Horizontal Segregation in Science", Brussels, Belgium, October 2010.

Round Table, "The Model for a Research Institute", Hainan, China, December 2010.

- "Innovation Schemes", Ministry of Science and Innovation, Wellington, New Zealand, March 2011.
- "Art in Science", IWF Conference, Rome, Italy, May 2011.
- "Math and Beauty The Other Direction", IAS, Princeton, USA, March 2012.
- "Math and Beauty", Unconference, Wyoming, USA, January 2015.
- "Why is it Important to Study Math and How", Korea, August 2015.
- "Frontiers in Neuroscience", Conference: Transforming Tomorrow Today, Boston, USA, October 2015.
- "How to Protect from Cyber Risks", Unconference, Wyoming, USA, July 2016.
- "Math end Beauty", Shanghai, China September 2018
- "Women Empowerment", Sarasota, USA, November 2018
- "Math end Beauty", Montreal, Canada, January 2019
- "How to make Europe Innovative?", EU Summit, Bucharest, Romania, June 2019
- 'Why the Ecosystem in Israel so successful?", NYU, School of Engineering, Oct 2019,

Presentations in Israel

- Nano-Technologies, High-Tech Forum, Tel-Aviv, April 2002.
- "Advancement of Women", EMUNA Conference, Ramat-Gan, March 2005.
- "Chief Scientist presentation", Committee for S&T of the Knesset, Jerusalem, Oct. 2005 and June 2006.
- "40 Years of Germany-Israel Scientific Collaborations", Jerusalem, December 2005.
- "The Chief Scientist Day", Ministry of Industry, Tel-Aviv, December 2005.
- "Defense R&D vs Civil R&D", The Tel Aviv University Security and Peace Center, 2006.
- "Space Day 2006", The Fisher Research Center of the IAF, Herzliya, January 2006.
- "Research in Colleges", Council for Higher Education, March 2006.
- "U.S.-Israel Women's Dialogue", American Embassy, May 2006.
- "The Innovation Food Chain", The European Commission Embassy, Ramat-Gan, September 2006.
- "Energy Renewal", BIRD Conference, Tel-Aviv, November 2006.
- "Academy for Industry", Institute for Evolution, Haifa University, November 2006.

Moderator, The 2nd MOST Conference on Science Policy, January 2007.

- "Women in Hi-Tech", Ramat-Gan, March 2007.
- "Young Women for Science", Ministry of Education, Modiin, June 2007.
- "Women in Industrial R&D", Forum of Arab-Jewish Business Women, Haifa, October 2007.
- "Lama Ma", Daily Television series (Channel 8), January March 2008.
- "Women and Growth", Prime Minister's Office, June 2008.
- "My Faith", TV movie, January 2008.
- "Women in Science and National Growth", NAAMAT Conference, Tel-Aviv, September 2008.
- "The Food Chain", Herzlia Forum, February 2009.

Keynote, "Women, Technology and Industry", Holon, June 2009.

- "International R&D", Herzlia Forum, February 2010.
- "Why Innovation, Why Israel, Why Eilat?, EilatHub, Eilat, September 2020.
- "Why Girls Should go for Math", MOST, Israel, March 2021.

Newspapers Articles

- M. Teicher, Open Letter to President Summers, EMS Newsletter, December 2005.
- M. Teicher, O&A by Mina Teicher, Ha'aretz, May 2005.
- M. Teicher, Be a Woman, Ha'ir Magazine, March 2006.
- M. Teicher, Principles of Governmental R&D in Israel, December 2006.
- M. Teicher, Swim Against the Stream, Ha'aretz, January 2007.
- M. Teicher, Organizational Reform of the Center for Marine Agriculture Center, July 2007.
- M. Teicher, The Chief Scientist Report, September 2007.
- M. Teicher, Technology in Education, MOFET Journal, April 2008

M. Teicher, *Brain and the Third Age*, "The Third Age" by Liora Eini, 2009. M. Teicher, *Math and Beauty – The Other Direction*, IAS Letters, 2012.

LIST OF PUBLICATIONS

Scientific Articles in Peer Review Journals

- 1. M. Teicher, Factorization of a birational morphism between 4-folds, Math. Ann. 256 (1981), 391-399.
- 2. R. Miranda and M. Teicher, *Non-commutative algebra of dimension 3 over integral schemes*, Trans. Amer. Math. Soc. 292, 2 (1985), 705-712.
- 3. B. Moishezon and M. Teicher, *Existence of simply connected algebraic surfaces of positive and zero indices*, Proceedings of the National Academy of Sciences, United States of America 83 (1986), 6665-6666.
- 4. M. Teicher, On toroidal embeddings of 3-folds, Israel Journal of Mathematics 57, no. 1 (1987), 49-67.
- 5. M. Teicher, *Multiplicity one theorem for GSp(k,2n) and O(k,4) where k is a finite field*, Journal of Algebra 107, no. 2 (1987), 436-465.
- 6. B. Moishezon and M. Teicher, *Simply connected algebraic surfaces with positive index*, Inventiones Math. 89 (1987), 601-643.
- 7. B. Moishezon and M. Teicher, *Galois covers in theory of algebraic surfaces*, Amer. Math. Soc. Pub. PSPM 46 (1987), 47-65.
- 8. B. Moishezon and M. Teicher, *Braid group techniques in complex geometry* I, *Line arrangements in* \mathbb{CP}^2 , Contemporary Math. 78 (1988), 425-556.
- 9. B. Moishezon and M. Teicher, *Braid group techniques in complex geometry* II, *From arrangements of lines and conics to cuspidal curves*, in: *Algebraic Geometry*, Lecture Notes in Math. 1479 (1991), 131-180.
- 10. B. Moishezon and M. Teicher, *Finite fundamental groups free over Z/cZ for Galois covers of* **CP**², Math. Ann. 293 (1992), 749-766.
- 11. Y. Halevi and M. Teicher, *Foundations for expert systems in projective geometry*, Proceedings of ILA (Israel Society for Information Processing), November 1992 (in Hebrew), 203-224.
- 12. B. Moishezon and M. Teicher, Braid group techniques in complex geometry III, Projective degeneration of V^3 , Contemporary Math. 162 (1994), 313-332.
- 13. B. Moishezon and M. Teicher, *Braid group techniques in complex geometry* IV, *Braid monodromy of* S_3 , the branch curve of π_3 : $V_3 \to \mathbb{CP}^2$ and applications to $\pi_1(\mathbb{CP}^2 S_3)$, Contemporary Math. 162 (1994), 333-358.
- 14. B. Moishezon and M. Teicher, *Fundamental groups of complements of branch curves as solvable groups*, Israel Mathematical Conference Proceedings 9 (1995), 329-346.
- 15. B. Moishezon and M. Teicher, *Braid group techniques in complex geometry* V, *The fundamental group of a complement of a branch curve of a Veronese generic projection*, Communications in Analysis and Geometry 4 (1996) no. 11, 1-120.

- 16. B. Moishezon., A. Robb and M. Teicher, *On Galois covers of Hirzebruch surfaces*, Math. Ann. 305 (1996), 493-539.
- 17. I. Piatetski-Shapiro and M. Teicher, *Correspondence between representations of dual reductive pairs of O(n,k) and* Sp(2,k), Beiträge zur Algebra und Geometrie 38, no. 1 (1997), 145-148. Printed also (with permission) in: *Sitzungsberichte der Berliner Mathematischen Gesellschaft 1993-1996* (1998), 103-106.
- 18. A. Robb and M. Teicher, *Applications of braid group techniques to the decomposition of moduli spaces, new examples*, Topology and its Applications 78 (1997), 143-151.
- 19. J. Birman and M. Teicher, *The braid group, knots and algebraic geometry*, Topology and its Applications 78 (1997), 1-4.
- 20. M. Teicher, On the quotient of the braid group by commutators of transversal half-twists and its group actions, Topology and its Applications 78 (1997), 153-186.
- 21. M. Teicher, *Braid groups, algebraic surfaces and fundamental groups of complements of branch curves*, Amer. Math. Soc. Publications PSPM 62 (1997), no.1, 127-150.
- 22. M. Teicher, *Commutativity of the Schur algebra*, Beiträge zur Algebra und Geometrie 38, no. 1 (1997), 135-143. Printed also (with permission) in: *Sitzungsberichte der Berliner Mathematischen Gesellschaft 1993-1996* (1998), 107-116.
- 23. M. Teicher, *The variety of the set of representation of* D_{∞} *and* $SL_2(z)$, Sitzungsberichte der Berliner Matematischen Gesellschaft 1997-2000 (1998), 177-179.
- 24. M. Teicher, *Chern classes of fibered products of surfaces*, Documenta Mathematica 3 (1998), 321-342.
- 25. M. Teicher, *Open questions on fundamental groups of complements of curves*, Proceedings of Kernforschungszentrum Jülich, 1998.
- 26. M. Teicher, New invariants of surfaces, Contemporary Math. 231 (1999), 271-281.
- 27. M. Teicher, The fundamental group of a **CP**²-complement of a branch curve as an extension of a solvable group by a symmetric group, Math. Ann. 314 (1999), 19-38.
- 28. M. Teicher, *Hirzebruch surfaces: degenerations, related braid monodromy, Galois covers*, Contemporary Math. 241 (1999), 305-325.
- 29. D. Garber and M. Teicher, *The fundamental group's structure of the complement of some configurations of real line arrangements*, in: *Complex Analysis and Algebraic Geometry* (T. Peternell, F.-O. Schreyer, eds.), de Gruyter, 2000, pp. 173-223.
- 30. V. Kulikov and M. Teicher, *Braid monodromy factorizations and diffeomorphism types*, Russian Acad. Sci. Izvestiya Math. 64:2 (2000), 89-120; translation in Izv. Math. 64 (2000), no. 2, 311-341.

- 31. M. Amram and M. Teicher, *Braid monodromy of special curves*, Journal of Knot Theory and its Ramifications 10 (2001), no. 2, 171-212.
- 32. C. Ciliberto, R. Miranda and M. Teicher, *Pillow degenerations of K3 surfaces*, in: *Applications of Algebraic Geometry to Coding Theory, Physics, and Computation*, NATO Science Series II: Mathematics, Physics and Chemistry, vol. 36, 2001, 53-63.
- 33. M. Fryers, J.Y. Kaminski and M. Teicher, *Some applications of algebraic curves to computational vision*, Applications of Algebraic Geometry to Coding Theory, Physics, and Computation, NATO Science Series II: Mathematics, Physics and Chemistry, vol. 36, 2001, 121-137.
- 34. M. Fryers, J.Y. Kaminski, A. Shashua and M. Teicher, *Multiple-view geometry of non-planar algebraic curves*, Proceedings of the International Conference of Computer Vision, 2001.
- 35. J.Y. Kaminski and M. Teicher, *General trajectory triangulation*, Proceedings of the European Conference of Computer Vision, 2002.
- 36. M. Teicher, *Braid Monodromy Type invariants of surfaces and 4-manifolds*, in: *Trends in Singularities*, Birkhauser, 2002, 215-222.
- 37. E. Adi-Japha, L. Frenkel, R. Shalev and M. Teicher, *Writing and dysgraphia in ADHD*, Neuroplasticity 9 (2002), no. 2, p. 65.
- 38. E. Adi-Japha, A. Kleks, M. Teicher and A. Zilberstein, *Solving the EEG Inverse problem using genetic algorithms*, Neuroplasticity 9 (2002), no. 2, p. 126.
- 39. S. Kaplan and M. Teicher, *Identifying half-twists using randomized algorithm methods*, Journal of Symbolic Computation 34 (2002), 91-103.
- 40. S. Kaplan and M. Teicher, *Solving the braid word problem via the fundamental group*, Advances in Algebra and Geometry, Birkhauser, 2002, pp. 217-238.
- 41. D. Garber, S. Kaplan and M. Teicher, *A new algorithm for solving the word problem in braid groups*, Advances in Math. 167 (2002) no.1, 142-159.
- 42. M. Amram, D. Goldberg, M. Teicher and U. Vishne, *The fundamental group of the Galois cover of the surface* $\mathbb{CP}^1 \times T$, Algebraic and Geometric Topology 2 (2002), no. 20, 403-432.
- 43. D. Garber, M. Teicher and U. Vishne, *Classes of wiring diagrams and their invariants*, Journal of Knot Theory and its Ramifications 11 (2002) no.8, 1165-1191.
- 44. D. Garber, M. Teicher and U. Vishne, π_1 -classification of arrangements with up to eight lines, Topology 42 (2003), 265-289.
- 45. M. Amram, M. Teicher and M. Uludag, *Fundamental groups of some quadric-line arrangements*, Topology and its Applications 130 (2003) no. 2, 159-173.
- 46. M. Amram and M. Teicher, *On the degeneration, regeneration and braid monodromy of T*×*T*, Acta Appl. Math. 75 (2003), 195-270.

- 47. M. Amram and M. Teicher, *The fundamental group of the complement of the branch curve of TxT*, Osaka Journal of Mathematics 40 (2003) no. 4, 857-893.
- 48. T. Ben-Itzhak and M. Teicher, *Hurwitz equivalence in B*₃, International Journal of Algebra and Computation 13 (2003) no. 3, 277-286.
- 49. T. Ben-Itzhak and M. Teicher, *Properties of Hurwitz equivalence in the braid group of order n*, Journal of Algebra 264 (2003), 15-25.
- 50. T. Ben-Itzhak and M. Teicher, *Graph theoretic methods for determining non-Hurwitz equivalence in the braid group and symmetric group*, Israel J. Math. 135 (2003), 83-91.
- 51. T. Ben-Itzhak and M. Teicher, *Topological algorithms for conjugation of half-twists in the braid group with application to Hurwitz equivalence*, Proceedings of the Fano Conference (A. Collina, A. Conte, M. Marchisio, eds.), 2004, pp. 209-222.
- 52. E. Adi-Japha, S. Kipervasser, M. Neufeld, M. Teicher and A. Zilberstein, *Time domain source localization (TDSL) based on ictal EEG recordings*, Epilepsia, 45, Suppl. 7 (2004), 245-245.
- 53. J.Y. Kaminski and M. Teicher, *A general framework for trajectory triangulations*, Journal of Mathematics Imaging and Vision 21 (2004), 27-41.
- 54. J.Y. Kaminski and M. Teicher, *Algebraic curves in structure from motion*, in: *Computer Vision and Robotics*, (ed. John X. Liu), Nova Science Publishers, 2005, pp. 245-296.
- 55. M. Fryers, J.Y. Kaminski and M. Teicher, *Recovering an algebraic curve using its projections from different planes*, Journal of the European Mathematical Society 7 (2005), 145-172.
- 56. L. Rowen, M. Teicher and U. Vishne, *Coxeter covers of the symmetric groups*, Journal of Group Theory 8 (2005), 139-169.
- 57. A.M. Akhtyamov, A.V. Mouftakhov, M. Teicher and L.S. Yamilova, *Can one hear fastening of a rod?*, "International Ufa Winter Mathematical and Physical School-Conference for Undergraduate and Postgraduate Students and Young Scientists," Mathematics. Vol. I, Ufa: BashSU (2005), 55-71.
- 58. A.M. Akhtyamov, A.V. Mouftakhov, M. Teicher and L.S. Yamilova, *On the correctness of the inverse problem of reconstruction of non-separate boundary conditions*, "International Ufa Winter Mathematical and Physical School-Conference for Undergraduate and Postgraduate Students and Young Scientists," Mathematics. Vol. I. Ufa: BashSU, (2005), 39-55.
- 59. M. Abeles, Y. Ben-Shaul, R. Drori, Z. Nadasdy, O. Shmiel, T. Shmiel and M. Teicher, *Neurons of the cerebral cortex exhibit precise interspike timing in correspondence to behavior*, Proc. National Academy of Sciences 102 (2005), 18655-18657.
- 60. M. Abeles, Y. Ben-Shaul, R. Drori, Z. Nadasdy, M. Shemesh, O. Shmiel, T. Shmiel and M. Teicher, *Temporally precise cortical firing patterns are associated with distinct action segments*, Journal of NeuroPhysiology 96 (2006), 2645-2652.
- 61. D. Garber, S. Kaplan, M. Teicher, B. Tsaban and U. Vishne, *Probabilistic solutions of equations in the braid groups*, Advances in Applied Mathematics 35 (2005) no. 3, 323-334.

- 62. D. Garber, S. Kaplan, M. Teicher, B. Tsaban and U. Vishne, *Length-based conjugacy search in the braid group*, Contemporary Mathematics 418 (2006), 75-87.
- 63. E. Godelle, S. Kaplan and M. Teicher, *Conjugacy in Artin groups and application to the classification of surfaces*, J. Algebra and Applications 5 (2006), 563-570.
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