CURRICULUM VITAE

SAHARON SHELAH

Institute of Mathematics
The Hebrew University of Jerusalem
Jerusalem 91904, Israel.

E-mail: shelah@math.huji.ac.il
URL: https://shelah.logic.at

Personal Information

Date and place of birth: July 3, 1945; Jerusalem, Israel
Nationality: Israeli
Marital Status: Married (Yael), three children (Omri, Atalya, Yovav)

Education

October 1962 – June 1964:
Studied Applied Mathematics at Tel Aviv University. Awarded B.Sc. with distinction.
November 1964 – July 1967:
Served in the army.
October 1965 – July 1968:
Studied Mathematics at the Hebrew University, Jerusalem. Awarded M.Sc. with distinction.
(M.Sc. Thesis in Mathematics under the supervision of Professor H. Gaifman, *On Hanf numbers*.)
October 1967 – July 1969:
Studied towards Ph.D. in Mathematics at the Hebrew University, Jerusalem under the supervision of Professor M. O. Rabin.
March 16, 1970:
Awarded Ph.D Summa Cum Laude

Employment

October 1967 – March 1969:
The Hebrew University of Jerusalem. Teaching assistant in the Institute of Mathematics.
April – September 1969:
The Hebrew University of Jerusalem. Instructor, Institute of Mathematics.
September 1969 – July 1970:
Princeton University. Lecturer in the Mathematics Department.

Date: May, 2020.

July 1970 - July 1971:
University of California Los Angeles. Assistant Professor (tenure track).
October 1, 1971 – April 30, 1972:
The Hebrew University of Jerusalem. Assistant Professor in the Institute of Mathematics.
May 1, 1972 – December 1, 1974:
The Hebrew University of Jerusalem. Associate Professor, Institute of Mathematics.
December 1, 1974 – present:
The Hebrew University of Jerusalem. Professor, Institute of Mathematics.
October 1986 – present:
Rutgers University, New Brunswick, NJ. Distinguished Visiting Professor (two months a year spent here).

Visiting Positions

September 1977 – January 1978:
University of Wisconsin at Madison. Visiting Professor.
January – August 1978:
University of California Berkeley. Visiting Professor.
January – March 1982:
University of California Berkeley. Visiting Professor.
September 1984 – May 1985:
University of Michigan, EECS and Math., Ann Arbor, Michigan. Visiting Professor.
June – August 1985:
Simon Fraser University, Burnaby B.C., Canada. Visiting Professor.
September 1985 – February 1986:
Rutgers University, New Brunswick, NJ. Visiting Professor.
October 1986 – present:
Rutgers University, New Brunswick, NJ. Distinguished Visiting Professor (two months a year spent here, for more details see "Conferences attended, short visits, talks given" below).
September – October 2000:
Institut Mittag-Leffler, Sweden. Visiting Professor.

Ph.D. Students

Mati Rubin, 1972 – 1976, Professor, Ben-Gurion University (passed away)
Uri Abraham, 1975 – 1979, Professor, Ben-Gurion University
Shai Ben David, 1976 – 1985, Professor, University of Waterloo
Rami Grossberg, 1982 – 1986, Professor, Carnegie-Mellon University
Menachem Kojman, 1989 – 1993, Professor, Ben-Gurion University
Shmuel (Sami) Lifsches, 1991 – 1997
Ofer Shafir (didn't complete his degree)
Ziv Shami, 1993 – 1998,
Alex Usvyatsov, 2000 – 2005, Researcher, TU Wien
Moshe Klein, 2001 – 2004 (didn't complete his degree)
Mor Doron, 2003 – 2010
Itay Kaplan, 2005 – 2010, Professor, The Hebrew University
Shimon Garti, 2008 – 2012, Researcher, The Hebrew University

Haim Horowitz, 2012 – 2016
Shlomo Eshel, since 2023, together with I. Kaplan

M.Sc. Students

Anna Sfard, 1972 – 1974, Professor, University of Haifa
Lion Sfard, 1972 – 1974
Rachel Vinstein, 1972 – 1974
Uri Abraham, 1973 – 1975
Amit Cohen, 1974 – 1975
Edit Doron, 1978 – 1980, Professor, Hebrew University, Linguistics
Rami Grossberg, 1979 – 1981
Menachem Kojman, 1985 – 1988
Shmuel (Sami) Lifsches, 1988 – 1990
Eyal Firstenberg, (2009)
Adi Jarden, 2004 – 2007, Lecturer, Ariel University Center
Chanoch Havlin, (2004)
Esther Gruenhut, (2008)
Moran Cohen, (2009-10)
Haim Horowitz, (2010 – 2012)
Biran Falk-Dotan, (2023 – 2025/6)

Post-Doctoral Fellows

T. Bartoszyński (National Science Foundation)
J. Brendle (Kobe U.)
J. Cummings (Carnegie-Mellon U.)
M. Droste (Leipzig U.)
M. Džamonja (U. of East Anglia)
T. Eisworth (Ohio U.)
S. Fuchino (Kobe U.)
M. Goldstern (U. of Technology Vienna)
J. Makowsky (Technion, Israel Institute of Technology)
A. Rosłanowski (U. of Omaha, Nebraska)
O. Spinas (Christian-Albrechts-U. Kiel)
A. Villaveces (U. Nacional de Columbia in Bogota)
M. Malliaris (University of Chicago)
all of whom are now tenured professors.

Honorary Positions

October 1980 – September 1981:
Head of the Model Theory group in the Institute for Advanced Studies, Jerusalem.
October 1992 – present:
Member of the General Editorial Board of *Israel Journal of Mathematics* and *Journal D'Analyse Mathématique*.
January 1994 – present:
Editor of *Fundamenta Mathematicae*.
January 1994 – present:
Honorary Editor of *Mathematica Japonica*.

January 1996 – present:
Editor of *Journal of Applied Analysis*.
January 1998 – present:
Editor of *Asian Journal of Mathematics*.
May 2013 – present:
Editor of *Annales Mathematicae Silesianae*.
2012 – present:
Member of Advisory Committee of the Center for Advanced Studies in Mathematics at Ben-Gurion University of the Negev.

Awards

May, 1977:
Awarded Erdös Prize
(a prize for Israeli mathematicians, awarded annually since 1977).
November 1978 – present:
Awarded the A. Robinson Chair for Mathematical Logic
(at the Hebrew University, Jerusalem).
July 1982:
Awarded the Rothschild Prize in Mathematics
(awarded every few years to an Israeli mathematician).
January 1983:
Awarded the C. Karp prize
(awarded by the Association for Symbolic Logic every five years).
May 1988:
Member of Israeli Academy of Science and Humanities.
May 1991:
Foreign Honorary Member of the American Academy of Arts and Sciences.
November 1991:
Awarded SIAM 1991 George Polya Prize in Applications of Combinatorial Mathematics for *Primitive recursive bounds for van der Waerden numbers*.
March 1996:
Gödel Lecture in Annual Meeting of ASL, Madison, Wisconsin. Title: *On categoricity of non-elementary classes in three successive cardinals*.
April 1998:
Awarded the Israel Prize in Mathematics.
August 1999:
Awarded the JAMS Prize (of the Japanese Association of Mathematical Sciences).
November 2000:
Awarded the Janos Bolyai prize by the Hungarian Academy of Sciences for the monograph *Cardinal Arithmetic*.
January 2001:
Awarded the Wolf Foundation Prize in Mathematics.
August 2011:
Awarded the EMET Prize for Arts, Science and Culture.
September 2012:
Member of Academia Europaea.

2013:
Awarded the 2013 Leroy P. Steele Prize for Seminal Contribution to Research of the AMS.
May 2013:
Honorary Member of the Hungarian Academy of Sciences.
July 2017:
Awarded the Hausdorff Medal together with Maryanthe Malliaris by the European Set Theory Society for: ([MS16]).
March 2018:
2018 Rolf Schock Prize in Logic and Philosophy, by the Royal Swedish Academy of Sciences.
December 3, 2019:
Honorary Doctorate in Natural Sciences from TU Wien (Vienna University of Technology).

Grants

1969 – 1971:
Fulbright Travel Grant
1969 – 1970:
NSF, Princeton (junior researcher).
1970 – 1971:
NSF, UCLA (junior researcher; with Chang).
1974 – 1978:
NSF, Stanford University (junior researcher, with Feferman).
1975 – 1980:
United States-Israel Binational Science Foundation (BSF) for a project in *Model Theory*.
1977:
NSF, University of Wisconsin (junior researcher; with Keisler).
1978, 1–6:
NSF, University of California Berkeley.
1979, 7–8:
NSF, Ohio State University, Columbus, Ohio (inside Friedman's grant).
1981 – 1984:
United States – Israel Binational Science Foundation (BSF), grant for a project *Problems in Set Theory and Model Theory*. Co PI's: Paul C. Eklof and Gregory Cherlin.
1982, 1–3:
NSF, University of California Berkeley (with McKenzie).
1984 – 1985:
NSF, Michigan University (with Blass (Math) and Gurevich (CS)).
1985 – 1988:
United States – Israel Binational Science Foundation (BSF), grant for a project *Problems in Logic*. Co PI's: John Baldwin and Yuri Gurevich.
1988 – 1991:
United States – Israel Binational Science Foundation (BSF), grant for a project *Model Theory*.

1989 – 1991:
The Niedersachsen Fundation, German-Israeli project (with Podewski and Steffens) *Transversals in Infinite Graphs*.
1990 – 1993:
The Israel Science Foundation founded by The Israel Academy of Sciences and Humanities (ISF) (with H. Judah), grant for a project *The Continuum Problem*.
1991 – 1995:
United States – Israel Binational Science Foundation (BSF), grant for a project *Problems in Logic and its Application*. Co PI's: John Baldwin, Rami Grossberg and Yuri Gurevich.
1992 – 1994:
Deutsche Forschungsgemeinschaft (DFG), grant Ko 490/7-1 (with S.Koppelberg) for a project *Boolean Algebras*.
1993 – 1996:
The Israel Science Foundation founded by The Israel Academy of Sciences and Humanities (ISF), grant for a project *Set Theory of the reals*.
1995 – 1997:
German Israeli Foundation for Scientific Research and Development (GIF) (with R. Göbel and M. Droste), grant for a project *Applications of Model Theory to Algebra*.
1995 – 1998:
United States – Israel Binational Science Foundation (BSF), grant for a project *Classification Theory and Finite Model Theory*. Co PI's: Gregory Cherlin, Yuri Gurevich and Mirna Džamonja.
1996 – 1999:
The Israel Science Foundation founded by The Israel Academy of Sciences and Humanities (ISF), grant for a project *Cardinal Arithmetic*.
1998 – 2001:
United States – Israel Binational Science Foundation (BSF), grant for a project *Classification Theory and Finite Model Theory*. Co PI's: Gregory Cherlin, Yuri Gurevich, Mirna Džamonja and Andrzej Rosłanowski.
1999 – 2001:
German Israeli Foundation for Scientific Research and Development (GIF) (with R. Göbel), grant for a project *Infinite combinatorics and their impact on Group Theory*.
1999 – 2002:
The Israel Science Foundation founded by The Israel Academy of Sciences and Humanities (ISF), grant for a project *Cardinal Arithmetic*.
2003 – 2005:
German Israeli Foundation for Scientific Research and Development (GIF) (with R. Göbel), grant for a project *Set Theoretic Principles and Constructions in Module Theory with Additional Impact to Algebra*.
2003 – 2007:
The Israel Science Foundation founded by The Israel Academy of Sciences and Humanities (ISF), grant for a project *Classification Theory for Non Elementary Classes*.
2003 – 2007:
United States – Israel Binational Science Foundation (BSF), grant for a project

Forcing for Set Theory of the Reals. Co PI's: Andreas Blass, Todd Eisworth, and Andrzej Rosłanowski.

2007 – 2011:
The Israel Science Foundation founded by The Israel Academy of Sciences and Humanities (ISF), grant for project *Problems in Classification Theory.*

2007 – 2011:
United States – Israel Binational Science Foundation (BSF), grant for a project *Problems in the Theory of Forcing.* Co PI: Andrzej Rosłanowski.

2009 – 2011:
German Israeli Foundation for Scientific Research and Development (GIF) (with R. Göbel, L. Struengmann), grant for a project *Solving problems from module theory by using recent results from logic and model theory.*

2011 – 2015:
The Israel Science Foundation founded by The Israel Academy of Sciences and Humanities (ISF), grant for project *Cardinal Arithmetic.*

2012 – 2015:
United States – Israel Binational Science Foundation (BSF), grant for a project *Very nice forcing notions - the Creature Forcings.* Co PI: Andrzej Rosłanowski.

2014 – 2019:
European Research Council (ERC), grant for project *Dependent Classes - Model theory and its applications.*

2018 – 2023:
The Israel Science Foundation founded by the The Israel Academy of Sciences and Humanities (ISF), grant for project *On many cardinal invariants of the continuum.*

2021 – 2026:
NSF-BSF, grant with M. Malliaris for the project *Independent theories.*

2023 – 2027:
Israel Science Foundation, grant for the project on *Corrected creature iterations.*

Societies

- Member, Israel Mathematical Society

Conferences attended, short visits, talks given

November 1969:
visit to Cornell University; colloquium lecture: *On the stability spectrum* ([GS73]).

January 1970:
visit to University of Wisconsin at Madison; colloquium lecture.

January 1971:
ASL meeting, UCLA; **invited lecture**: *On isomorphic ultrapowers* ([She71]).

1971:
visit to Simon Fraser University, B.C. Canada; colloquium lecture.

1971:
visit University of Colorado, Boulder; colloquium lecture.

May 1971:
Tarski's 70th Birthday Conference, UC Berkeley; **invited lecture**: *Stability Theory and the spectrum conjecture.*

July 1971:
Summer School in Logic, NATO, Cambridge, GB; **invited lecture**.
August 1974:
visit to Stanford University; colloquium lecture.
August 1974:
International Congress of Mathematicians, Vancouver BC; **invited lecture:** *Stability Theory.*
Additional lecture: *Whitehead problem from compactness of singulars* ([She75a]).
March 1975:
Louvain La Neve, visit and conference; **invited series of lectures** on stability for e.c. models: *The lazy model-theoretician's guide to stability* ([She75b]).
April 1975:
visit to University of Paris VIII; colloquium lecture.
May 1975:
Robinson Memorial Conference, Yale; **invited lecture:** *Refuting the Ehrenfeucht Conjecture* ([She76]).
Summer 1975:
ASL conference, Clermont-Ferand; **invited lecture**.
Spring 1976:
ASL meeting, Jerusalem; **invited lecture:** *Number of models of* $\varphi \in \mathbb{L}_{\omega_1,\omega}$ *in the* $\aleph_n$*-s* ([She83a, She83b]).
July 1 – August 3, 1976:
Conference on Group Theory and Logic, Oxford; **invited lecture**. Additional informal lecture: *Kurosh Groups* ([She80a]).
August 1976:
ASL conference, Oxford; **invited lecture**.
Additional lecture: *Kurosh group* ([She80a]).
July 1977:
Workshop in Model Theory, Berlin; **invited lectures**: *On the omitting type theorem* ([She81]) and *On compactness in singulars* [She19a] (previously [Sh:E18])
Summer 1977:
European Annual ASL conference, Wroclaw, Poland; **invited lecture**: *Omitting types for* $L(Q)$ *in* λ *interpretation* ([She81]).
August 1977:
a week-long visit to Freiburg, colloquium lecture.
August 1977:
ETH, Zurich; colloquium lecture: *Whitehead problem.*
November 1977:
University of Illinois at Urbana; colloquium lecture.
November 1977:
Chicago University; colloquium lecture.
December 1977:
a week-long visit to University of California at Irvine; colloquium lecture.

January 1978:
UCLA Meeting; **invited lecture**: *Uniformization* ([She80b]).
Summer 1978:
Summer School in Set Theory, NATO, Cambridge, GB; **invited lecture**.

August 1978:
a month-long visit to Bedford College, London, GB, colloquium lecture.
Summer 1978:
European Annual ASL Conference, Mons, Belgium; **invited lecture**.
December 1978:
Oberwolfach Meeting on Soft Model Theory; **invited lecture**.

January 1979:
Oberwolfach Meeting on Boolean Algebras, **invited lecture**.
Summer 1979:
visit to Ohio State University, Columbus, Ohio (two months). Gave a summer course on forcing.
Summer 1979:
Conference on Banach Spaces, Kent State University, **invited lecture:** *Existence of some Banach spaces* [She85, §5].
Summer 1980:
visit to Ohio State University, Columbus, OH (two months);
visit to Pennsylvania State University, University Park, PA;
visit to Yale University.
August 1980:
Annual European ASL Meeting in Patras, Greece; **invited lecture**; an additional informal lecture: *A bound on* $\aleph_\omega^{\aleph_0}$ ([She82, CH XIII]).
June 1981:
Frieburg Meeting on Soft Model Theory; **invited participant**.
January 1982:
UCLA Meeting, lecture: *Model Theory.*
February 1982:
a week-long visit to Simon Fraser University, Burnaby, BC.
March 1982:
Conference in Soft Model Theory, Stanford; **invited participant**.
July 1983:
AMS Summer Conference on Set Theory; Boulder, Colorado; organizer, one of the editors of the Proceedings and **invited speaker**.
August 1983:
Conference on Logic, Methodology and Philosophy of Science, Salzbug, Austria; **invited lecture**.
September 1983:
visit to Simon Fraser University Burnaby, BC (two weeks).
September 1983:
visit to SUNY at Buffalo (two weeks); colloquium lecture and 2 other lectures.
April 1984:
Conference for Fuchs birthday, Iudine, Italy; **invited lecture**.
April 1984:
visit to Budapest, Hungary; three colloquium lectures; one: *Remarks on the numbers of ideals of Boolean algebra and open sets of a topology* ([She86b]).
July 1984:
Conference in Classification Theory, Trento, Italy; **an invited series of lectures** on: *The main gap for countable f.o. T.*

August 1984:
US–Israel Conference in Classification Theory, Chicago; head of the Israeli delegation; lecture: *Classification over a predicate*.
November 1984:
MAMLS meeting, Lehigh University, Bethlehem, PA; **invited lecture**.
January 13–19, 1985:
Oberwolfach Conference on Boolean Algebras, organized by S. Koppelberg and D. Mink; **invited lecture**.
January 13–19, 1985:
Oberwolfach Meeting on Set Theory, organized by E.J. Thiele and M. Magidor; **invited lecture**.
April 1985:
a week-long visit to Caltech, Pasadena, CA.
April 1985:
visit to Toronto; colloquium lecture.
April 1985:
visit to Dartmouth College NH; colloquium lecture.
July 1985:
AMS Conference of Finitary Logic, Arcata, California; **invited lecture**: *Was Sierpinski right?* ([She88b]).
June – August 1985:
visit to Simon Fraser University, Burnaby B.C., Canada; course on *Classification over a predicate*. ([She86a]).
September – December 1985:
visit to Rutgers University; a course on *Universal Classes* ([She87], [She09c, II A-E]).

January – February 1986:
Institute for Advanced Studies (a month).
February 1986:
visit to McGill University, Montreal, Quebec.
July 1986:
International Congress of Mathematicians, Berkeley California; Chair of the Committee for Logic; **invited plenary lecture**: *Universal Classes* ([She87]).
September – October 1986:
Rutgers University; short course on *Monadic Logic* (includes [Sh:284A]).

February 1987:
a week-long visit to Tulane University, New Orleans, Louisiana; a conference in honor of S.Shelah.
July 1987:
Conference in Classification Theory, Trento, Italy; **invited lecture**.
September – October 1987:
Rutgers University; short course on *Viva la difference I: Non-isomorphism of ultrapowers of countable models* ([She92]).
May 1988:
British Annual Meeting, Devonshire, GB; **invited lecture:** *On van der Wardean numbers* ([She88a]).

September – October 1988:
Rutgers University; series of talks on *Non structure $I(\lambda, T)$ for T unsuperstable* ([Shear, III, VI]).
July 1989:
visit in Queen's Mary College, London; lecture: *Non structure theory* ([She90]).
July 1989:
Oxford, GB; colloquium lecture: *On cardinal arithmetic.*
July 1989:
Cambridge, GB; colloquium lecture: *Incompactness for chromatic numbers of graphs.*
September – October 1989:
MSRI Year in Logic, Berkeley, California; series of lectures on *Proper Forcing: no new reals* ([She98c, ChXVIII]).
October 1989:
Conference in Set Theory, MSRI; **invited lecture:** *Cardinal Arithmetic.*
October 1989:
MAMLS meeting, Berkeley; **invited lecture**: *On* $\mathrm{pp}(\aleph_\omega) < \aleph_{\omega_4}$ ([She94, IX §2]).
July 1990:
European Annual ASL Conference in Helsinki, Finland; **invited lecture**: *On universal classes and existence of indiscernible set over other index structures* (from [She09g]).
September – October 1990:
Rutgers University; short course: *On models with few automorphisms.*
January 1991:
Winter Institute and Conference on Set Theory of the Reals, Bar–Ilan, Israel; **an invited series of talks** on *The* pcf *Theory*; also **invited lecture**: *Future of Set Theory* ([She93]).
April 22 – May 2, 1991:
Banff Conference on Finite and Infinite Sets, Alberta, Canada; **invited lecture**: *Cardinal arithmetic.*
September – October 1991:
Rutgers University; short course: *On cardinal arithmetic.*
June 11–14, 1992:
The Annual Meeting of the Canadian Mathematical Society, **invited plenary lecture:** *On cardinal arithmetic.*
June 15–19, 1992:
visit to Simon Fraser University, Burnaby, BC; Lecture in Memory of Alan Mekler.
September – October 1992:
Rutgers University; short course on *Compact logic in ZFC: Complete embedding of atomless Boolean algebras* ([Shea]).
October 1992:
MAMLS meeting; **invited lecture**: *Compact Logics.*
September – October 1993:
Rutgers University; short course on *Existence of λ-separable Abelian groups.*
October 1993:
MAMLS meeting; **invited lecture**: *On pcf without choice* ([She97b]).
December 1993:
Israel–French Meeting in Lyons; **invited lecture**.

January 1994:
Workshop on Set Theory of the Reals, Bar-Ilan, Israel; **invited lectures**: *On pcf and the free subset property* ([She02b]) and *On adding many Cohen reals without adding a Cohen subset to* $\aleph_1$.
June 9–11, 1994:
Conference on Model Theory and Algebra, Essen; **invited lecture**: *λ-free algebras.*
September – October 1994:
Rutgers University; short course on *Categoricity and abstract elementary classes* ([She01a]).
May 26–28, 1995:
Joint Meeting of the AMS and the Israel Mathematical Union, Jerusalem, Israel: Special session organizing committee, chair.
June, 1995:
Conference Algebra and Model Theory, Dresden, Germany.
June, 1995:
Conference 100 years of Cantor's Set Theory, Halle, Germany; **invited lecture:** *Cardinal Arithmetic.*
August 1995:
European Logic Colloquium 1995, Haifa, Israel; **invited plenary lecture:** *Proper and Improper Forcing* (on [She98d], [Shed], [She00a]).
September – December 1995:
Rutgers University; short course: *On 0–1 laws* ([LS]).
September 1995:
MAMLS Meeting, **Lecture:** *An application of pcf: if λ is a strong limit singular of uncountable cofinality $2^\lambda > \lambda^+$, then $\lambda^+ \to (\lambda, \lambda)^2$* ([She98a]).
October – December 1995:
DIMACS Special Year on Logic and Algorithms; **invited lecture:** *Polynomial Models for 0-1 Laws* ([LS]).
January – June 1996:
visit to University of Wisconsin at Madison; a series of lectures on *Topics from Set Theory and Model Theory* ([She98d], [She03c], [She21c], [She01a], [She99d]).
March 1996:
Annual Meeting of ASL, Madison, Wisconsin; **Gödel Lecture**: *On categoricity of non-elementary classes in three successive cardinals* ([She01a], [She09b]).
March 1996:
Boise Extravaganza in Set Theory V, Boise, Idaho; **invited lecture**: *Preserving cardinals in $(< \kappa)$–support iterations* ([She03c]).
July 1996:
The First Set Theory and Model Theory Conference of the York – McMaster – University of Toronto – Fields in conjunction with annual McLogic meeting; **invited lectures**: *Free caliber of Boolean Algebras* ([She99d]) and *Categoricity of non-elementary classes.*
August 1996:
University of Helsinki, Finland; **invited lecture**: *On non–structure.*
August 1996:
TOPOSym 1996, Prague, Czech Republic; **invited talk**: *Applications of* **pcf** *to general topology* ([She99d]).

September 1996:
Rutgers University; Short course on *Non-elementary proper forcing notions* ([She04c]).
October 1996:
AMS meeting, Rider University; Special session lecture: *Existence of universal members in classes of Abelian groups* ([She97a], [She01b]).
October 1996:
MAMLS Meeting, Rutgers University; Lecture: *On categoricity in non elementary classes.*
June 1997:
Conference in honor of Rabin's 65th birthday; Lecture: *On 0-1 laws.*
September 1997:
MAMLS meeting; Lecture: *On applications of* **pcf** *to BAs.*
September-October 1997:
ESF meeting in Barcelona; Lecture: *On the Erdös-Renyi conjecture* ([She98b]). (Vice-chair).
September-October 1997:
Rutgers University; Short course on *Open Problems* ([She00b], [She00c]).
February 1998:
Turan Lectures (3) in Budapest, Hungary:

- *Cardinal Arithmetic* ([She94]),
- *Non-structure Theory* ([Shear]),
- *A Partition Theorem* ([She02a])

March 1998:
A conference "Groups and Probability" in Jerusalem; Lecture *On 0-1 laws* ([She02e], [LS]).
August 1998:
Colloquium Logicum'98, Berlin; **invited lecture**: *On Arhangelskii's Problem* ([She04a]).
September 1998:
MAMLS meeting; **invited lecture**: *The Whitehead problem for Souslin groups* ([She99b]).
September – October 1998:
Rutgers University; short course on *Perfect squares, Souslin relations, and Borel Whitehead groups* ([She99a]).
July 4–18, 1999:
Set-Theoretic Topology Workshop of the Erdős Center, Budapest, Hungary. Two lectures on *Partitions of Spaces* ([She04a]).
July 4–11, 1999:
Paul Erdős and his Mathematics, Budapest, Hungary; Lecture: *On omitting cardinals in T_3 spaces* ([She99c]).
August 20–26, 1999:
11th International Congress of Logic, Methodology and Philosophy of Science, Kraków, Poland; Lecture: *On categoricty of non–elementary classes* ([She01a], [She09b]).
June 26 – July 2, 1999:
Infinite Combinatorics and its Impact to Algebra, European Research Conferences. A conference in Hattingen, Germany. Chairman; Lecture: *The Revised Generalized Continuum Hypothesis, and applications.*

September – October 1999:
Rutgers University; Lectures on *On resplended models* and *On Boolean Algebras* ([Shear, Ch V, VIII]).
October 15–17, 1999:
MAMLS meeting; Lecture: *Are* $\mathfrak{a}$ *and* $\mathfrak{d}$ *your cup of tea?* ([She04e]).
August, 2000:
Meeting of the Japanese Mathematical Association; **invited lectures**: *What I do not understand in model theory?* ([She00c]).
September 2–4, 2000:
Cantor's Paradise – a workshop with Saharon Shelah, Japan; **invited lectures** (6): *Are* $\mathfrak{a}$ *and* $\mathfrak{d}$ *your cup of tea?* ([She04e]).
September – October, 2000:
visit to Institut Mittag-Leffler, Sweden; **Invited talk** on *Categoricity* ([She09b]), **invited seminar lecture**: *Superatomic Boolean algebras and rigidity* ([She02c]).
November, 2000:
You can enter Cantor's Paradise Bolyai Society, Budapest ([She02d]).
February 9–11, 2001:
Conference in honor of Göbel's 60'th Birthday, Essen; Lecture: *On strange splitters - An application of set theory to homological algebra.*
February 16–19, 2001:
MAMLS meeting, Rutgers University; Lecture: *The automorphism group of a countable structure* ([She03a]).
May 20–25, 2001:
Conference and Workshop in honor of Professor Saharon Shelah, IAS, Ben Gurion University; Steering committee; Lecture: *Model theory: between Polish groups and abstract elementary classes* ([She11b]).
August 18–23, 2001:
EURESCO Conference, Hattingen; Lecture: *Irredundance and consistency results.*
August, 2001:
ASL European meeting, Wien; Lecture: *On a partition relation* ([She03b]).
Fall, 2001:
MAMLS meeting, Rutgers University; Lecture: *Colonial Theories* ([She04b]).
September – October 2001:
Rutgers University; Short course on *Polish group* ([771, §1 – §5]).
October, 2001:
Rutgers University, coloquium lecture: *Hilbert first problem: on the arithmetic of infinite numbers.*
Fall, 2002:
MAMLS Meeting, Rutgers University; Lecture: *Topless Towers* ([Sheh]).
September – October 2002:
Rutgers University; short course: *Quantification over automorphisms presented with forcing* [(Sh:800]).
October, 2002:
Distinguished Lecture Series, Fields Institute, Toronto; **series of lectures on:** *Measured creatures* ([RS06]).
Summer, 2003:
ASL European meeting, Helsinki; **invited lecture:** *Good* λ*-frames* from ([She09a]).

August 8–13, 2003:
Topology 2003, Juhasz 60th birthday meeting, Budapest; **invited lecture:** *On character of uf on ω* from ([MS07]).
September – October 2003:
Rutgers University; short course: *Collapsing an inaccessible slowly* ([S$^+$a]); one lecture on ([She09b], [She09f]).
October 4–5, 2003:
MAMLS Meeting, Dartmouth College, In honour of J. Baumgartner's 60'th Birthday, **invited lecture:** *On faking and forcing* ([She06b]).
March 10, 2004:
Logic Seminar, Hebrew University, *Working in ZF, unstable T with $|T|$ an $\aleph$, has at least $|\alpha|$ non isomorphic models in $\aleph_\alpha > |T|$.* From ([She09d] Sec. 3, continues previous week's lecture)
March 23–29, 2004:
8th Jerusalem Midrasha Mathematicae, IAS, 2 lectures: *The revised generalized continuum hypothesis revisited*, and *Diamonds in all but finitely many cofinalities* ([She06a]).
March 2, 2005:
Logic Seminar, Hebrew University, *A.E.C.*. From ([S$^+$b]).
May 16–19, 2005:
5th Workshop on Interdisciplinary Applications of Graph Theory, Combinatorics and Algorithms, in honor of Prof. Michael Rabin, Univerity of Haifa (CRI), **invited lecture:** *What majority decisions are possible* ([She09h]).
September 12, 2005:
Logic Seminar, Rutgers University, *"Complete" Real-Closed fields.* From ([She04d]).
September 19, 2005:
Logic Seminar, Rutgers University, *Long Automorphism Towers I* from ([Sheh]).
October 14–15, 2005:
MAMLS Meeting, Rutgers University, In honour of Shelah's 60th Birthday; Panel: Morley, Pillay, Scanlon, and Shelah, *Bicoastal model theory: marriage, separation, or divorce.*
November 2, 9, 16, 2005:
Logic Seminar, Hebrew University, *Limit models and dependent theories* from ([She14a]).

March 8, 2006:
Logic Seminar, Hebrew University, *Comparing invariants of the Continuum: Groupwise density and non-dominating number, G and B.* From ([She08a]).
September 11, 2006:
Logic Seminar, Rutgers University, *Subgroups of bounded index in dependent theories.* From ([She08b]).
September 14–17, 2006:
Cohen is 72: Analysis, Logic and Number Theory; Stanford University, Stanford, CA **invited lecture:** *Forcing is great.*
October 14, 2006:
MAMLS Meeting, Rutgers University, *In our modest knowledge of dependent theories, are measurable cardinals relevant?* from ([She14a], [S$^+$c]).

March 22, 2007:
Basic Notions Seminar, Hebrew University, *Forcing.*
April 19, 2007:
Basic Notions Seminar, Hebrew University, *Forcing (continuation).*
October 5–6, 2007:
AMS Regional Meeting, Chicago, on: Model Theory of AEC, **invited lecture:** *Non structure in λ^{++} and weak non-forking* ([She09e]).
October 7, 2007:
Mini-conference on Non-Elementary Classes, University of Illinois at Chicago, on: The Future of Non-elementary Classes, **invited lecture:** *Why I am so happy II* and *What next for AEC'?* ([SV24]).

March 27–30, 2008:
ASL Annual Meeting, Irvine, CA, **special lecture** in honor of Paul Eklof: *Incompactness in singular cardinals* ([GS24]).
September 1–4, 2008:
Haifa Modnet Meeting, **invited lecture:** *On 2-dependent first order complete theories* ([She17b])
September – October, 2008:
Rutgers University; short course *On dependent theories* ([Shec]).
September 24–26, 2008:
MAMLS Meeting, Rutgers University, in honor of G. Cherlin's 60th birthday, **invited lecture:** *Dependent theories: limit model existence and recounting the number of types* ([Shec]).

September 1–30, 2009:
Scientific Program Fall 2009, Mittag-Leffler Institute, Sweden, on: Mathematical Logic: Set Theory and Model Theory.
October 1–28, 2009:
Rutgers University; short course *Applying PCF to Abelian group of the Trichotomy* ([She13b]).
October 23–25, 2009:
MAMLS Meeting, Rutgers University, **invited lecture:** *Forcing for a larger continuum* ([She13b]).

September 5–October 22, 2010:
Rutgers University, Logic Seminar: *Orders in models of PA* ([She15b]), 3 lectures; *Locally finite groups*, ex.cl ([She17c]), 2 lectures; *Making a point* ([S$^+$d]) 1 lecture.
October 16, 2010:
MAMLS Meeting, Rutgers University; Lecture: *The axiom of choice, should we reconsider?*. Relevant papers: ([She97b], [She24], [She09d], [She11a], [S$^+$e], [She14b], [She16b]).

February 23, 2011:
Logic Seminar, Hebrew University, talk on: *Stability of Polish structure*, (see paper [She16a]). At first glance, notions like categoricity, stability are meaningless when we look at a fixed structure, nicely definable say on the reals. But we shall suggest a

definition and show that the direction is not empty: the theorems on the existence of indiscernibles has a generalization in this context.

May 27, 2011:
Set Theory Seminar, Hebrew University, talk on: *There are forcing notions with properties parallel to random real forcing for strongly inaccessible cardinals*, (see paper [She17a]). We show for λ weakly compact that there is a (non-trivial) ${}^{\lambda}\lambda$-bounding λ^+-c.c. $(< \lambda)$-strategically complete forcing notion and even a λ-complete one.

May 30–June 3, 2011:
Conference on Groups and Model Theory, Muelheim an der Ruhr, Germany; **invited lecture**: *Existentially closed locally finite groups* ([She17c]).

June 13–17, 2011:
Conference on Infinite and finite sets (Hajnal Conference), Alfréd Rényi Institute, Budapest; **invited lecture**: *Non-P point and forcing* ([S$^+$f]).

September 12, 2011:
Logic Seminar, Rutgers University, *Can we understand countable theories with few atomic models in $\aleph_1$ (without weak CH)? A progress report* ([S$^+$g], see [BLS16]).

September - October, 2011:
Logic Seminar, Rutgers University, *Pseudo-random forcing in inaccessibles*, ([She17a]), (Sept. 19, 26, Oct. 3, 10, 17).

May 10, 2012:
Colloquium lecture, Hebrew University, *Recounting Types and Classifying Theories.* From ([She15a])

July 2–7, 2012:
6th European Congress of Mathematicians, Krakow, Poland;
plenary speaker: *Classifying classes of structures in model theory.* ([E70] general), ([E71] presentation), ([E72] proceedings paper)

July 8–11, 2012:
Trends in Set Theory, Warsaw, Poland, (satellite event to the 6th ECM); **invited talk**: *Null ideal (random forcing) for inaccessible exist?.* ([She17a])

September 10, 2012:
Logic Seminar, Rutgers University, *How much freedom is compatible with complicatedness?* ([She20]) (Sept. 10, 17, 24, Oct. 8, 22)

September 27, 2012:
Fields Institute, Thematic Program on Forcing and its Applications, Toronto, Canada, **invited lecture:** *Weak axiom of choice: can the dead be resurrected* ([She16b]).

October 6, 2012:
MAMLS Meeting, Rutgers University; **invited lecture:** *Model theory for θ-complete ultra-powers* ([She21b]).

October, 2012:
Logic Seminar, Rutgers University, *On compactness and chromatic number* ([She13a]).

May 20, 2013:
Interactions between Logic, Topological structures and Banach spaces theory, Research workshop of ISF, Eilat campus of Ben-Gurion University; **plenary lecture**: *Ultra-products of finite cardinals: spectrum of an ultrafilter* ([She18]).
November 29, 2013:
Set Theory Seminar, Hebrew University, *Coloring Theorems* ([She19b]).

May 4, 2014:
Member of scientific committee of the "Young set theory in Jerusalem" workshop held within the Midrasha Mathematicae at the Institute for Advanced Study, Givat Ram, October 2015.
September - October, 2014:
Rutgers University, Logic Seminar series of talks on: *The maximality principle for stationary sets.*

September - October, 2015:
Mini course at Rutgers.
October 25 - 26, 2015:
MAMLS Meeting in Rutgers, **Invited Lecture**, *The universality spectrum of a first order theory c*, ([She19b]).
October 29, 2015:
The 19th Midrasha Mathematicae, Compactness, Incompactness and Canonical Structures, Jerusalem Institute for Advanced Studies, *Iterated forcings for inaccessible cardinals*

January 19, 2016:
Combinatorics: Challenges and Applications, Celebrating Noga Alon's 60th Birthday, Tel Aviv University, *Random graph: stronger logic but with the zero one law*
February 17, 2016:
Menachem Magidor 70th Birthday Conference, Hebrew University, *How free can a quite complicated Abelian group be* ([She20]).

September - October, 2016:
Rutgers University, Logic Seminar series of talks on: *Random graphs: a stronger logic, but with the zero one law, I, II, and III* ([Sheg]) (Sept. 19, Sept. 26, Oct. 10) and on: *Failure of 0-1 laws in least fixed-point logic for random graphs with edge probability* $1/n^{\alpha}$ ([She15c, She17d]) (Oct. 25).

July 2–7, 2017:
6th European Set Theory Conference, Budapest, Hungary, Lecture: The Hausdorff Medal lecture, *Cardinal arithmetic and universal models* ([S^+h, S^+i]).

September 15–17, 2017:
Simon Thomas: the first 60 years, Rutgers University (Simonfest), Lecture: *ZFC constructing somewhat free Abelian group with prescribed endomorphism ring*, On ([KS]), in preparation.

September - October, 2017:
Rutgers University, Logic Seminar series of talks on *Atomic saturation of reduced power* ([She21a]), (Sept. 11, 25, Oct. 2, 9), and *Forcing a universal triangle free graph in* $\aleph_1$ (Oct. 15, 23, 30), see [Shej].

April 22–26, 2018:
Research Workshop of the ISF: Set Theory, Model Theory and Applications (In memory of Mati Rubin), Eilat. Plenary Lecture: *On the existence of universal models.* (Probably [She23b])

September - October, 2018:
Rutgers University, Logic Seminar series of talks. MAMLS meeting, Rutgers, **invited talk**.

June 23, 2019:
Laskowski Fest Conference: Model Theory and Mathematical Logic, UMD Math Department, talk via skype: *Simplicity and universality.*

October - November, 2019:
Rutgers University, Logic Seminar, series of talks on The universality spectrum for first-order theories

November 2, 2019:
MAMLS Meeting, Rutgers, **invited talk**, *Forcing against an ultrafilter.* On ([Shee])

August 31, 2020:
Bernays Lecture 1, talk via zoom: *Cardinal Arithmetic: Cantor's paradise.*

September 1, 2020:
Bernays Lecture 2, talk via zoom: *How large is the continuum?*

September 1, 2020:
Bernays Lecture 3, talk via zoom: *Cardinal invariants of the continuum: are they all independent?*

Virtual Rutgers visitors program fall 2020:

May 19, 2021:
Logic Seminar, Hebrew University, *Torsion-Free abelian groups are Borel complex*, ([PS24]).

Virtual Rutgers visitors program fall 2021

Sept 2020- Dec 2022 Mark Poor, post doc

June 15, 2022:
Logic Seminar, Hebrew University, *Automorphisms no-where trivial of the Boolean*

algebra P(lambda) modulo the ideal of bounded subsets, ([S$^+$j]).

July 10 – 14, 2022: Conference, Advances in Set Theory 2022, Hebrew University, *Corrected Iterations* ([She23a], [HS24]).
July 18 – 22, 2022:
36th Summer Topology Conference, Vienna; **Plenary speaker:** *Partition theorems for uncountable expanded trees* (zoom talk), ([Shef]).

August 29 – September 2, 2022:
European Set Theory Conference, Torino, *On having many translates of Borel sets pairwise with a restricted size of intersection* (zoom talk), ([RS19], [RS], [RS25]).

Virtual Rutgers visitors program fall 2022

January 16 – 20, 2023:
Hybrid Research School, Discrete Mathematics and Logic: between mathematics and computer science (from the finite to the infinite), CIRM, *Categoricity of atomic classes in small cardinals, in ZFC*.

May 31, 2023:
Logic Seminar, Hebrew University, *Abelian groups and infinitary logics* (based on a joint work with M. Asgherzadeh and M. Golshani), ([S$^+$k]).

August 8, 2023:
Juhász80 Workshop, Rényi Institute, Budapest, Hungary, *Consistency of Tiltan = club*, ([S$^+$l]).

July 7 – 11, 2025:
Logic Colloquium 2025, Vienna, Austria, *The Logic Colloquium, the European Summer Meeting of the Association for Symbolic Logic*, Plenary speaker, *Twins: non-isomorphic models forced to be isomorphic*, ([Shei]).

July 14 – 15, 2025:
TU Wien, Austria, *Conference in honor of Saharon Shelah's 80th birthday* and Visitors program, July 13 - 20. Lecture on July 14: *On classification on over a predicate: a program*; Lecture on July 15: *On Black boxes* ([S$^+$m]).

September 3, 2025:
Conference in honor of J. Brendle's 60th birthday, Kobe, Japan, invited lecture (zoom): *Consistency of square bracket partition relation* ([Sheb]).

Virtual Rutgers Visitors 2021: (six of them young)

(1) Heike Mildenberger, Sept. 1-7;
(2) John Baldwin, Sept. 1 - 7;
(3) Otmar Spinas, Sept. 5 - 10;
(4) Ashutosh Kumar, Sept. 12 - 17;
(5) Will Brian, ;
(6) Alan Dow:
(7) Lorenz Halbeisen and Ricardo Plati, Sept. 26 - Oct. 1;

(8) John Baldwin and Chris Laskowski;
(9) Chris Laskowski
(10) Vera Fischer, Oct. 10 - 15;
(11) Mohammad Golshani, Oct. 17 - 22;
(12) Michael Hrusak, 2021-10-16.,
(13) Dilip Raghavan, Nov. 1 - 5;
(14) (Shahram Mohsenipour),
(15) Juris Steprans, Nov. 7 - 12;
(16) Nick Ramsey;
(17) Kostana Ziemek;
(18) Wieslaw Kubis;
(19) Ilijas Farah,
(20) Clovis Hamel,
(21) Daniel Calderon,
(22) Sam Corson ;

Virtual Rutgers Visitors 2022:

(1) Lutz Strungmann, Aug. 28 - Sept. 2;
(2) Andrzej Roslanowski, Sept. 4 - 9; second visit Oct. 30 - Nov. 4;
(3) Heike Mildenberger, Sept. 4 - 9;
(4) Mohammad Golshani, Sept. 11 - 16; second visit Oct. 9 - 14;
(5) Mohsen Asgharzadeh, Sept. 11 - 16;
(6) Ashutosh Kumar, Sept. 18 - 23;
(7) Miguel Cardona, Sept. 27 - 30; second visit Oct. 18 - 21;
(8) John Baldwin, Oct. 2 - 7; second visit Nov. 13 - 18;
(9) Chris Laskowski, Oct. 2 - 7;
(10) Juris Steprans, Oct. 9 - 14;
(11) Haim Horowitz, Oct. 23 - 28;
(12) Wieslaw Kubis, Oct. 23 - 28;
(13) Juan Aguilera, Oct. 25 - 30;
(14) Lorenz Halbeisen, Nov. 6 - 11;
(15) Natasha Dobrinen, Nov. 6 - 11;
(16) D. Ulrich, Nov. 13 - 18;
(17) Gianluca Paolini, Nov. 14 - 20;
(18) Vera Fischer, Nov. 20 - 25;
(19) Andres Villaveces, Nov. 21 - 25;

Virtual Rutgers Visitors 2023:

(1) Miguel Cardona, real visit, Sept. 1 - 15;
(2) Gianluca Paolini, Sept. 3 - 10;
(3) Paul Larson, Sept. 13 & 27;
(4) Mohammad Golshani, Sept. 17 - 22; second visit Oct. 22 - 27;
(5) Mohsen Asgharzadeh, Sept. 17 - 22;
(6) Heike Mildenberger, Sept. 17 - 22;
(7) Juris Steprans, Sept. 24 - 29;
(8) Juan Aguilera, Oct. 1 - 6;
(9) Alan Dow, Oct. 8 - 13;
(10) Wieslaw Kubis, Oct. 8 - 13;
(11) Martin Goldstern, Oct. 15 - 20;
(12) Jakob Kellner, Oct. 15 - 20;
(13) Diego A. Mejia, Oct. 15 - 20;
(14) Sam Corson, Oct. 16 - 20;
(15) John Baldwin, Oct. 22 - 27;
(16) Chris Laskowski, Oct. 22 - 27; second visit Nov. 5 - 10;
(17) Natasha Dobrinen, Oct. 29 - Nov. 3;
(18) Ziemowit Kostana, Oct. 29 - Nov. 3;
(19) Assaf Rinot, Oct. 29 - Nov. 3;
(20) Danielle Ulrich, Nov. 5 - 10;
(21) Ashutosh Kumar, Nov. 12 - 17;
(22) Dilip Raghavan, Nov. 19 - 24;
(23) Vera Fischer, Dec. 10 - 15;
(24) Will Boney, Dec. 18 - 22;
(25) Ilijas Farah, Feb. 5 - 9, 2024 (in framework of 2023 visits);
(26) . Jakob Kellner, Feb. 17 - 21, 2024 (2023 visits);
(27) Denis Savielev, March 3 - 8, 2024 (2023 visits);

Virtual Rutgers Visitors 2024:

(1) Martin Goldstern, Sept. 1 - 6;
(2) Vera Fischer, Sept. 1 - 6;
(3) Jakob Kellner, Sept. 1 - 6;
(4) Diego A. Mejia, Sept. 1 - 6;
(5) Gianluca Paolini, Sept. 8 - 13;
(6) Ilijas Farah, Sept. 15 - 20;
(7) Paul Larson, Sept. 17;
(8) Mohsen Asgharzadeh, Sept. 22 - 27;
(9) Mohammad Golshani, Sept. 22 - 27; second visit Nov. 17 - 22;
(10) Heike Mildenberger, Sept. 29 - Oct. 4;
(11) Sam Corson, Sept. 30 - Oct. 4;
(12) Chris Laskowski, Oct. 6 - 11; second visit Nov. 3 - 8;
(13) John Baldwin, Oct. 6 - 11;
(14) Wieslaw Kubis, Oct. 27 - Nov. 1;
(15) Ziemowit Kostana, Oct. 27 - Nov. 1;
(16) Danielle Ulrich, Nov. 3 - 8;
(17) Natasha Dobrinen, Nov. 10 - 15;
(18) Lorenz Halbeisen, Nov. 24 - 29;
(19) Riccardo Plati, Nov. 24 - 29;
(20) Dilip Raghavan, Dec. 1 - 9;
(21) Denis Saveliev, Dec. 8 - 13;
(22) Lyubomyr Zdomskyy, Dec. 15 - 20;
(23) Ashutosh Kumar, Dec. 22 - 27;
(24) Andres Villaveces, March 9 - 14, 2025 (in framework of 2024 visits);

Virtual Rutgers Visitors 2025:

(1) Heike Mildenberger, Sept. 7 - 12;
(2) Paul Larson, Sept. 10, 12, 17, 19;
(3) Alvaro D. Ramos, Sept. 29 - Oct. 3;
(4) Jouko Vaananen, Sept. 30 - Oct. 6;
(5) Takashi Yamazoe, Oct. 6 - 11;
(6) Mohammad Golshani, Oct. 12 - 19; second meeting Nov. 16 - 21;
(7) Mohsen Asgharzadeh, Oct. 12 - 19;
(8) Will Boney, Oct. 20 - 24;
(9) Sam Corson, Oct. 27 - 31;
(10) Andres Villaveces, Nov. 2 - 6;
(11) Gianluca Paolini, Nov. 23 - 29;
(12) Michael Hrusak, Nov. 23 - 28;
(13) Ashutosh Kumar, Nov. 30 - Dec. 5;
(14) Wieslaw Kubis, Dec. 7 - 12;
(15) Ziemowit Kostana, Dec. 7 - 12;
16. Denis Saveliev, Dec. 14 - 19;
(16) Juris Steprans, date undecided;

Languages

– Hebrew (mother tongue)
– English

Publications

A list of publications can be found at https://shelah.logic.at/publist.pdf.

Bibliography

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[GS73] Fred Galvin and Saharon Shelah, *Some counterexamples in the partition calculus*, J. Combinatorial Theory Ser. A **15** (1973), 167–174. MR 0329900

[GS24] Noam Greenberg and Saharon Shelah, *Many forcing axioms for all regular uncountable cardinals*, Israel J. Math. **261** (2024), no. 1, 127–170, arXiv: 2107.05755. MR 4776489

[HS24] Haim Horowitz and Saharon Shelah, *Abstract corrected iterations*, Bollettino dell'Unione Matematica Italiana (2024), arXiv: 2302.08581.

[KS] Ashutosh Kumar and Saharon Shelah, *RVM, RVC revisited: Clubs and Lusin sets.*

[LS] Paul B. Larson and Saharon Shelah, *0-1 laws.*

[MS07] Heike Mildenberger and Saharon Shelah, *Increasing the groupwise density number by c.c.c. forcing*, Ann. Pure Appl. Logic **149** (2007), no. 1-3, 7–13, arXiv: math/0404147. MR 2364193

[MS16] Maryanthe Malliaris and Saharon Shelah, *Cofinality spectrum theorems in model theory, set theory, and general topology*, J. Amer. Math. Soc. **29** (2016), no. 1, 237–297, arXiv: 1208.5424. MR 3402699

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[RS] Andrzej Rosłanowski and Saharon Shelah, *Borel sets without perfectly many overlapping translations II*, arXiv: 1909.00937.

[RS06] ———, *Measured creatures*, Israel J. Math. **151** (2006), 61–110, arXiv: math/0010070. MR 2214118

[RS19] ———, *Borel sets without perfectly many overlapping translations*, Rep. Math. Logic (2019), no. 54, 3–43, arXiv: 1806.06283. MR 4011916

[RS25] ———, *Borel sets without perfectly many overlapping translations, III*, Ann. Pure Appl. Logic **176** (2025), no. 6, Paper No. 103565, 49, arXiv: 2009.03471. MR 4874855

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[S$^+$b] ———, *Tba*, In preparation. Preliminary number: Sh:F672.

[S$^+$c] ———, *Tba*, In preparation. Preliminary number: Sh:F756.

[S$^+$d] ———, *Tba*, In preparation. Preliminary number: Sh:F1091.

[S$^+$e] ———, *Tba*, In preparation. Preliminary number: Sh:F1039.

[S$^+$f] ———, *Tba*, In preparation. Preliminary number: Sh:F1127.

[S$^+$g] ———, *Tba*, In preparation. Preliminary number: Sh:F1098.

[S$^+$h] ———, *Tba*, In preparation. Preliminary number: Sh:F1164.

[S$^+$i] ———, *Tba*, In preparation. Preliminary number: Sh:F1676.

[S$^+$j] ———, *Tba*, In preparation. Preliminary number: Sh:F2158.

[S$^+$k] ———, *Tba*, In preparation. Preliminary number: Sh:F2188.

[S$^+$l] ———, *Tba*, In preparation. Preliminary number: Sh:F2192.

[S$^+$m] ———, *Tba*, In preparation. Preliminary number: Sh:F2442.

[Shea] Saharon Shelah, *Compact logics in ZFC: Constructing complete embeddings of atomless Boolean rings*, Ch. X of "The Non-Structure Theory" book [Sh:e].

[Sheb] ———, *Consistency of square bracket partition relation.*

[Shec] ———, *Dependent dreams: recounting types*, arXiv: 1202.5795.

[Shed] ———, *Historic iteration with* $\aleph_\varepsilon$*-support*, arXiv: math/9607227.

[Shee] ———, *More forcing for no ultrafilters.*

[Shef] ———, *Partition theorems for expanded trees*, arXiv: 2108.13955.

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