Curriculum Vitae
Prof. Roni Katzir

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EDUCATION (from earliest to latest)

Period of Study (dates)	Name of University (including city and country if not in Israel)	Subject	Degree or Professional License
1996-2001	Tel Aviv University	Mathematics	B.Sc., *summa cum laude*
2003-2008	MIT; Cambridge, MA USA	Linguistics	Ph.D.

ACADEMIC AND PROFESSIONAL EXPERIENCE: (from earliest to latest)

Period (dates)	Name of Institution (city, country)	Department	Rank/Function
Fall 2005	MIT; Cambridge, MA USA	Linguistics and Philosophy	Teaching Assistant for *24.900 Introduction to Linguistics*, taught by Norvin Richards
2008 – May 2010	Cornell University; Ithaca, NY USA	Linguistics	Visiting Assistant Professor (Classes Taught: Introduction to

			Linguistics; Syntax I; Syntax II; Field Methods; Topics in Syntax; Semantics II; Syntax Seminar)
2010 – 2013	Tel Aviv University; Tel Aviv, Israel	Linguistics	Lecturer
2013 – 2020	Tel Aviv University; Tel Aviv, Israel	Linguistics	Senior Lecturer (tenured)
2016-2018	MIT; Cambridge, MA USA	Linguistics and Philosophy	Visiting Associate Professor (Classes Taught: Topics in Semantics; Computation and Linguistic Theory; Morphology; Topics in Phonology; Learning and Learnability)
2020 - present	Tel Aviv University; Tel Aviv, Israel	Linguistics	Associate Professor

FURTHER ACADEMIC AND PROFESSIONAL ACTIVITIES

Reviewer for *International Journal of Game Theory, Journal of Language Modelling, Journal of Memory and Language, Journal of Semantics, Linguistic Inquiry, Morphology, Natural Language and Linguistic Theory, Natural Language Semantics, Syntax, and Synthese*

Reviewer of conference abstracts *for SALT, SuB, GLOW, WCCFL, IATL, NELS, SCiL*

Reviewer of grant applications for the *Israel Science Foundation, Binational Science Foundation*

Organizer (with Michal Ben Shachar and Susan Rothstein)
Workshop on Brain Imaging of Language Functions, Bar Ilan University
June 2011

Organizer (with Luka Crnič and Danny Fox)
Tel Aviv/ Hebrew University Joint Reading Group in Syntax and Semantics
Fall 2011

Conference Organizer (with Luka Crnič and Danny Fox)
Tel Aviv/Hebrew University Workshop in Syntax and Semantics
July 2012

Co-organizer (with David Barner, Judith Degen, Albert Gatt, and Noah Goodman)
Workshop on alternatives; 2014 Annual Conference of the Cognitive Science Society
July 2014

Co-organizer
Joint Research Workshop, Tel Aviv/University of Maryland
Fall 2014

Co-organizer
HUJI-TAU Winter school on exhaustivity
December 2015

Co-organizer
Workshop on exhaustivity and cognitive architecture, MIT
September 2016

Co-organizer
Workshop on simplicity in grammar learning, MIT
September 2017

Co-ordanizer
HUJI-TAU Winter school on learning in phonology

Program head
Computational Linguistics B.A. program, Tel Aviv University
Fall 2010-present

Primary Investigator
Tel Aviv University Computational Linguistics Lab
Fall 2010-present

Program co-coordinator
Tel Aviv/Hebrew University Joint Graduate Program in Linguistics
Fall 2014-present

Member of the steering committee for the MiLa Center, Sagol School of Neuroscience
Fall 2018-present

Member of School of Philosophy, Linguistics and Science Studies committee for the creation of cross-departmental course(s) on language
January 2019-present

Tutor, the Adi Lautman Interdisciplinary Program for Outstanding Students
January 2019-present

Member of the PhD Committee, School of Philosophy, Linguistics, and Science Studies
January 2024-present

Associate Editor, *Linguistics & Philosophy*
January 2024-present

Head, School of Philosophy, Linguistics, and Science Studies
October 2024- present

ACTIVE PARTICIPATION IN SCIENTIFIC MEETINGS

Title of Presentation	Name of Meeting (city, country)	Year
'Right-Node Raising and Delayed Spellout' (lecture with Asaf Bachrach)	Interphases; Nicosia, Cyprus	2006
'Spelling out QR' (lecture with Asaf Bachrach)	Sinn und Bedeutung 11; Barcelona, Spain	2006
'Implicatures and the Maxim of Manner' (lecture)	South New England Workshop in Semantics; Yale University; New Haven, CT USA	2006
'Identity and Precedence' (lecture with Asaf Bachrach)	Conference on Precedence Relations; CUNY; New York, NY USA	2007
'Antecedent-Contained Deletion without QR or Extraposition' (lecture with Asaf Bachrach)	WCCFL (West Coast Conference on Formal Linguistics); UC Berkeley; Berkeley, CA USA	2007
'Structurally Defined Alternatives' (lecture)	Workshop on Presuppositions and Implicatures, DEC-ENS; Paris, France	2007
'Right-Node Raising' (lecture with Asaf Bachrach)	SPINE (Syntax and Prosody in the Northeast); Cornell University; Ithaca, NY USA	2007
'Focus Alternatives and Givenness Effects' (lecture with Ivona Kučerová)	Workshop on Information Structure; Potsdam University; Potsdam, Germany	2008
'Deriving Relative Givenness Effects from Focus Alternatives and Presupposition Domains' (lecture with Ivona Kučerová)	DGfS (Deutschen Gesellschaft für Sprachwissenschaft); Osnabrück, Germany	2009
'Learning and Linguistic Competence' (lecture; also served as event co-organizer)	Cornell Workshop on Grammar Induction; Ithaca, NY USA	2010
‘Constraints on the Lexicalization of Logical Operators’ (poster with Raj Singh)	Ling50, MIT; Cambridge, MA USA	2011

‘Hurford Disjunctions: Evidence for Embedded Exhaustification and Structural Economy’ (poster with Raj Singh)	Sinn und Bedeutung 18, Basque Country	2013
‘Formal constraints on alternatives’	2014 Annual Meeting of the Cognitive Science Society, Workshop on Alternatives, Quebec City	July 2014
‘Economy of structure and information’ (with Raj Singh)	Sinn und Bedeutung 19, Göttingen	September 2014
‘A Learnability Argument for Constraints on Underlying Representations’ (with Ezer Rasin)	NELS 45, MIT; Cambridge, MA USA	October 2014
‘Edges and Linearization’ (with Asaf Bachrach)	International Convention of Psychological Science, Vienna	March 2017
‘Minimum description length subsumes free ride effects in UR learning’ (with Ezer Rasin)	Fifth Annual Meeting on Phonology, New York, NY	September 2017
‘Acquiring opaque phonological interactions using minimum description length’ (with Ezer Rasin, Iddo Berger, and Nur Lan)	Fifth Annual Meeting on Phonology, New York, NY	September 2017
‘Learning abstract URs from distributional evidence’ (with Ezer Rasin)	NELS 48, Reykjavik, Iceland	October 2017
‘Rule-based learning of phonological optionality and opacity’ (with Ezer Rasin, Iddo Berger, and Nur Lan)	NELS 48, Reykjavik, Iceland	October 2017
‘Simultaneous learning of vowel harmony and segmentation’ (with Ezer Rasin and Nur Lan)	SCiL, New York, NY	January 2019
‘Minimum Description Length learning of quantificational determiners’ (with Noa Peled)	Sinn und Bedeutung 24, Osnabrück	September 2019
A unified approach to several learning challenges in phonology (with Ezer Rasin and Itamar Shefi)	NELS 50, Cambridge MA	October 2019
On the irrelevance of contextually-given states for the computation of scalar implicatures (with Daniel Asherov and Danny Fox)	LSA	January 2021
An evolutionary model-based approach to the missing O corner (with Maike Zuefle)	Sinn und Bedeutung 26	September 2021

Communicative stability and the typology of logical operators (with Moshe E. Bar-Lev)	IATL 37	October 2022
Positivity, (anti-)exhaustivity, and stability (with Moshe E. Bar-Lev)	The 23rd Amsterdam Colloquium	December 2022
Benchmarking neural network generalization for grammar induction (with Nur Lan and Emmanuel Chemla)	Learning with Small Data, Gothenburg	September 2023
Minimum Description Length Hopfield Networks (with Matan Abudy, Nur Lan, and Emmanuel Chemla)	NeurIPS Workshop: Associative Memory & Hopfield Networks	December 2023
Aspectual domains for adverbs (with Aviv Schoenfeld and Moshe E. Bar-Lev)	NELS 54	January 2024
Bridging the empirical-theoretical gap in neural network formal language learning using Minimum Description Length (with Nur Lan and Emmanuel Chemla)	ACL 62	August 2024

COLLOQUIA AND INVITED TALKS

Invited talks for which I was offered to be flown and hosted by the organizers are marked in boldface.

Title of Talk	Department	Year
'Unsupervised Grammar Induction with Minimum Description Length'	Infolab, Computer Science and Artificial Intelligence Laboratory; MIT; Cambridge, MA USA	2006
'Learning Word Segmentation with Minimum Description Length'	Computational Cognitive Science Group; MIT; Cambridge, MA USA	2006
'Antecedent-Contained Deletion as VP-Sharing' (with Asaf Bachrach)	DEC-ENS; Paris, France	2007
'Right-Node Raising and Delayed Spellout'	Departmental Seminar, The Hebrew University	2007
'Simple Alternatives'	Interdisciplinary Colloquium; Tel Aviv University	2007

'Morpho-Semantic Mismatches and Licensing'	Queen Mary, University of London	2007
'Description Length and Language Acquisition'	Interdisciplinary Colloquium; Tel Aviv University	2009
'On the Roles of Context and Structure in the Theory of Alternatives' (with Danny Fox)	Syntax Brown Bag; NYU; New York, NY USA	2009
'Universal Grammars and the Learners they Induce'	Departmental Seminar, Ben-Gurion University	2010
'Lexicalizing Logical Constants' (with Raj Singh)	Syntax Brown Bag; NYU; New York, NY USA	2011
'A Representational Approach to Learning'	Seminar, The Hebrew University	2011
'When do Logical Operators get Lexicalized?'	Roots III Workshop, The Hebrew University	2011
'Markedness, symmetry, and the lexicalization of logical operators'	Colloquium, Bar-Ilan University	2012
'A note on implicatures and focus'	**Cross-Disciplinary Perspectives on Scalar Implicatures, MIT; Cambridge, MA USA**	**2012**
Commentary on 'Person Features' by Uli Sauerland	Workshop on the Syntax and Semantics of Resumptive Pronouns, The Hebrew University	2012
'Contrast, Scalarity, and Contradiction'	Ling-Lunch, Paris VII	2012
Commentary on 'An Active Ellipsis Resolution and the Nature of Island Effects' by Masaya Yoshida (with Asaf Bachrach)	Nantes Workshop on Multidominance	2012
'Linearizing Multidominance Structures' (with Asaf Bachrach)	Nantes Workshop on Multidominance	2012
'Linguistic representations and grammar induction'	Department seminar, Tel Aviv University Neurobiology Department	2013
'Unifying the alternatives for scalar implicature, association with focus, and free focus'	Linguistics Department seminar, Hebrew University of Jerusalem	2013

‘An evaluation metric for Optimality Theory’ (with Ezer Rasin)	LLCC Seminar, Hebrew University of Jerusalem	2013
‘Modeling the acquisition of linguistic knowledge’	Sagol School and IBM joint symposium, TAU	2013
‘An evaluation metric for Optimality Theory’ (with Ezer Rasin)	NECPhon, MIT	2013
‘Distinguishing anaphoricity and relevance in free and bound focus’	Workshop on Focus-Sensitive Expressions, Bar-Ilan University	2014
‘Mapping linguistic theories to learners’	Linguistics Department Seminar, HUJI	2014
‘Computation and natural language’	Evolutionary and Enviornmental Biology Department Seminar, Haifa University	2015
‘Anaphoricity and relevance in focus’	**Colloquium, Department of Linguistics and Philosophy, MIT**	**2016**
‘Computational aspects of the representation and learning of natural language’	Medical Neurobiology Department Seminar, HUJI	2016
‘The roles of questions, answers, and anaphoricity in focus’	McGill University	2016
Mini-course on Language and Learnability (with Ezer Rasin)	**CNRS, Paris**	**2017**
‘An adequate simplicity metric for learning grammars’	**LAVA Lunch, Tromsø**	**2017**
‘Comparing theories of UG using compression-based learning’	**Colloquium, Tromsø**	**2017**
Mini-course on Simplicity-based learning in constraint-based and rule-based phonology (with Ezer Rasin)	**Leipzig University**	**2019**
Restricting the role of anaphoricity in focus	**Colloquium, Leipzig University**	**2019**
Representing and learning phonological knowledge	Seminar, Uppsala University	2019

Restricting the role of anaphoricity in focus	Seminar, ZAS, Berlin	2020
Morphological Learning using Minimum Description Length (with Ezer Rasin)	Mini-workshop on morphological processing, NYU	2020
A problem for iterated rationality approaches to scalar implicatures (with Daniel Asherov and Danny Fox)	MIT	2020
Scalar implicatures: iterated rationality models vs. formal exhaustification (with Danny Fox)	Seminar, Leibniz ZAS, Berlin	2021
Minimum Description Length recurrent neural networks (with Nur Lan and Emmanuel Chemla)	Seminar, Leibniz ZAS, Berlin	2021
Rational choice and/or exhaustification (with Danny Fox)	ESSLLI Workshop on Implicatures	2021
Scalar implicatures in reference games: comparing between grammatical exhaustification and iterated rationality models (with Daniel Asherov and Danny Fox)	Harvard LangCog	2021
Connecting representations and learning using Minimum Description Length	Edinburgh Linguistic Circle	2021
Learning grammars using Minimum Description Length (and why linguists should care)	Seminar, Leibniz ZAS, Berlin	2021
Connecting representations and learning using Minimum Description Length	Seminar, Humboldt University, Berlin	2022
Communicative stability and the typology of logical operators (with Moshe E. Bar-Lev)	Seminar, Leibniz ZAS, Berlin	2022
Communicative stability and the typology of logical operators (with Moshe E. Bar-Lev)	DIP Colloquium, Amsterdam	2022

Communicative stability, deletion alternatives, and the absence of lexicalizations of XOR (with Moshe E. Bar-Lev)	Seminar, University of Leipzig	2022
The division of labor between general reasoning and grammatical computations in the derivation of scalar implicatures (with Danny Fox)	Seminar, University of Leipzig	2022
Alternatives, expectations, and the typology of logical operators (with Moshe E. Bar-Lev)	Workshop on alternatives, expectations, and domain widening, Bar Ilan University	2022
GPT Chat	Humboldt University	2023
Anaphoricity, exhaustification, and questions in free focus	**Colloquium, University of Goettingen**	**2023**
The division of labor between general reasoning and grammatical computations in linguistic inferences (with Danny Fox)	**Seminar, University of Goettingen**	**2023**
Questions, answers, and the typology of logical connectives (with Moshe E. Bar-Lev)	**LINGUAE Lecture, Ecole normale superieure**	**2023**
Large Language Models: The view from linguistics	**Ecole normale superieure**	**2023**
On the roles of anaphoricity and questions in free focus	**LINGUAE Lecture, Ecole normale superieure**	**2023**
On the roles of anaphoricity and questions in free focus	Workshop on questions, degrees, and related matters, HUJI	2023
Questions, answers, and the typology of logical connectives	**Keynote talk, workshop on internal and external pressures shaping language, ESSLLI**	**2023**
On the roles of anaphoricity and questions in free focus	Seminar, Leibniz ZAS, Berlin	2023

Attested connectives are better at answering questions (with Moshe E. Bar-Lev)	Seminar, Leibniz ZAS, Berlin	2023
Learning, simplicity, and linguistic representations	**CIMeC, University of Trento**	**2024**
Large Language Models and human linguistic cognition	Large Language Models: Science and stakes, UQAM, Montreal	2024
Negotiating the common ground using questions and answers (with Danny Fox)	**Keynote talk, 2nd Paris Workshop on Games, Decisions, and Language**	**2024**
Comments on ignorance	**Invited commentary, Workshop on speech act related operators, Berlin**	**2024**
TBD	**Colloquium, Department of Linguistics and Philosophy, MIT**	**2025**
TBD	**Invited talk, 3rd Paris Workshop on Games, Decisions, and Language**	**2025**

Academic and Professional Awards (prizes, fellowships, grants, scholarships)

Occasion	Name of Institution (city, country)	Year
Fellowship from the Special Program for Outstanding Students	Tel Aviv University	1996 - 2000
Scholarship for a two-month German language course in Berlin, Germany	German Academic Exchange Service (DAAD)	2000
Scholarship for a one-month French language course in Besançon, France	French government	2002
Stipend to participate in a workshop in Computational Linguistics in Tübingen, Germany	Minerva Foundation	2002

ISF Individual Research Grant (#187/11, “A cognitively plausible model for grammar induction”); grant amount of 128,700 NIS annually for a period of three years	Israel Science Foundation	2011
Bi-departmental grant to support the establishment of a structured joint graduate program in linguistics (co-organized with Luka Crnic and Danny Fox, HUJI and Outi Bat-El, TAU; grant amount of 6,454,000 NIS over a 5-year period)	Humanities Fund/Yad HaNadiv	2014
TAU Breakthrough Innovative Research Grant ("Learning form-meaning mappings in natural language"); grant amount of 82,000 USD PI	Tel Aviv University	2019
ISF Individual Research Grant (# 1083/23, "An evolutionary framework for the modeling of linguistic typology and the study of its cognitive implications"); grant amount of 120,000 NIS annually for a period of four years	Israel Science Foundation	2023

STUDENTS SUPERVISED BY CANDIDATE

Supervisor (Postdoctoral researchers)

Moshe E. Bar-Lev	Tel Aviv University	2021-2022
Milica Denic	Tel Aviv University	2022-2024

Supervisor (Doctoral Students)

Nur Lan (co-supervised with Emmanuel Chemla, ENS)	Tel Aviv University	2019-2024

Supervisor (M.A./M.Sc. Students)

Amnon Lotan (co-advisor with Ido Dagan) Thesis title: “Research and Implementation of a syntactic knowledge resource for textual entailment, both generic and lexical-syntactic”	Tel Aviv University Department of Linguistics	2010-2012

Ezer Rasin Thesis title: “Learning OT grammars”	Tel Aviv University Department of Linguistics	2011-2013
Tali Arad Thesis title: “The nature of resumptive pronouns: evidence from parasitic gaps”	Tel Aviv University Department of Linguistics	2012-2014
Victoria Costa Thesis title: An MDL-based computational model for unsupervised joint learning of morphophonological constraints and lexicons in Optimality Theory	Tel Aviv University Department of Linguistics	2013-2018
Noa Bassel (co-advisor with Tal Siloni) Thesis title: Argument structure in result nominals - evidence from binding"	Tel Aviv University Department of Linguistics	2012-2018
Nur Lan Thesis title: Learning rule based morpho-phonology using MDL and a genetic algorithm"	Tel Aviv University Department of Linguistics	2014-2018
Adam Rimon Thesis title: A Frequency Based Model for Lexicalization of Logical Operators"	Tel Aviv University Department of Linguistics	2014-2019
Itamar Shefi (co-advisor with Ezer Rasin) Thesis title: Evolution of Phonological Typology: an Iterated Learning Model of the Emergence of Phonological Patterns	Tel Aviv University Department of Linguistics	2018-2020
Adi Behar Medrano Thesis title: TBD	Tel Aviv University Department of Linguistics	2019-
Alma Frischoff (co-advising with Moshe E. Bar-Lev)	Tel Aviv University, Department of Linguistics	2022-2024
Dani Rodov	Tel Aviv University, Department of Linguistics	2022-2024
Matan Abudy	Tel Aviv University, Department of Linguistics	2023-
Imry Ziv	Tel Aviv University, Department of Linguistics	2024-
Orr Well	Tel Aviv University, Department of Linguistics	2024-

Orit Jaschek	Tel Aviv University, Department of Linguistics	2024-

Committee member (PhD)

Oren Kolodny (committee member, supervised by Arnon Lotem and Shimon Edelman) Thesis title: "Models for learning structured data: From animal behavior to language acquisition"	Tel Aviv University Department of Zoology	2014
Yair Lakretz (committee chair, supervised by Naama Friedman and Gal Chechik) Thesis title: "Converting graphemes to phonemes in reading"	Tel Aviv University Sagol School of Neuroscience	2017
Chris O'Brien (committee member) Thesis title: "Multiple dominance and interface operations"	MIT Department of Linguistics and Philosophy	2017
Ezer Rasin (committee member) Thesis title "Modularity in Phonology"	MIT Department of Linguistics and Philosophy	2018
Moshe Elyashiv Bar-Lev (committee member) Thesis title "Free Choice, Homogeneity, and Innocent Inclusion"	Hebrew University of Jerusalem Department of Linguistics	2018
Hadass Zaidenberg (committee member) Thesis title: TBD	Tel Aviv University Sagol School of Neuroscience	TBD

Committee member (MA)

Reshef Shilon (committee member, supervised by Fred Landman and Shuly Wintner) Thesis title: "Transfer-based Machine Translation between morphologically-rich and resource-poor languages: The case of Hebrew and Arabic"	Tel Aviv University Department of Linguistics	2010-2011

Publications

Note: in papers with my graduate students and postsdoctoral researchers based on work in my lab, the lead advisee is listed first and I (as PI) am listed final. (Exception: E.9, in which there was no lead advisee and I am listed first.) Advisee names are underlined. In all other works author names are listed alphabetically.

Metrics
Overall citations: Google Scholar 1928, Web of Science 443, Scopus 440
h-index: Google Scholar 19, Web of Science 7, Scopus 7

C. Refereed Articles
a. Refereed Articles in Journals

1. Katzir, Roni. 2007. 'Structurally-Defined Alternatives.' *Linguistics & Philosophy* vol. 30, no. 6, pp. 669-690. (Q1)

2. Katzir, Roni. 2011. 'Morpho-Semantic Mismatches, Structural Economy, and Licensing.' *Linguistic Inquiry* vol. 42 no. 1, pp. 45-82. (Q1)

3. Fox, Danny and Roni Katzir. 2011. 'On the Characterization of Alternatives.' *Natural Language Semantics* vol. 19 no.1, pp. 87-107. (Q1)

4. Katzir Roni and Raj Singh. 2013. ‘Constraints on the Lexicalization of Logical Operators.’ *Linguistics & Philosophy* vol. 36 no. 1, pp. 1-29. (Q1)

5. Katzir, Roni and Raj Singh. 2013. ‘A Note on Presupposition Accommodation.’ *Semantics and Pragmatics* vol. 6 no. 5, pp. 1-16.

6. Katzir, Roni. 2013. ‘A Note on Contrast.’ *Natural Language Semantics* vol. 21 no. 4, pp. 333-343. (Q1)

7. Katzir, Roni. 2014. ‘A Cognitively Plausible Model for Grammar Induction.’ *Journal of Language Modelling* 2:2, 213-248.

8. Rasin, Ezer and Roni Katzir. 2016. ‘On Evaluation Metrics in Optimality Theory.’ *Linguistic Inquiry*, 47:2, 235-282. (Q1)

9. Endress, Ansgar and Roni Katzir. 2016. ‘Linguistics, Cognitive Psychology, and the Now-or-Never Bottleneck.’ *Behavioral and Brain Sciences*, 29, e71, 27-28. (Q1 in linguistics)

10. Bachrach, Asaf and Roni Katzir. 2017. ‘Linearizing Structures.’ *Syntax*, 20:1, 1-40. (Q1)

11. Rasin, Ezer and Roni Katzir. 2020. ‘A conditional learnability argument for constraints on underlying representations.’ *Journal of Linguistics (accepted, to appear)*. (Q1)

12. Rasin, Ezer, Iddo Berger, Nur Lan, Itamar Shefi, and Roni Katzir. 2021. 'Approaching explanatory adequacy in phonology using Minimum Description Length.' Journal of Language Modelling, 9:1, 17-66. (Q2) Note: Ezer Rasin and I were guest editors for this issue of JLM, but our submission was handled blindly by a third editor and peer-reviewed according to the usual (double-blind) policy of the journal.

13. Fox, Danny and Roni Katzir. 2021. 'Notes on iterated models of scalar implicature.' Journal of Semantics, 38:4, 571-600. (Q1)

14. Lan, Nur, Michal Geyer, Emmanuel Chemla, and Roni Katzir. 2022. 'Minimum Description Length Recurrent Neural Networks.' Transactions of the Association for Computational Linguistics, 785-799. (Q1)

15. Bar-Lev, Moshe E. and Roni Katzir. 2023. 'Communicative stability and the typology of logical operators.' Linguistic Inquiry. (Q1)

16. Roni Katzir. 2023. 'Why Large Language Models are poor theories of human linguistic cognition: A reply to Piantadosi.' Biolinguistics 17:e13153. (Q3)

17. Roni Katzir. 2024. 'On the roles of anaphoricity and questions in free focus.' Natural Language Semantics, 32:1, 65-92. (Q1)

18. Lan, Nur, Emmanuel Chemla, and Roni Katzir. 2024. 'Large Language Models and the argument from the poverty of the stimulus.' Linguistic Inquiry. (Q1)

19. Asherov, Daniel, Danny Fox, and Roni Katzir. 2024. 'Strengthening, exhaustification, and rational inference.' Linguistics & Philosophy. (Q1)

20. Fox, Danny and Roni Katzir. 2024. 'Large Language Models and theoretical linguistics.' Theoretical Linguistics. (Q2)

b. Articles in progress planned to be submitted to journals by the end of the spring semester

1. Ziv, Imry, Nur Lan, Emmanuel Chemla, and Roni Katzir. 'Large Language Models provide evidence for nontrivial learning biases in humans.' Target journal: *Journal of Memory and Language*.
2. Fox, Danny and Roni Katzir. 'Negotiating the common ground using questions and answers.' Target journal: *International Journal of Game Theory*.

c. Refereed Articles in Books

1. Bachrach, Asaf and Roni Katzir. 2009. 'Right-Node Raising and Delayed Spellout.' In K. Grohmann (ed.), *InterPhases: Phase-Theoretic Investigations of Linguistic Interphaces*. Oxford University Press, pp. 222-267.

2. Katzir, Roni. 2014. ‘On the Roles of Markedness and Contradiction in the Use of Alternatives.’ In Pistoia Reda, S. (ed.), *Semantics, Pragmatics and the Case of Scalar Implicatures*. Palgrave. pp. 40-71

3. Katzir, Roni and Tal Siloni. 2014. ‘Agreement and definiteness in Germanic DPs.’ Bondaruk, A., Dalmi, G., and Grosu, A. (eds.), *Advances in the Syntax of DP's. Structure, agreement, and case*. John Benjamins. pp. 267-293.

E. Papers Presented at Scientific Meetings and Published in Proceedings

1. Bachrach, Asaf and Roni Katzir. 2007. 'Spelling out QR.' In E. Puig-Waldmüller (ed.), *Proceedings of Sinn und Bedeutung 11*, pp. 63-75.

2. Katzir, Roni and Raj Singh. 2014. ‘Hurford Disjunctions: Embedded Exhaustification and Structural Economy.’ In Urtzi Etxeberria, Anamaria Fălăuş, Aritz Irurtzun, and Bryan Leferman (eds.), *Proceedings of Sinn und Bedeutung 18*, pp. 201-216.

3. Katzir, Roni and Raj Singh. 2015. ‘Economy of Structure and Information: Oddness, Questions, and Answers.’ In Csipak, E. and Zeijlstra, H. (eds.), *Proceedings of Sinn und Bedeutung 19*, pp. 302-319.

4. Rasin, Ezer and Roni Katzir. 2015. ‘Compression-based learning for OT is incompatible with Richness of the Base.’ In Thuy, B. and Özyıldız, D. (eds.) *Proceedings of NELS 45*, pp. 267-274.

5. Rasin, Ezer and Roni Katzir. 2018. ‘Learning abstract underlying representations from distributional evidence.’ In Hucklebridge, S. and Nelson, M. (eds.), *Proceedings of NELS 48*, pp. 283–290.

6. Rasin, Ezer, Iddo Berger, Nur Lan, and Roni Katzir. 2018. ‘Learning phonological optionality and opacity from distributional evidence.’ In Hucklebridge, S. and Nelson, M. (eds.), *Proceedings of NELS 48*, pp. 269–282.

7. Rasin, Ezer, Nur Lan, and Roni Katzir. 2019. ‘Simultaneous learning of vowel harmony and segmentation.’ In Jarosz, G., Nelson, M., O’Connor, B., and Pater, J. (eds.), *Proceedings of SCiL 2019*.

8. Rasin, Ezer, Itamar Shefi and Roni Katzir. 2020. ‘A Unified Approach to Several Learning Challenges in Phonology.’ In Asatryan, M. and Song, Y. and Whitmal, A. (eds.), *Proceedings of NELS 50*, pp. 73-86.

9. Katzir, Roni, Nur Lan, and Noa Peled. 2020. ‘A Note on the Representation and Learning of Quantificational Determiners.’ In Franke, M. and Kompa, N. and Liu, M. and Mueller, J. and Schwab, J. (eds.), *Proceedings of Sinn und Bedeutung 24*, pp. 392-410.

10. Zuefle, Maike and Roni Katzir. 2022. 'Reasoning about stored representations in semantics using the typology of lexicalized quantifiers.' In Gutzmann, D. and Repp, S. (eds.), Proceedings of Sinn und Bedeutung 26, pp. 923-944.

11. Bar-Lev, Moshe E. and Roni Katzir. 2022. 'Positivity, (anti-)exhaustivity, and stability.' In Degano, M., Roberts, T., Sbarolini, G., and Schouwstra, M. (eds.), Proceedings of the 23rd Amsterdam Colloquium, pp. 23-30.

12. Lan, Nur, Emmanuel Chemla, and Roni Katzir. 2023. 'Benchmarking neural network generalization for grammar induction.' In Ellen Breitholtz, Shaom Lappin, Sharid Loaiciga, Nikolai Ilinykh, and Simon Dobnik (eds.), Proceedings of the 2023 CLASP Conference on Learning with Small Data, pp. 131-140.

Accepted:

1. Lan, Nur, Emmanuel Chemla, and Roni Katzir. 2024. 'Bridging the empirical-theoretical gap in neural network formal learning using Minimum Description Length.' To appear in Proceedings of the 62nd annual meeting of the Association for Computational Linguistics.

2. Schoenfeld, Aviv, Moshe E. Bar-Lev, and Roni Katzir. 2024. 'Aspectual domains for adverbs.' To appear in Proceedings of NELS 54.

G. Other

1. Katzir, Roni and Raj Singh. 2009. 'On the Absence of XOR in Natural Language.' In P. Égré and G. Magri (eds.), *Presuppositions and Implicatures*. MIT Working Papers in Linguistics (MITWPL).

2. Fox, Danny and Roni Katzir. 2009. 'On the Characterization of Alternatives for Implicature and for Focus.' In P. Égré and G. Magri (eds.), *Presuppositions and Implicatures*. MIT Working Papers in Linguistics (MITWPL).

3. Katzir, Roni and Raj Singh. 2012. ‘Two Restrictions on Possible Connectives.’ In Thomas Graf, Denis Paperno, Anna Szabolsci, and Jos Tellings (eds.), *Theories of Everything*, UCLA Working Papers in Linguistics, pp. 154-162

Research, teaching, and administration

Research. My research combines mathematical and computational tools to study human linguistic cognition, with special focus on questions of learning, representation, and reasoning.

One research project (originally supported by Israel Science Foundation grant ISF 187/11), concerns unsupervised grammar learning using the principle of Minimum Description Length (MDL). MDL guides the learner toward a grammar that is relatively simple and at the same time provides a relatively close fit to the input data. The MDL principle rests on mathematical and information-theoretical foundations laid by Solomonoff, Kolmogorov, and Chaitin and has been used in a range of contexts within cognitive science. In Katzir (2014) I provided an argument for MDL being the null hypothesis about language learning by humans and outlined how it can serve as a bridge between theoretical linguistics and domain-general approaches to learning. In joint work with Ezer Rasin we presented an MDL-based learner for constraint-based phonology that acquires underlying representations, constraints, and rankings from distributional evidence (Rasin & Katzir 2016), the first reported learner to do so. Similarly, Rasin, Berger, Lan, Shefi, & Katzir (2021) presents an MDL learner that acquires rule-based phonological grammars, including underlying representations, context-sensitive rules, their ordering, and segmentation, all from distributional data. This learner acquires complex patterns such as opacity, optionality, and long-distance dependencies. Other work in my lab has developed MDL learners for other formalisms and other domains, including Minimalist Grammars (Avraham, 2017 MA thesis) and quantificational determiners (Katzir, Lan, & Peled 2020). Recent joint work with Emmanuel Chemla at ENS and Nur Lan (our joint PhD student) uses MDL to study artificial neural networks. By replacing the standard training approach for artificial neural networks with MDL we obtained small, transparent networks that learn complex recursive patterns perfectly from very little data (Lan et al. 2022, TACL; Lan et al. 2024, ACL).

MDL also offers a tool for linguists to investigate properties of children's innate knowledge. In Rasin & Katzir (2020) we show that if acquisition is guided by MDL then a child who can state so-called morpheme-structure constraints can acquire the full knowledge of allophonic patterns (e.g., aspiration in English), while a child who cannot state such constraints will acquire at most one half of the knowledge. This provided evidence for morpheme-structure constraints, the first empirical argument that bears on this question. We are now following up on this work in a joint project with Adam Albright and Donca Steriade at MIT, funded by a MISTI grant. In other projects in my lab growing out of a TAU Innovative Breakthrough / Schmidt Futures grant we outlined an MDL-based theory comparison concerning representations in semantics (Katzir, Lan, & Peled 2020) and are now examining such a comparison in morphology.

A different research topic that I have been very interested in for many years and have worked on from different angles concerns linguistic processes that are sensitive to alternatives. Processes of this kind include scalar implicature (where, e.g., *Some of the students left* can be taken to imply that not all of them did), association with focus (where, e.g., *Only SOME of the students left* entails that not all of them did), and the felicity pattern of so-called free focus (where, e.g., *SOME of the students left* is a natural response to *All of the students left* but feels odd after *All of the professors left*). I find

alternative-sensitive processes especially interesting because of what they can teach us about the division of labor between grammar and general-purpose reasoning and about fundamental properties governing each side of the divide.

Early on I focused on the challenge of characterizing the alternatives that feed such processes. I argued that this characterization makes crucial reference to grammar, and in particular to syntactic complexity. I made the argument first for scalar implicatures (Katzir 2007) and then, in joint work with Danny Fox (Fox & Katzir 2011), we extended the argument to association with focus and also argued that the contextual restriction of the alternatives in both scalar implicatures and association with focus is highly limited and follows the logic of question-induced relevance. More recently, I have examined the role of alternatives in the felicity pattern of free focus. In Katzir (2023) I argue in favor of a perspective that reduces free focus to associated focus, which feeds both exhaustification and question formation. I show that recent developments in the theory of questions allow us to derive the pattern of felicity of focus in discourse from a general pragmatic condition that requires that sentences be good answers to good questions.

Another research project, joint work with Danny Fox at MIT, concerns the division of labor between grammar and general-purpose rationality in giving rise to exhaustive inferences. In Fox & Katzir (2021) we examine a systematic pattern of conjunctive inferences that speakers draw from certain disjunctive constructions. A grammatical approach to exhaustification readily derives this pattern of inference, but prominent approaches to rational inference do not, as we show. We also show that when rational inferences are iterated they lead to an extreme sensitivity of a certain subset of scalar implicatures to prior probabilities, while the attested inferences that speakers draw are robust to priors. In follow-up work (Asherov, Fox, & Katzir 2024), we present a simple pattern of inference and show that the grammatical approach predicts the pattern in full while various views on rational inference do not. Beyond the implications for grammatical inference mechanisms, our results bear on broader questions of rationality and connect with work on the topic in philosophy, game theory, economics, and psychology. I presented some of the work at Reason & Decision, a cross-departmental rationality forum at Tel Aviv University, and more recently as a keynote speaker at the 2nd Paris Workshop on Games, Decisions, and Language.

A final project that I will describe concerns linguistic typology and its cognitive implications (ISF grant 1083/23). Seminal work by Larry Horn notes that the typology of lexicalized logical operators is extremely skewed, with only a handful of operators receiving their own morpheme across languages. As with other typological observations, however, drawing implications for cognitive architecture is complicated by the fact that the typology is influenced by many complex and interacting factors, including ease of learning, conversational utility, historical accident, sociolinguistic pressures, and others. In this project I combine detailed theoretical linguistic analysis with tools from evolutionary game theory to reason about such interacting factors. In Züfle & Katzir (2022) we examine proposals attributing the cross-linguistic generalization to usage frequencies. Using the Replicator-Mutator Dynamic, we modeled the effects of usage frequencies when combined with learnability and communication pressures and found that usage frequencies could not explain the typological patterns while representational asymmetries could. In subsequent joint work with Moshe E. Bar-Lev we attempt to find a deeper explanation for the pattern. In Bar-Lev & Katzir (2024, Linguistic Inquiry) we show using simulations of iterated communication that attested inventories are communicatively stable in a formal sense while unattested connectives such as ‘nand’ (=

not and) lead to instability. In newer work (under review) we propose a very direct reduction of the typology to communicative success based on how connectives help speakers identify an epistemic state with respect to a given question.

Teaching. My teaching and advising at Tel Aviv University have centered around several areas and programs. I head the Computational Linguistics program, a double-major program in Computer Science and Linguistics that I designed and started in 2011. I regularly supervise the research of multiple MA and PhD students and postdoctoral researchers, in the Computational Linguistics Lab, which I also started in 2011. I was a co-director and one of the co-creators of the joint PhD program of TAU with the Hebrew University in Jerusalem, a program for which we received a highly competitive grant that allowed us to support several outstanding graduate students throughout a structured five-year program and also to arrange multiple winter schools with guest lecturers from abroad. While the program officially ended in 2021 I am still in touch with our former students and am mentoring them in their respective stages of their academic careers. Since 2019 I have been one of the four-member team of tutors of the Adi Lautman Interdisciplinary Program for Outstanding Students, TAU's flagship undergraduate program, to which 15 students are admitted every year after a long and extremely selective process out of the entire incoming class of the university. Each of the students admitted is then supported in a four-year program in which they may take any class on campus regardless of formal prerequisites as they complete their very own undergraduate education and proceed directly to complete an MA. As tutors we guide them through their four years in the program, thinking with them about their choice of classes, the directions they might be converging on for their MA, and their possible academic paths after that.

I regularly teach the following classes at TAU. **Introduction to Computational Linguistics**. An introductory undergraduate class that is aimed at students with no familiarity with mathematics or computation and that brings them to the point where they can join the students from the Computational Linguistics program in more advanced classes. **Advanced Computational Linguistics**. A class that introduces students to the theory of computation and formal language theory as well as probabilistic models and parsing algorithms. **Parsing: Computation and Cognition.** An MA-level seminar that serves as a first seminar in computational cognitive science and covers formalisms not discussed in Advanced Computational Linguistics. **Learning: Computation and Cognition.** An MA-level seminar that covers formal criteria for learning, inference, and topics such as arguments from the poverty of the stimulus, the richness of the stimulus, and the typology, which we discuss in view of the formal perspectives encountered earlier in the seminar.

I have also taught classes in syntax (at Cornell University, where I was a Visiting Assistant Professor, 2008-2010), semantics (both at Cornell University, and a graduate seminar at MIT co-taught in 2016 with Danny Fox and Roger Schwarzschild during my stay as a Visiting Associate Professor, 2016-2018), morphology (graduate course co-taught at MIT in 2017 with Adam Albright and David Pesetsky), learning (graduate seminar co-taught at MIT in 2018 with Naomi Feldman and Roger Levy), and other topics. I have also taught mini-courses on learning and MDL at CNRS (2017), Leipzig University (2019), TAU (2019), and Leibniz ZAS (2024).

Public outreach. I have given multiple lectures on topics in computational linguistics to various audiences of non-linguists. These included various lectures on language and

learning to the general public, and also more academic talks in seminars of departments of biology (at Tel Aviv University, Haifa University, and Hebrew University) and computer science (at Tel Aviv University), as well as at the Reason and Decision forum at Tel Aviv University. I have recently given a long interview on Large Language Models to *Calcalist*, the most-read economic newspaper in Israel and another interview on the same topic to *Iyyun*, a philosophical quarterly.

Leadership & administration. As mentioned, I started Tel Aviv University's Computational Linguistics program in 2011 and have been heading it ever since. In the same year I also started the Computational Linguistics lab. In 2014 I was part of a team that applied for a large grant for a joint PhD program together with Hebrew University in Jerusalem. I co-directed the program for its entire duration. I have organized multiple workshops and winter schools, including at Cornell University (the Cornell Workshop on Grammar Induction, 2010), Tel Aviv University (winter school with Maryland, 2014, winter school on exhaustivity, 2015, winter school on learning in phonology, 2019, workshop on abstractness in phonology, 2023), and MIT (workshop on simplicity in grammar learning, 2017). I have co-edited a special issue at the *Journal of Language Modelling* on the topic of simplicity in grammar learning. I am also a member of the PhD committee of the School of Philosophy, Linguistics, and Science Studies and of the steering committee of the MiLa center of Sagol School of Neuroscience. I have been an associate editor at *Linguistics & Philosophy* since January 2024. As of October 2024, I am the head of the School of Philosophy, Linguistics, and Science Studies.