

Tal Ness

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Current position

2021 - Postdoctoral Associate
Today University of Maryland, College Park
PIs: Jared Novick (UMD) and Albert Kim (CU Boulder)

Education

2017-2021 PhD in Neuroscience, Sagol School of Neuroscience, Tel Aviv University
Dissertation title: Prediction during language processing: Beyond activation
Advisor: Aya Meltzer-Asscher

2016-2017 M.Sc. in Neuroscience in Linguistics, Sagol School of Neuroscience, Tel Aviv University
Thesis title: Lexical inhibition due to failed prediction: Behavioral evidence and ERP correlates
Advisor: Aya Meltzer-Asscher
Summa cum laude

2013-2016 B.Sc. in Biology and Linguistics with an emphasis on Neuroscience, Sagol School of Neuroscience, Tel Aviv University
Summa cum laude

Publications

Ness, T. & Meltzer-Asscher, A. (2021). Rational adaptation in lexical prediction: The influence of prediction strength. In special issue: Rational Approaches in Language Science, in *Frontiers in Psychology*, 12, 1166.

Ness, T. & Meltzer-Asscher, A. (2021). From pre-activation to pre-updating: A threshold mechanism for commitment to strong predictions. *Psychophysiology*, 58(5), e13797.

- Ness, T. & Meltzer-Asscher, A. (2021). Love thy neighbor: facilitation and competition between parallel predictions. *Cognition*, 207, 104509.
- Ness, T. & Meltzer-Asscher, A. (2019). When is the verb a potential gap site? The influence of filler maintenance on the active search for a gap. *Language, Cognition and Neuroscience*, 34(7), 936-948.
- Ness, T. & Meltzer-Asscher, A. (2018). Predictive pre-updating and working memory capacity: Evidence from event-related potentials. *Journal of Cognitive Neuroscience*, 30(12), 1916-1938.
- Ness, T. & Meltzer-Asscher, A. (2018). Lexical inhibition due to failed prediction: Behavioral evidence and ERP correlates. *Journal of experimental psychology: learning, memory and cognition*, 44(8), 1269-1285.
- Ness, T., & Meltzer-Asscher, A. (2017). Working memory in the processing of long-distance dependencies: Interference and filler maintenance. *Journal of psycholinguistic research*, 46(6), 1353-1365.

Presentations and Posters

Talks:

- Ness, T. & Meltzer-Asscher, A. (July 2021). Bayesian adaptation of prediction strength to the statistics of the current situation. *Talk given at the 5th Conference on Usage-based Linguistics (UBL)*, Tel Aviv, Israel.
- Ness, T. & Meltzer-Asscher, A. (February 2020). Prediction mechanisms in sentence processing: Predictive pre-updating. *Talk given at the 7th Conference on Cognition Research of the Israeli Society for Cognitive Psychology (ISCoP)*, Acre, Israel.
- Ness, T. & Meltzer-Asscher, A. (October 2019). Rational adaptation in lexical prediction: The influence of prediction strength. *Talk given at Rational Approaches in Language Science (RAILS)*, Saarbruecken, Germany.
- Ness, T. & Meltzer-Asscher, A. (June 2019). Parallel predictions: Evidence of competition. *Talk given at Psycholinguistics in Iceland – Parsing and Prediction (PIPP)*, Reykjavík, Iceland.
- Ness, T. & Meltzer-Asscher, A. (April 2019). Predictive pre-updating: Converging evidence from electrophysiology and eye-blink rate. *Talk given at the 7th International Graduate Student Conference on Diverse Approaches to Linguistics (IGDAL)*, Jerusalem, Israel.

Ness, T. & Meltzer-Asscher, A. (March 2019). Predictive pre-updating: Converging evidence from electrophysiology and eye-blink rate. *Talk given at the 32nd Conference on Human Sentence Processing (CUNY)*, Boulder, Colorado, USA.

Ness, T. (December 2016). Lexical inhibition due to failed prediction: Behavioral evidence and ERP correlates. *Talk given at the Interdisciplinary Colloquium in Linguistics, Tel-Aviv University*.

Posters:

Ness, T. , Nakar, H. & Meltzer-Asscher, A. (September 2021). Domain-general cognitive control and linguistic prediction: Cross-task adaptation. *Short talk presented at the 20th conference on Architectures and mechanisms for language processing (AMLaP)*, virtual.

Ness, T. & Meltzer-Asscher, A. (September 2020). Rational adaptation in lexical prediction: The influence of prediction strength. *Poster presented at the 20th conference on Architectures and mechanisms for language processing (AMLaP)*, virtual.

Ness, T. & Meltzer-Asscher, A. (March 2020). Rational adaptation in lexical prediction: The influence of prediction strength. *Poster presented at the 33rd Conference on Human Sentence Processing (CUNY)*, Amherst, Massachusetts.

Ness, T. & Meltzer-Asscher, A. (September 2018). Event-based eye blink rate as an index of working memory gating and updating: Predictive pre-updating and individual differences in working memory capacity. *Poster presented at the 18th conference on Architectures and mechanisms for language processing (AMLaP)*, Berlin, Germany.

Ness, T. & Meltzer-Asscher, A. (June 2018). Predictive pre-updating: Evidence from event-related potentials and event-based eye blink rate. *Poster presented at the 1st Workshop on Predictive Processing (WoPP)*, San Sebastián, Spain.

Ness, T. & Meltzer-Asscher, A. (March 2018). Predictive pre-updating: ERP correlates and the influence of working memory capacity. *Poster presented at the 31st Conference on Human Sentence Processing (CUNY)*, Davis, California.

Ness, T. & Meltzer-Asscher, A. (March 2018). When is the verb a potential gap site? How filler maintenance affects active gap-filling. *Poster presented at the 31st Conference on Human Sentence Processing (CUNY)*, Davis, California.

Ness, T. & Meltzer-Asscher, A. (March 2017). Predictive pre-updating: Evidence from event-related potentials. *Poster presented at the 30th Conference on Human Sentence Processing (CUNY)*, Cambridge, Massachusetts.

Ness, T. & Meltzer-Asscher, A. (September 2016). Lexical inhibition due to failed prediction. *Poster presented at the 16th conference on Architectures and mechanisms for language processing (AMLaP)*, Bilbao, Spain.

Ness, T. & Meltzer-Asscher, A. (September 2016). The influence of working memory interference on filler maintenance costs. *Poster presented at the 16th conference on Architectures and mechanisms for language processing (AMLaP)*, Bilbao, Spain.

Ness, T. & Meltzer-Asscher, A. (February 2016). Lexical inhibition due to failed prediction. *Poster presented at the 3rd Conference on Cognition Research of the Israeli Society for Cognitive Psychology (ISCoP)*, Acre, Israel.

Scholarships, Honors and Awards

- 2021 Tel Aviv University presidential scholarship for post-doctoral research abroad

- 2020 Ministry of Science, Technology and Space travel grant
 Herbert and Sharon Glaser excellence scholarship

- 2019 Trotsky scholarship
 Adams Center for Brain Studies travel scholarship

- 2018 CUNY Conference on Human Sentence Processing travel award
 Adams Center for Brain Studies travel scholarship

- 2017 Sagol School of Neuroscience PhD scholarship (for 4 years)
 CUNY Conference on Human Sentence Processing travel award
 Adams Center for Brain Studies travel scholarship

- 2016 Dean's excellence list, Sagol School of Neuroscience, Tel Aviv University
 Adams Center for Brain Studies travel scholarship

- 2015 Sagol School of Neuroscience M.Sc scholarship
 Dean's excellence list, Sagol School of Neuroscience, Tel Aviv University
 TAU students' union community involvement scholarship

- 2014 Dean's excellence list, Sagol School of Neuroscience, Tel Aviv University

Teaching Experience

- Fall 2020 Lecturer, “Statistics for Linguists”, Tel Aviv University.
- Fall 2016-2020 Teaching assistant, “Psycholinguistics: Research methods and experimental design”, Tel Aviv University.
- Lecturers: Prof. Aya Meltzer-Asscher (2016-17,2017-18, 2019-20),
 Dr. Einat Shetreet (2018-19)

Academic service

Public outreach activities:

- An active member of ‘The Language Science Station’ at the Planet Word museum, conducting research demonstrations and experiments with museum visitor, aimed to:
 - Introduce language science and the scientific method to the public
 - Increase diversity in age, ethnic background, education level, and socioeconomic background in participant pools studied in the psycholinguistic literature

Reviewer for:

- *Cognition*
- *Journal of Experimental Psychology: Learning, Memory, and Cognition*
- *Language, Cognition & Neuroscience*
- *Neuropsychologia*
- *Translational Psychiatry*

See: <https://publons.com/researcher/3067310/tal-ness/peer-review/>

Organizing committee member for The 35th Annual Conference on Human Sentence Processing (HSP 2022).

Skills

Programming and analysis software R, Python, Matlab, BrainVision-EEG software, SPSS

Additional training Summer school on statistical methods for linguistics and psychology, Advanced linear mixed models stream, University of Potsdam, Germany, September 2017.

 Mini ERP Boot Camp (Dr. Steve Luck), University of California, Davis, California, March 2018.

Membership in professional associations

2022	Psychonomic Society Society for the Neurobiology of Language (SNL)
2021	Society for Psychophysiological Research (SPR)
2020	Cognitive Science Society (CogSci) Psychonomic Society