

# BRUNO NICENBOIM

## CURRICULUM VITAE

### Contact Information

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### Education

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2011–2017	<b>PhD in Cognitive Science, University of Potsdam</b> Topic: Dependency resolution as a retrieval process Supervisors: Prof. Dr. Shravan Vasishth and Prof. Dr. Reinhold Kliegl Grade: <i>summa cum laude</i>
2010	M.A. in Linguistics, Tel Aviv University Topic: Processing Complex NP Islands in Hebrew Supervisors: Prof. Dr. Julia Horvath and Prof. Dr. Tal Siloni Grade: <i>summa cum laude</i>
2009	B.A Double Major, Tel Aviv University Linguistics. Grade: <i>summa cum laude</i> Sociology and Anthropology. Grade: very good

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### Academic-related work

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2020–	<b>Assistant professor</b> (tenure track) at the department of Cognitive Science and AI of Tilburg University, the Netherlands.
2020–	Guest researcher at the Department of Linguistics of the University of Potsdam, Germany
2017–2020	Postdoctoral Researcher, University of Potsdam. PIs: Shravan Vasishth, Frank Rösler
2016–2017	Coordinator of the Master in Cognitive Systems, University of Potsdam
2009–2009	Research assistant, Tel Aviv University. Syntax and Lexicon interface. Supervisors: Prof. Dr. Tal Siloni and Prof. Dr. Julia Horvath
2008–2009	Research assistant, Tel Aviv University. Psycholinguistics. Assistance in experiments using E-prime and CHILDES software. Supervisor: Prof. Dr. Ruth Berman

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# Articles

## Published or accepted in peer-reviewed journals

Lisson, P., D. Pregla, **B. Nicenboim**, D. Paape, M. L. van het Nederend, F. Burchert, N. Stadie, D. Caplan, and S. Vasishth (2021). “A computational evaluation of two models of retrieval processes in sentence processing in aphasia”. In: *Cognitive Science* 45.4. DOI: 10.1111/cogs.12956.

**Nicenboim, B.**, S. Vasishth, and F. Rösler (2020). “Are words pre-activated probabilistically during sentence comprehension? Evidence from new data and a Bayesian random-effects meta-analysis using publicly available data”. In: *Neuropsychologia* 142, p. 107427. ISSN: 0028-3932. DOI: 10.1016/j.neuropsychologia.2020.107427.

Vasishth, S., **B. Nicenboim**, F. Engelmann, and F. Burchert (2019). “Computational models of retrieval processes in sentence processing”. In: *Trends in Cognitive Sciences* 23.11, pp. 968 - 982. ISSN: 1364-6613. DOI: 10.1016/j.tics.2019.09.003.

**Nicenboim, B.**, S. Vasishth, F. Engelmann, and K. Suckow (2018). “Exploratory and confirmatory analyses in sentence processing: A case study of number interference in German”. In: *Cognitive Science* 42.S4, pp. 1075–1100. DOI: 10.1111/cogs.12589.

**Nicenboim, B.**, T. B. Roettger, and S. Vasishth (2018). “Using meta-analysis for evidence synthesis: The case of incomplete neutralization in German”. In: *Journal of Phonetics* 70, pp. 39–55. DOI: 10.1016/j.wocn.2018.06.001.

Vasishth, S., **B. Nicenboim**, M. E. Beckman, F. Li, and E. Kong (2018). “Bayesian data analysis in the phonetic sciences: A tutorial introduction”. In: *Journal of Phonetics* 71, pp. 147–161. DOI: 10.1016/j.wocn.2018.07.008.

**Nicenboim, B.** and S. Vasishth (2018). “Models of Retrieval in Sentence Comprehension: A computational evaluation using Bayesian hierarchical modeling”. In: *Journal of Memory and Language* 99, pp. 1–34. ISSN: 0749-596X. DOI: 10.1016/j.jml.2017.08.004.

Paape, D., **B. Nicenboim**, and S. Vasishth (2017). “Does antecedent complexity affect ellipsis processing? An empirical investigation”. In: *Glossa: A journal of general linguistics*. 2.1, p. 71. DOI: 10.5334/gjgl.290.

**Nicenboim, B.**, P. Logačev, C. Gattei, and S. Vasishth (2016). “When high-capacity readers slow down and low-capacity readers speed up: Working memory and locality effects”. In: *Frontiers in Psychology* 7.280. ISSN: 1664-1078. DOI: 10.3389/fpsyg.2016.00280 . eprint: <https://www.frontiersin.org/articles/10.3389/fpsyg.2016.00280/full>.

**Nicenboim, B.** and S. Vasishth (2016). “Statistical methods for linguistic research: Foundational Ideas - Part II”. In: *Language and Linguistics Compass* 10.11, pp. 591–613. ISSN: 1749-818X. DOI: 10.1111/lnc3.12207.

Vasishth, S. and **B. Nicenboim** (2016). “Statistical Methods for Linguistic Research: Foundational Ideas - Part I”. In: *Language and Linguistics Compass* 10.8, pp. 349–369. ISSN: 1749-818X. DOI: 10.1111/lnc3.12201.

**Nicenboim, B.**, S. Vasishth, C. Gattei, M. Sigman, and R. Kliegl (2015). “Working memory differences in long-distance dependency resolution”. In: *Frontiers in Psychology* 6.312. ISSN: 1664-1078. DOI: 10.3389/fpsyg.2015.00312.

## Unpublished manuscripts

Vasishth, S., **B. Nicenboim**, N. Chopin, and R. Ryder “Bayesian hierarchical finite mixture models of reading times: A case study”. unpublished. DOI: 10.17605/OSF.IO/FWX3S.

Albert, A. and **B. Nicenboim** “The double life of language systems: Modelling sonority with complementary symbol and signal based models”. unpublished. DOI: 10.31234/osf.io/kvqy5.

Schad, D. J., **B. Nicenboim**, P. Bürkner, M. Betancourt, and S. Vasishth (2021). “Workflow Techniques for the Robust Use of Bayes Factors”. unpublished.

## Book in preparation

Nicenboim, B., D. Schad, and S. Vasishth An Introduction to Bayesian Data Analysis for Cognitive Science.

## Conferences

### 2021

Patterson, C., P. B. Schumacher, **B. Nicenboim**, J. Hagen, and A. Kehler (2021). “German pronoun use follows Bayesian principles”. In: Proceedings of Annual CUNY Sentence Processing Conference, University of Pennsylvania.

### 2020

Lisson, P., D. Pregla, D. Paape, **B. Nicenboim**, N. Stadie, F. Burchert, and S. Vasishth (2020). “Computational models of retrieval processes in sentence comprehension in aphasia”. In: Architectures and Mechanisms for Language Processing (AMLaP). University of Potsdam, Germany.

Albert, A. and **B. Nicenboim** (2020). “Incorporating continuity in phonological models of the syllable using NAP”. In: LabPhon17.

### 2019

**Nicenboim, B.** (2019). “Bayesian inference: Obstacles and opportunities”. In: 8th Biennial International Conference on the Linguistics of Contemporary English (BICLCE), Bamberg, Germany.

Lisson, P., **B. Nicenboim**, S. Vasishth, and D. Paape (2019). “Models of retrieval in sentence comprehension in aphasia”. In: StanCon. Cambridge, UK.

Lisson, P., M. van het Nederend, D. Pregla, S. Vasishth, **B. Nicenboim**, and D. Paape (2019). “Competing models of retrieval in sentence processing: The case of aphasia”. In: Architectures and Mechanisms for Language Processing (AMLaP). Institute of Cognitive Neuroscience and Centre for Language and Brain, Higher School of Economics, Russia.

### 2018

**Nicenboim, B.** (2018). “The implementation of a model of choice: The (truncated) linear ballistic accumulator”. In: StanCon. Aalto University, Helsinki, Finland. DOI: 10.5281/zenodo.1465990.

Guerra, E., **B. Nicenboim**, and A. V. Helo (2018). “A crack in the crystall ball: Evidence against pre-activation of gender features in sentence comprehension”. In: Architectures and Mechanisms for Language Processing (AMLaP). Titanic Hotel Chaussee Berlin, Germany.

**Nicenboim, B.** and S. Vasishth (2018). “Bayesian cognitive models of memory retrieval processes: A case study”. In: 51. Kongress der Deutschen Gesellschaft für Psychologie. Bayesian statistics as a coherent approach to psychologists’ statistical and methodological problems. Goethe-Universität Frankfurt, Germany.

### 2017

Vasishth, S., N. Chopin, R. Ryder, and **B. Nicenboim** (2017). “Modelling dependency completion in sentence comprehension as a Bayesian hierarchical mixture process: A case study involving Chinese relative clauses”. In: Proceedings of Cognitive Science Conference. London, UK.

Vasishth, S., L. Jaeger, and **B. Nicenboim** (2017). “Feature overwriting as a finite mixture process: Evidence from comprehension data”. In: Proceedings of MathPsych/ICCM Conference. Warwick, UK.

Albert, A. and **B. Nicenboim** (2017). “Linking sonority with periodic energy: Preliminary findings from production and perception”. In: 3rd International Workshop on Dynamic Modeling, Cologne, Germany.

**Nicenboim, B.** and S. Vasishth (2017). “Models of Retrieval in Sentence Comprehension”. In: StanCon. Columbia University New York, NY.

**Nicenboim, B.** and S. Vasishth (2017). “Models of retrieval in sentence comprehension: A computational evaluation using Bayesian hierarchical modeling”. In: Proceedings of the Annual CUNY Sentence Processing Conference. Massachusetts Institute of Technology, Boston, MA, USA.

## 2016

**Nicenboim, B.,** F. Engelmann, K. Suckow, and S. Vasishth (2016). “Number interference as predicted by cue-based retrieval”. In: Architectures and Mechanisms for Language Processing (AMLaP). Bilbao, Spain.

## 2015

**Nicenboim, B.,** F. Engelmann, K. Suckow, and S. Vasishth (2015). “Fail fast or succeed slowly: Good-enough processing can mask interference effects”. In: International Conference on Cognitive Modeling (ICCM).

**Nicenboim, B.,** P. Logacev, C. Gattei, and S. Vasishth (2015). “When high-capacity readers slow down and low-capacity readers speed up: Working memory differences in unbounded dependencies”. In: Proceedings of Annual CUNY Sentence Processing Conference. University of Southern California, Los Angeles, CA.

**Nicenboim, B.,** K. Suckow, and S. Vasishth (2015). “Good-enough processing can mask interference effects”. In: Proceedings of Annual CUNY Sentence Processing Conference. University of Southern California, Los Angeles, CA.

## 2014

**Nicenboim, B.,** P. Logacev, C. Gattei, and S. Vasishth (2014). “When high-capacity readers slow down and low-capacity readers speed up: Working memory differences in unbounded dependencies for German and Spanish readers”. In: Mental Architecture for Processing and Learning of Language (MAPLL). Tokyo, Japan.

**Nicenboim, B.,** S. Vasishth, and R. Kliegl (2014). “Readers with less cognitive control are more affected by surprising content: Evidence from a self-paced reading experiment in German”. In: Mental Architecture for Processing and Learning of Language (MAPLL). Tokyo, Japan.

**Nicenboim, B.,** S. Vasishth, and R. Kliegl (2014). “Readers with less cognitive control are more affected by surprising content”. In: Architectures and Mechanisms for Language Processing (AMLaP). Edinburgh, UK.

**Nicenboim, B.,** S. Vasishth, R. Kliegl, C. Gattei, and M. Sigman (2014). “Working-memory capacity modulates antilocality effects in syntactic dependencies”. In: Proceedings of Annual CUNY Sentence Processing Conference. The Ohio State University, Columbus, OH.

## 2013

**Nicenboim, B.,** S. Vasishth, C. Gattei, P. Logačev, and M. Sigman (2013). “The effect of distance on unbounded dependencies: An individual differences perspective”. In: Architectures and Mechanisms for Language Processing (AMLaP). Aix-Marseille Université, Marseille, France.

## 2012

**Nicenboim, B.** (2012). “Processing of filler-gap dependencies in Complex NP islands: Evidence from Hebrew”. In: Proceedings of Annual CUNY Sentence Processing Conference, New York, NY.

**Nicenboim, B.** (2012). “Processing Complex NP islands in Hebrew”. In: Proceedings of Generative Linguistics in the Old World Conference (GLOW), Potsdam, Germany.

## Invited talks

### 2019

Bayesian models of memory retrieval in sentence comprehension (2019). Institute of Cognitive Science, University of Osnabrueck, Germany.

### 2018

Memory in sentence comprehension (2018). Job Talk at the Department of Cognitive and Brain Sciences, University of Ben Gurion, Israel.

A comparison of race and mixture models for explaining memory processes in sentence comprehension (2018). Stan user group in Berlin, Germany.

### 2017

Bayesian models in psycholinguistics (2017). Institut für Linguistik - Phonetik, University of Cologne, Germany.

Models of retrieval in sentence comprehension: A computational evaluation using Bayesian hierarchical modeling (2017). Colloquium of the HLP Lab at University of Rochester, NY, USA.

### 2015

Fail fast or succeed slowly: Good-enough processing can mask interference effects (2015). Center for Research in Language at University of San Diego, California, USA.

Hierarchical multinomial processing tree models (2015). Research Seminar in Cognitive Psychology, University of Potsdam, Germany.

### 2013

Speed-up does not necessarily mean facilitation: Working memory differences in long-distance dependency resolution (2013). Research Seminar in Cognitive Psychology, University of Potsdam, Germany.

The Effect of Distance on Long-Distance Dependencies. An Individual Differences Perspective (2013). Research Seminar in Cognitive Psychology, University of Potsdam, Germany.

The Effect of Distance on Long-Distance Dependencies. An Individual Differences Perspective (2013). Interdisciplinary Colloquium of the Linguistic Department, Tel Aviv University, Israel.

### 2012

The Effect of Distance on Unbounded Dependencies. An Individual Differences Perspective (2012). Psycholinguistic Seminar, Institute of Linguistics, University of Buenos Aires, Argentina.

The Effect of Distance on Unbounded (Linguistic) Dependencies. An Individual Differences Perspective (2012). Seminar, Laboratory of Integrative Neuroscience, University of Buenos Aires, Argentina.

## Honors and grants

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2012–2018	Potsdam Graduate School (PoGS) Travel Grants
2014	Kommission für Forschung und wissenschaftlichen Nachwuchs (FNK, University of Potsdam) Travel Grant
2014	Potsdam Graduate School (PoGS) PhD Completion Scholarship (5 months)
2013	Minerva Fellowship Extension for Doctoral Research (1 year)

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2011	Minerva Fellowship for Doctoral Research (2 years)
2009	Posis Scholarship from the School of Cultural Studies, Tel Aviv University
2008	Faculty of Humanities Scholarship for Achievements in M.A. studies, Tel Aviv University
2006	Dean's Award for Achievements in Linguistics, Tel Aviv University

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## Teaching experience

### Workshops and summer schools

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2020	“Introduction to computational Bayesian methods using Stan”, with Shravan Vasishth, Physalia courses, Berlin, Germany
2020	“Methods in Advanced Statistics”, with Shravan Vasishth 2020 Winter School organized by Netherlands Graduate School in Linguistics (LOT), Tilburg, Netherlands
2019	“Introduction to Bayesian statistics using brms”, University of Cologne, Germany
2019	“Introduction to Bayesian statistics using brms”, University of Edinburgh, UK
2019	“Advanced Bayesian methods”, Third Summer School on Statistical Methods for Linguistics and Psychology, University of Potsdam, Germany
2018	Talk: “Cognitive models of memory processes in sentence comprehension: A case study using Bayesian hierarchical modeling” Masterclass in Bayesian Statistics, Research school, CIRM (Marseille Luminy, France)
2018	“Advanced topics in Bayesian modeling”, Second Summer School on Statistical Methods for Linguistics and Psychology, University of Potsdam, Germany
2017	“Introduction to Bayesian Modeling using Stan”, 13. Tagung der Fachgruppe Methoden und Evaluation der Deutschen Gesellschaft für Psychologie, Tübingen, Germany
2017	“Introduction to Bayesian modeling”, First Summer School on Statistical Methods for Linguistics and Psychology, University of Potsdam, Germany

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### Courses

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2020–2021	<b>Lecturer</b> in “Research Skills: Programming with R”. Tilburg University
2020–2021	<b>Lecturer</b> in “Methodology for Premasters Data Science & Society”. Tilburg University
2015–2017 (Winter)	<b>Lecturer</b> in “Advanced Data Analysis”. University of Potsdam
2016 (Summer)	<b>Lecturer</b> in “Predictions in Language Processing”. University of Potsdam
2015–2016 (Winter)	<b>Lecturer</b> in “Individual Differences in Sentence Processing”. University of Potsdam
2015 (Summer)	<b>Lecturer</b> in “Predictions in Language Processing”. University of Potsdam
2008–2010	<b>Teaching assistant</b> in “Syntax Beginners” and “Foundations of Theoretical Linguistics” Tel Aviv University

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## Open software

- eeguana. An R package for flexible manipulation of EEG data. **Author**
- loo. Efficient Leave-One-Out Cross-Validation and WAIC for Bayesian Models. **Contributor**

## Academic-related training

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2016	Groningen Spring School on Cognitive Modeling, the Netherlands
2015–2016	International Teaching Professionals, University of Potsdam, Germany
2013	Autumn School Methods in Language Comprehension, Rovereto (TN), Italy
2012	Eye-tracking-while-reading at Laboratory of Integrative Neuroscience, University of Buenos Aires (3 months). Host: Dr. Mariano Sigman

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## Reviewing

- Cognitive Psychology
- Journal of Experimental Psychology: Learning, Memory, and Cognition
- Neuropsychologia
- Lingua
- Phonological Data and Analysis
- Language, Cognition and Neuroscience
- Routledge Manuscript
- Journal of Memory and Language
- Quarterly Journal of Experimental Psychology
- Journal of Cognitive Psychology
- Journal of Phonetics
- CUNY Conference
- Quantitative approaches in corpus linguistics and psycholinguistics, Paris, France

## Languages

- Spanish (Mother tongue)
- English (Fluent)
- Hebrew (Fluent)
- German (Advanced)

## Non-academic professional experience

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2009–2011	QA engineer: NLP Testing at Clearforest. Testing rules and heuristics for identifying semantic entities and relations in English, Spanish and French texts.
2007–2009	Content Specialist position at Celebros. Organization, analysis and categorization of data of Spanish and U.S. clients' databases.

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