

# Curriculum Vitae

Eric Rosen

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Personal website: <https://stanleythepug.github.io/>

## Recent research position

Visiting postdoctoral fellow, Department of Cognitive Science, Johns Hopkins University

Duration of contract: February 7th, 2018 - January 31st, 2021

Faculty sponsor: Dr. Paul Smolensky, Krieger-Eisenhower Professor, with cross appointment at Microsoft Research

## Current research position

Visiting postdoctoral fellow, Institute of Linguistics, University of Leipzig

Duration of contract: November 1st, 2021 - March 31st, 2023.

Faculty sponsor: Dr. Jochen Trommer, Professor

## Research publications since 2016

- [1] to be presented at the Annual Meeting on Phonology, October 23rd, 2022. *Gradient Symbolic Computation **can** account for A'ingae verbal stress patterns.*
- [2] 2022. *Modeling human-like morphological prediction.* Proceedings of the 2022 meeting of the Society for Computation in Linguistics.
- [3] 2022. *Interaction of lexical strata in hybrid compound words through gradient phonotactics.* (with second author Matthew Goldrick) Supplemental Proceedings of the Annual Meeting on Phonology, Toronto. October 3, 2021.
- [4] 2021. *Inflectional paradigms as interacting systems* Proceedings of the 2021 meeting of the Society for Computation in Linguistics.
- [5] 2021. *Lexical strata and phonotactic perplexity minimization.* Supplemental proceedings of the Annual Meeting on Phonology, UC Santa Cruz, September 2020. Also presented as a poster and extended abstract at the 2021 meeting of the Society for Computation in Linguistics.
- [6] 2021. *Emergent Gestural Scores in a Recurrent Neural Network Model of Vowel Harmony.* Caitlin Smith, Charlie O'Hara Paul Smolensky and Eric Rosen. Proceedings of the 2021 meeting of the Society for Computation in Linguistics.
- [7] 2021. *Compositional semantics emerges in neural networks solving math problems* (Jacob Russin, Roland Fernandez, Hamid Palangi, Eric Rosen, Nebojsa Jojic, Paul Smolensky and Jianfeng Gao) To appear in the proceedings of COGSCI 2021.

- [8] 2021. Structural Biases for Improving Transformers on Translation into Morphologically Rich Languages. Paul Soulos, Sudha Rao, Caitlin Smith, Eric Rosen, Asli Celikyilmaz, R. Thomas McCoy, Yichen Jiang, Coleman Haley, Roland Fernandez, Hamid Palangi, Jianfeng Gao, Paul Smolensky. Proceedings of the 4th Workshop on Technologies for MT of Low Resource Languages (LoResMT2021), 2021.
- [9] 2019. *Learning a model of gradient French liaison* (with Paul Smolensky and Matthew Goldrick). Proceedings of the Annual Meeting on Phonology, Stony Brook University, October 2019.
- [10] 2019. *Predicting surface forms in complex inflectional paradigms through phonological constraints*. Supplemental proceedings of the Annual Meeting on Phonology, Stony Brook University, October 2019.
- [11] 2019. *Learning complex inflectional paradigms through blended gradient inputs*. Proceedings of the 2019 meeting of the Society for Computation in Linguistics, January 2019, NYU.
- [12] 2018. *Weak elements make strong predictions: Evidence for gradient input features from Sino-Japanese compound accent*. Supplemental proceedings of the Annual Meeting on Phonology. October 5-7, 2018. UC San Diego.
- [13] 2017. *Predicting semi-regular patterns in morphologically complex words* (An analysis of the semi-regularity of pitch accent in Japanese compound words) *Linguistics Vanguard*, 4(1). ROA 1339. <http://roa.rutgers.edu/article/view/1729>
- [14] 2016. *Predicting the unpredictable: capturing the apparent semi-regularity of rendaku voicing in Japanese through harmonic grammar*, In proceedings of the 42nd annual meeting of the Berkeley Linguistic Society, February 5-7, 2016. ROA 1299. <http://roa.rutgers.edu/article/view/1559>

## Presentations

- [P1] 2022. *Inflectional prediction in complex systems*. Thomas Münzer Lecture. University of Leipzig Institute of Linguistics Retreat. July 18th, 2022.
- [P2] 2021. *Human-like morphological prediction through implicative relations*. Oral presentation at the American International Morphology Meeting, August 26-29, 2021.
- [P3] 2018. *Efficient representation of inflectional paradigms through harmonic grammar*. Poster presented at the Mid-Atlantic Student Colloquium on Speech, Language and Learning, University of Maryland, May 2018.
- [P4] 2017. *Predicting semi-regular Japanese accent patterns through gradient strengths of inputs* Presented at the workshop “Strength in Grammar”, University of Leipzig, November 10-12 2017.
- [P5] 2016. *Japanese pitch accent as a dynamic computational system: global effects through strictly local interactions* Conference paper presented at the Montreal-Ottawa-Laval-Toronto Phonology Workshop, Carleton University, Ottawa, March 19, 2016.

## Non-refereed research

2017. *Geometrical Morphology* Technical report on morphological paradigms in a new framework based on vectors in high-dimensional space. Work in equal joint collaboration with John Goldsmith, University of Chicago. Available on Arxiv at <https://arxiv.org/pdf/1703.04481.pdf>

## Research prior to 2016

*Japanese Loanword Accentuation: Epenthesis and Foot Form Interacting through Edge-Interior Alignment*, Proceedings of the Second International Conference on East Asian Linguistics Vancouver, British Columbia, Canada. Nov. 7-9, 2008.

[https://www.sfu.ca/content/dam/sfu/linguistics/Gradlings/SFUWPL/Rosen\\_E.pdf](https://www.sfu.ca/content/dam/sfu/linguistics/Gradlings/SFUWPL/Rosen_E.pdf)

*Deriving the accentual behaviour of Japanese suffixes: a new OT account*. Invited talk given at the Third Joint Meeting of the Kansai and Tokyo Phonology Research Groups (PAIK and TCP), February 21-22, 2008, Atami, Japan.

Review of *Voicing in Japanese*, van de Weijer, Jeroen, Kensuke Nanjo, and Tetsuo Nishihara, eds., Mouton de Gruyter. Berlin. *The Phonetician* 97: 144-149. 2008.

[http://www.isphs.org/Phonetician/Phonetician\\_97-98.pdf](http://www.isphs.org/Phonetician/Phonetician_97-98.pdf)

*Systematic irregularity in Japanese rendaku: How the grammar mediates patterned lexical exceptions* Canadian Journal of Linguistics, vol. 48. 2003.

## Personal History

Born and educated in Canada. Canadian citizen. Native speaker of English.

Worked in the field of education before enrolling as a graduate student in the linguistics programme at the University of BC in 1994.

For family reasons, worked part-time at a non-linguistic job throughout graduate study years and full-time during the last year of completing Ph.D.

Also for family reasons, worked full-time at a non-linguistic job from 2001 to 2014 after completing Ph.D.

Retired from non-linguistic employment in June 2014 and since then have become active in the field again.

Was appointed adjunct professor in the Department of Linguistics at the University of British Columbia in August 2016.

## Academic Background

B.G.S.	Simon Fraser University	1975
M.A. Linguistics	University of British Columbia	1996
Ph.D. Linguistics	University of British Columbia	2001

## Upgrading and Institutes 2014-2015

**University of Washington Comp. Ling online courses** Sept. 2014 through March 2015: took 3 online courses in computational linguistics:

Ling 473: Introduction to Computational Linguistics

Ling 570: Natural Language Processing

Ling 575: Introduction to Speech Technology

**UBC machine learning, Spring 2015** Directed study in machine learning with Mark Schmidt, Associate Professor, Canada Research Chair in Large-Scale Machine Learning and Alfred P. Sloan Research Fellow, Department of Computer Science, UBC

**LSA Summer Institute in Chicago, July 6-31, 2015** Courses taken:

Gradient Symbolic Computation (Paul Smolensky and Matt Goldrick)

Unsupervised Learning of Linguistic Structure (John Goldsmith)

Computational Phonology (Jeffrey Heinz and Jason Riggle)

Computational Psycholinguistics (Roger Levy and Clinton Bicknell)

### **Research positions 2016-2017**

**UC Santa Cruz** Visiting researcher, Linguistics Research Center, UC Santa Cruz, January - March 2016.

Sponsor: Armin Mester, Professor, Department of Linguistics.

**U Chicago** Visiting postdoc<sup>1</sup>, University of Chicago, March to June 2016 and October 2016 through February 2017.

Sponsor: John Goldsmith, Edward Carson Waller Distinguished Service Professor, Departments of Linguistics, Computer Science and Physical Science Collegiate Division and Humanities Collegiate Division

### **Ph. D. Thesis**

*Phonological processes interacting with the lexicon: variable and non-regular effects in Japanese phonology.* Ph. D. Dissertation. University of B. C. 2001.

Supervisor: Dr. Douglas Pulleyblank.

Committee members: Dr. H. Davis, Dr. B. Gick.

University Examiner: Dr. J. Stemberger.

External Examiner: Dr. Armin Mester, University of California at Santa Cruz.

### **Research Assistantship**

Sept. 1994 - June 1995 Research Assistant, The Syntax and Phonology of Focus

Project Supervisor: Dr. Michael Rochemont, Department of Linguistics, UBC

### **Teaching: UBC Linguistics: phonology (200, 311) and syntax (201, 300, 301) courses**

2000	Summer Session Term I	LING 200 Phonology
2000	Winter Session Term I	LING 311 Phonology
2001	Summer Session Term I	LING 301 Syntax
2002	Summer Session Term I	LING 300 Syntax
2002	Summer Session Term I	LING 301 Syntax
2003	Winter Session Term II	LING 201 Syntax
2003	Summer Session Term II	LING 301 Syntax

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<sup>1</sup>unofficial: my visit was approved by the department but the university was unable to issue me a J-1 visa because of lack of funding.

2003	Winter Session Term I	LING 200 Syntax
2004	Summer Session Term I	LING 311 Phonology
2005	Summer Session Term I	LING 311 Phonology
2006	Summer Session Term II	LING 311 Phonology
2007	Summer Session Term I	LING 201 Syntax
2007	Summer Session Term II	LING 200 Phonology
2008	Summer Session Term I	LING 311 Phonology
2010	Summer Session Term II	LING 300 Syntax
2012	Summer Session Term II	LING 311 Phonology

## References

Dr. Paul Smolensky, Krieger-Eisenhower Professor,  
 Department of Cognitive Science,  
 Johns Hopkins University,  
[smolensky@jhu.edu](mailto:smolensky@jhu.edu), [psmo@microsoft.com](mailto:psmo@microsoft.com)  
<http://cogsci.jhu.edu/directory/paul-smolensky/>

Dr. Matthew Goldrick, Professor,  
 Department of Linguistics,  
 Northwestern University,  
 Evanston, Illinois.  
[matt-goldrick@northwestern.edu](mailto:matt-goldrick@northwestern.edu)  
<http://faculty.wcas.northwestern.edu/matt-goldrick/>

Dr. Eric Baković, Professor and Chair,  
 Department of Linguistics,  
 University of California, San Diego,  
[ebakovic@ucsd.edu](mailto:ebakovic@ucsd.edu),  
<https://sites.google.com/ucsd.edu/ebakovic/>