

EMPLOYMENT

- Current Lead Data Scientist & Algorithm Engineer, Rise Science
2018-2021 Lead Data Scientist, Jellyvision Labs, Inc.
2016-2018 Senior Data Scientist, Mattersight Corporation
2015-2016 Data Analyst, Mbira Technologies
2014-2015 Visiting Assistant Professor, Northwestern University
Dept. of Communication Sciences and Disorders

EDUCATION

- 2014 **Ph.D.**, *Communication Sciences & Disorders*
Northwestern University, Evanston, IL, USA
Cognitive Science Specialization
Dissertation Title: Bilingual Spoken Language Comprehension - A Computational and Empirical Study of Lexical Semantic Processing in Bilinguals
Committee: Dr. Viorica Marian (Advisor), Dr. Cynthia K. Thompson, Dr. Patrick C. M. Wong (Chinese University of Hong Kong), and Dr. Jeffrey Elman (University of California, San Diego)
- 2014 **M.A.**, *Communication Sciences & Disorders, Non-Clinical*
Northwestern University, Evanston, IL, USA
- 2006 **B.A.**, *Brain & Cognitive Sciences*
University of Rochester, Rochester, NY, USA

RESEARCH INTERESTS

Cognition, Language Comprehension, Psycholinguistics, Computational Modeling, Language Interaction, Eye-Tracking, Perception, Bilingualism, Culture & Language

PEER-REVIEWED JOURNAL ARTICLES

1. Hayakawa, S., **Shook, A.**, & Marian, V. (2020). When it's harder to ignore than to ignore: Evidence of greater attentional capture from a non-dominant language. *International Journal of Bilingualism*. doi: 10.1177/1367006920915277
2. **Shook, A.**, & Marian, V. (2018). Covert co-activation of bilinguals' non-target language: Phonological competition from translations. *Linguistic Approaches to Bilingualism*, 8. doi: 10.1075/lab.17022.sho
3. **Shook, A.**, & Marian, V. (2016). The influence of native-language tones on lexical access in the second language. *Journal of the Acoustical Society of America*, 139(6). doi: 10.1121/1.4953692.

4. Schroeder, S. R., Marian, V., **Shook, A.**, & Bartolotti, J. (2016). Bilingualism and musicianship enhance cognitive control, *Neural Plasticity*, 2016. doi: 10.1155/2016/4058620.
5. Giezen, M. R., Blumenfeld, H. K., **Shook, A.**, Marian, V., Emmorey, K. (2015). Parallel language activation and inhibitory control in bimodal bilinguals. *Cognition*, 141, 9-25. doi: 10.1016/j.cognition.2015.04.009.
6. **Shook, A.**, Goldrick, M., Engstler, C., & Marian, V. (2014) Bilinguals show weaker lexical access during spoken sentence comprehension. *Journal of Psycholinguistic Research*. doi:10.1007/s10936-014-9322-6
7. **Shook, A.**, & Marian, V. (2013). The Bilingual Language Interaction Network for Comprehension of Speech. *Bilingualism: Language and Cognition*, 16(2), 304-324. doi: 10.1017/S1366728912000466
8. Marian, V., **Shook, A.**, & Schroeder, S. R. (2013). Bilingual two-way immersion programs benefit academic achievement. *Bilingual Research Journal*, 36(2), 167-186. doi:10.1080/15235882.2013.818075
9. **Shook, A.**, Bartolotti, J., Schroeder, S. R., & Marian, V. (2013). Musical experience influences novel language learning. *American Journal of Psychology*, 126, 95-104.
10. Marian, V., Bartolotti, J., Chabal, S., & **Shook, A.** (2012). CLEARPOND: Cross-Linguistic Easy-Access Resource for Phonological and Orthographic Neighborhood Densities, *PLoS ONE*, 7(8): e43230. doi:10.1371/journal.pone.004323
11. **Shook, A.**, & Marian, V. (2012). Bimodal bilinguals co-activate both languages during spoken comprehension. *Cognition*, 124, 314-324. doi: 10.1016/j.cognition.2012.05.014
12. Krizman, J., Marian, V., **Shook, A.**, Skoe, E., & Kraus, N. (2012). Subcortical encoding of sound is enhanced in bilinguals and relates to executive function advantages. *Proceedings of the National Academy of Sciences*, 109, 7877-7881. doi: 10.1073/pnas.1201575109
13. Bartolotti, J., Marian, V., Schroeder, S. R., & **Shook, A.** (2011). Bilingualism and inhibitory control influence statistical learning of novel word forms. *Frontiers in Cognition*, 2, 324, 1-9. doi: 10.3389/fpsyg.2011.00324

BOOK CHAPTERS, ARTICLES, AND CONFERENCE PROCEEDINGS

1. Freeman, M. R., **Shook, A.**, & Marian, V. (2016). Cognitive and emotional effects of bilingualism in adulthood. In E. Nicoladis & S. Montanari (Eds.), *Bilingualism across the lifespan: Factors moderating language proficiency* (pp. 285-303). Berlin, Boston: De Gruyter Mouton. doi: 10.1515/9783110341249-017.
2. Marian, V., & **Shook, A.** (2012). The cognitive benefits of being bilingual. *Cerebrum*, October. Retrieved from <http://dana.org/news/cerebrum/>
3. Bartolotti, J., Marian, V., Schroeder, S. R., & **Shook, A.** (2011). Statistical learning of a Morse code language is improved by bilingualism and inhibitory ability. In L.

Carlson, C. Hoelscher, & T. Shipley (Eds.), *Proceedings of the 33rd Annual Meeting of the Cognitive Science Society* (pp. X885-890). Austin, TX: Cognitive Science Society.

4. **Shook A.**, & Marian V. (2010). Interactivity during spoken word recognition: Evidence from bimodal bilinguals. In S. Ohlsson & R. Catrambone (Eds.), *Proceedings of the 32nd Annual Meeting of the Cognitive Science Society* (pp. 790-795). Austin, TX: Cognitive Science Society.
5. **Shook, A.**, & Marian, V. (2010). Language processing in bimodal bilinguals. In E. Caldwell (Ed.), *Bilinguals: Cognition, Education and Language Processing*, pp. 35-64. Hauppauge, NY: Nova Science.

Republished in Meinken, K. L. (Ed.), (2010). *Encyclopedia of Language and Linguistics*. NY: Nova Science, pp. 35-64.

Republished in Meineken, K.L. (Ed.), (2012). *Encyclopedia of Language and Linguistics*. NY: Nova Science, pp. 299-328.

Republished in Sun, M.K. (Ed.), (2012). *Trends in Cognitive Science*, NY: Nova Science, pp. 81-112.

MANUSCRIPTS UNDER PREPARATION

1. Chen, P., **Shook, A.**, & Marian, V. (in preparation). Cognitive and linguistic predictors of translation ability in bilinguals.

CONFERENCE PRESENTATIONS

1. Marian, V., Bartolotti, J., **Shook, A.**, Schroeder, S. (2017, July). Research tutorial: Assessing phonological and orthographic neighborhood density in English, Spanish, French, German, and Dutch. *Abstracts of the AILA 2017 World Congress of Applied Linguistics*, Rio de Janeiro, Brazil.
2. **Shook, A.**, & Marian, V. (2016, May). Native-language Tones Influence Lexical Access in the Second Language. Presented at the *International Meeting of the Psychonomic Society*, Granada, Spain.
3. **Shook, A.**, & Marian, V. (2014, November). Automatic Activation of Translation Equivalents During Bilingual Spoken Comprehension. Presented at the *Annual Meeting of the Psychonomic Society*, Long Beach, CA.
4. **Shook, A.**, & Marian, V. (2014, October). Language Co-Activation in Single-Language Contexts. Presented at the *2014 University of Illinois-Chicago Bilingualism Forum*, Chicago, IL.
5. Marian, V., **Shook, A.**, Bartolotti, J., & Chabal, S. (2014, September) An Introduction to On-line Databases Using CLEARPOND: Cross-Linguistic Easy-Access Resource for Phonological and Orthographic Neighborhood Densities. Presented at the *9th International Workshop on Writing Systems and Literacy*, Brighton, UK.
6. **Shook, A.**, Bartolotti, J., Chabal, S., & Marian, V. (2013, November). CLEARPOND: Cross-Linguistic Easy-Access Resource for Phonological and Orthographic

Neighborhood Densities. Presented at the *Annual Meeting of the Psychonomic Society*, Toronto, Canada.

7. **Shook, A.**, Bartolotti, J., Chabal, S., & Marian, V. (2013, July). CLEARPOND: Phonological and orthographic neighborhood information for multiple languages. Presented at the *35th Annual Meeting of the Cognitive Science Society*, Berlin, Germany.
8. Marian, V., **Shook, A.**, & Chabal, S. (2013, June). Language co-activation during bilingual processing: A behavioral and computational approach. Talk presented at the *International Symposium on Bilingualism 9*, Singapore.
9. **Shook, A.**, Bartolotti, J., Chabal, S., & Marian, V. (2013, June). CLEARPOND: Cross-Linguistic Easy-Access Resource for Phonological & Orthographic Neighborhood Density. Poster presented at the *International Symposium on Bilingualism 9*, Singapore.
10. Krizman, J., **Shook, A.**, Skoe, E., Marian, V., & Kraus, N. (2012, April) Speaking two languages promotes enhanced encoding of sound. Poster presented at the *24th Annual Convention of the Association for Psychological Science*. Chicago, IL.
11. Krizman, J., Marian, V., **Shook, A.**, & Kraus, N. (2012, April). Bilingual enhancements in sound processing relate to executive function advantages. Poster presented at the *Annual Meeting of the Cognitive Neuroscience Society*. Chicago, IL.
12. **Shook, A.**, & Marian, V. (2011, November). Spoken language comprehension in bilinguals: A computational approach. Paper presented at the *2011 American Speech-Language and Hearing Association Convention*. San Diego, CA.
13. Krizman, J., Marian, V., **Shook, A.**, Skoe, E., & Kraus, N. (2011, November). Bilinguals show enhanced subcortical representation of sound. *Abstracts of Advances and Perspectives in Auditory Neurophysiology Conference at the Society for Neuroscience Annual Meeting*. Washington, D.C.
14. **Shook, A.**, Marian, V., Krizman, J., & Kraus, N. (2011, November). Bilingual experience enhances subcortical encoding of sound. Poster presented at the *52nd Annual Meeting of the Psychonomic Society*. Seattle, WA.
15. Schroeder, S. R., Marian, V., **Shook, A.**, Bartolotti, J., & Chabal, S. (2011, November). Bilingual experience and inhibitory control influence novel-word learning. Poster presented at the *52nd Annual Meeting of the Psychonomic Society*. Seattle, WA.
16. **Shook, A.**, Marian, V., Bartolotti, J., Schroeder, S. R., & Chabal, S. (2011, July). The impact of musical experience on statistical language learning. Poster presented at the *33rd Annual Meeting of the Cognitive Science Society*. Boston, MA.
17. **Shook, A.**, & Marian, V. (2011, June). BLINCS: The bilingual language interaction network for comprehension of speech. Presented at the *8th International Symposium on Bilingualism*. Oslo, Norway.

18. **Shook, A.**, & Marian, V. (2011, June). Language co-activation across modalities: An eye-tracking study of bimodal bilinguals. Presented at the *8th International Symposium on Bilingualism*. Oslo, Norway.
19. **Shook, A.**, & Marian, V. (2011, May). Hearing words and thinking signs: Language co-activation across modalities. Poster presented at the *23rd Annual Convention of the Association for Psychological Science*. Washington, D.C.
20. **Shook, A.**, & Marian, V. (2011, May). Hearing signs: Activation of sign language when listening to English. Presented at the *2011 Meeting of the Midwestern Psychological Association*. Chicago, IL.
21. **Shook, A.**, Bartolotti, J., Schroeder, S. R., & Marian, V. (2011, April). Bilingual experience and inhibitory control benefit language learning. Presented at the *2011 UIC Bilingualism Forum*. Chicago, IL.
22. Marian, V., & **Shook, A.** (2010, November). Top-down processing in spoken word recognition: Evidence from bimodal bilinguals. Presented at the *51st Annual Meeting of the Psychonomic Society*. St. Louis, MO.
23. **Shook, A.**, & Marian V. (2010, April). Parallel processing in bimodal bilinguals. Paper presented at the *46th Annual Meeting of the Chicago Linguistics Society*. Chicago, IL.
24. **Shook, A.**, & Marian, V. (2009, July). Bilingual education and academic achievement. Poster presented at the *International Symposium on Bilingualism 7*. Utrecht, Netherlands.
25. Marian, V., & **Shook, A.** (2008, July). Bilingual two-way immersion benefits academic achievement. Poster presented at the *11th Annual Congress of the International Association for the Study of Child Language*. Edinburgh, Scotland.
26. Den Ouden, D.B., Fix, S., Riley, E., Rulf, K., **Shook, A.**, Parrish, T., & Thompson, C.K. (2007, June). Verb argument structure in movies and pictures: An fMRI study. Poster presented at the *13 Annual Meeting of the Organization for Human Brain Mapping*. Chicago, IL.

RESEARCH EXPERIENCE

- 2007-2014 *Bilingualism & Psycholinguistics Research Group*, Northwestern University
Principal Investigator: Dr. Viorica Marian
- 2007 *Speech Physiology Lab*, Northwestern University
Principal Investigator: Dr. Charles Larson
- 2006 *Aphasia & Neurolinguistics Research Laboratory*, Northwestern University
Principal Investigator: Dr. Cynthia K. Thompson
- 2004-2006 *Computational Cognition & Perception Laboratory*, University of Rochester
Principal Investigator: Dr. Robert A. Jacobs

TEACHING EXPERIENCE

INSTRUCTOR OF RECORD

Northwestern University, Department of Communication Sciences & Disorders

- 2014-15 *Scientific Exploration of Communication (Fall)*
 Seminar in Communication Sciences & Disorders: Bilingualism (Fall)
 Seminar on Professional Development (Fall)
 Brain & Cognition (Winter)
 Phonetics (Winter)
 Research Methodology (Spring)
 Culture, Language, & Learning (Spring)
- 2013-14 *Statistics in Communication Sciences & Disorders (Winter)*

DIRECTED TEACHING

Northwestern University, Department of Communication Sciences & Disorders

- 2011 *Culture, Language, & Learning*, under the supervision of Viorica Marian

GUEST LECTURER

Northwestern University, Department of Communication Sciences & Disorders

- 2011 *Research Procedures in Communication Sciences & Disorders*

TEACHING ASSISTANT

Northwestern University, Department of Communication Sciences & Disorders

- 2009-2010 *Acoustic Phonetics*, with Jessica Maye, Ph.D.
- 2010 *Delivery Systems in Speech & Language Pathology*, with Frances Block, MA, CCC-SLP.
- 2007-2009 *Culture, Language, & Learning*, with Viorica Marian, Ph.D. and Renee Reilly, Ph.D., CCC-SLP.
- 2009 *Research Procedures in Communication Sciences & Disorders* with Cynthia K. Thompson, Ph.D.
- 2008 *Statistics in Communication Sciences & Disorders*, with Denise Drane, Ph.D.
- 2008 *Craniofacial Anomalies and Syndromes*, with Judith LeDuc, M.A. CCC-SLP.
- 2008 *Aphasia: Disorders of Language*, with Cynthia K. Thompson, Ph.D.
- 2007-2008 *The Scientific Exploration of Communication* with Jessica Maye, Ph.D., Charles Larson, Ph.D., and Patrick Wong, Ph.D.
- 2007 *Functional Neuroanatomy* with Patrick Wong, Ph.D.

University of Rochester, Department of Brain & Cognitive Sciences

- 2005 *Laboratory in Development and Learning* with Richard Aslin, Ph.D.

ADVISING & MENTORSHIP

David Chi, BS in Communication Sciences & Disorders, Northwestern University
Rucha Mehta, MD Candidate at Rosalind Franklin University
Sana Ali, BS in Communication Sciences & Disorders, Northwestern University

SERVICE

DEPARTMENT SERVICE

2014-2015 Co-Chair, Undergraduate Honors Committee
 Chair, Undergraduate First-Year Experience, CSD
 Ph.D. Recruitment Committee, CSD
 Coordinator & Capstone Supervisor, Children & Communication Module

PROFESSIONAL SERVICE

Ad-Hoc Review: Grants

National Science Foundation, 2014 (Linguistics Panel)

Ad-Hoc Review: Journal Publications

Journal of Memory and Language; Cognition; Psychological Research; Applied Psycholinguistics; Journal of Cognitive Psychology; Journal of Speech, Language, & Hearing Research; Discourse Processes; Bilingualism: Language & Cognition; International Journal of Bilingualism; Frontiers In Language Sciences; Linguistic Approaches to Bilingualism; Learning and Individual Differences; International Journal of Bilingual Education and Bilingualism

Ad-Hoc Review: Conferences

Annual Meeting of the Cognitive Science Society (2011-2015), UIC Bilingualism Forum (2012-2014), International Workshop on Bilingualism and Cognitive Control (2013), Architectures and Mechanisms for Language Processing Conference (2012)

PROFESSIONAL MEMBERSHIP

Psychonomic Society, Cognitive Science Society, Women in Cognitive Science

GRANTS AND AWARDS

- **John D. and Lucille H. Clarke Scholarship.** Dissertation Year Fellowship. One year full tuition and stipend, 2010
- **Language and Cognition Fellowship.** First year doctoral award. One year full tuition and stipend, 2006
- **ISB8 Travel Grant, 2011**
International Symposium on Bilingualism 8 in Oslo, Norway.
- Northwestern University **Graduate School Travel Grant, 2011**,
Annual Meeting of the Cognitive Science Society in Boston, MA.
- Northwestern University **Cognitive Science Travel Grant, 2010**,
Annual Meeting of the Cognitive Science Society in Portland, OR.
- Northwestern University **Graduate School Travel Grant, 2010**,
Annual Meeting of the Cognitive Science Society in Portland, OR.

- Northwestern University **Graduate School Travel Grant, 2009**, International Symposium on Bilingualism 7 in Utrecht, Netherlands.
- Northwestern University **Graduate School Travel Grant, 2008**, International Congress for the Study of Child Language in Edinburgh, Scotland.

ADDITIONAL SKILLS AND EXPERIENCE

- PROGRAMMING LANGUAGES:
R Statistical Computing Software, Python (Pandas, scikit-learn, Keras, numpy), Transact-SQL, PERL, MySQL, PostgreSQL, Julia.
- ANALYSIS SKILLS AND TECHNIQUES:
Statistics: Descriptive, Parametric / Non-Parametric Inferential Statistics, Machine Learning (Linear/Logistic Regression, Mixed Effects analyses, Random Forest, Gradient Boosted Trees, Neural Networks), Deep-learning Methods (Tensorflow, Keras).
Other: Web-scraping, NGINX, Apache HTTP server.
- EXPERIMENTAL APPLICATIONS:
Praat, SPSS, Psychtoolbox, EyeLink eye-tracking software, SuperLab, NIH Cognitive Assessment Toolbox, Standardized Psychometric Measures (e.g., WASI, CTOPP, PPVT).
- ADDITIONAL TOOLS:
LaTeX, JIRA, Confluence, Git, Jenkins, Docker, Amazon Web Services.