Zachary Burchill

academic cv

Department of Brain and Cognitive Sciences
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Education

2014–present **Ph.D Brain and Cognitive Sciences**, *University of Rochester*, Rochester, NY.
Advisor: T. Florian Jaeger

2010–2014 **BA Linguistics, minor in Computer Science**, *University of Pennsylvania*, Philadelphia, PA, *Magna cum laude,* with distinction in Linguistics.
Senior thesis advisors: Delphine Dahan and Lila Gleitman

Research Appointments

2010-2014 **Research Assistant**, *Purdue University, Center for the Computational Study of Cognition, Communication, Control, and Perception*.
Supervised by Jeffrey Siskind

Honors and Awards

- **Cognitive Modeling and Computational Linguistics Best Student Paper**, 2017
- **Cognitive Modeling and Computational Linguistics Student Travel Grant**, 2017
- University of Rochester **Center for Language Sciences (CLS) Fellowship**, 2014-present
- **Benjamin Franklin Scholar**, University of Pennsylvania, 2010-2014
- **College Alumni Society Research Grant**, University of Pennsylvania, 2013-2014
- **Biff Ruttenberg Foundation Scholar**, 2010-2014
- **United Methodist Gift of Hope Scholar**, 2010-2011

Publications

submitted Jaeger, T. F., Bushong, W., and **Burchill, Z**. *Strong evidence for expectation adaptation during language understanding, not a replication failure. A reply to Harrington Stack, James, and Watson (2018)*. https://osf.io/4vxyp/

2018 **Burchill, Z.**, Liu, L., Jaeger, T. F., Maintaining information about speech input during accent adaptation. *PloS one, 13*(8).

2018 Xie, X., Weatherholtz, K., Bainton, L., Rowe, E., **Burchill, Z.**, Liu, L., Jaeger, T. F., Rapid adaptation to foreign-accented speech and its transfer to an unfamiliar talker. *The Journal of the Acoustical Society of America, 143*(4).

Conference Proceedings Papers

2017 Liu, L., **Burchill, Z.**, Tanenhaus, M., Jaeger, T. F., Failure to replicate talker-specific syntactic adaptation. *In Proceedings of the 39th Annual Conference of the Cognitive Science Society.* Cognitive Science Society.

2017 **Burchill, Z.**, Jaeger, T. F., Grounding sound change in ideal observer models of perception. *In Proceedings of the 8th Workshop on Cognitive Modeling and Computational Linguistics.* Association for Computational Linguistics.

2012 Barbu, A., Bridge, A., **Burchill, Z.**, Coroian, D., Dickinson, S., Fidler, S., Michaux, A., Mussman, S., Siddharth, N., Salvi, D., Schmidt, L., Siskind, J. M., Waggoner, J., Wang, S., Wei, J., Yin, Y., & Zhang, Z. Video in sentences out. In de Freitas, N. & Murphy, K. (Eds.), *Proceedings of the Twenty-Eighth Conference on Uncertainty in Artificial Intelligence (UAI)* (pp. 102-12)

Plenary Talks

2016 **Burchill, Z.**, Liu, L., Weatherholtz, K., Jaeger, T. F., *Limits on maintaining perceptual information in accented speech processing.* Plenary talk presented at 29th Annual CUNY Sentence Processing Conference, Gainesville, FL

2015 **Burchill, Z.**, *Are accents hard to learn?.* Talk presented at the Language Labs Lab-meeting, McGill, Montreal, Canada

Conference Posters

2018 **Burchill, Z.**, Bushong, W., Jaeger, T.F., *Wasted power and false interactions in reading time analyses.* 24th Annual Conference on Architectures and Mechanisms for Language Processing (AMLaP), Berlin, Germany

2018 Bushong, W., **Burchill, Z.**, Jaeger, T.F., *Understanding changes in garden-paths as expectation adaptation.* 24th Annual Conference on Architectures and Mechanisms for Language Processing (AMLaP), Berlin, Germany

2016 **Burchill, Z.**, Jaeger, T. F., *Modeling new conceptions of functional load with perceptual confusability.* 15th Conference on Laboratory Phonology, Ithaca, NY, July 13-16.

2016 Bainton, L.; Rowe, E.; **Burchill, Z.**; Liu, L.; Weatherholtz, K.; Jaeger T. F., *Rapid adaptation to foreign-accented speech: A web-based replication of Clarke and Garrett (2004).* 15th Conference on Laboratory Phonology, Ithaca, NY, July 13-16.

2016 Rowe, E.; Bainton, L.; Jaeger, F.; Weatherholtz, K.; **Burchill, Z.**; Liu, L., *Rapid adaptation and generalization in foreign-accented speech perception.* Poster presented at the 30th Annual National Conference on Undergraduate Research.

Teaching & Outreach

Teaching

Spring 2018 **Teaching assistant: Foundations of Cognitive Science**, *University of Rochester.*

Spring 2015 & Fall 2016	**Teaching assistant: Language and Psycholinguistics**, *University of Rochester*, Conducted recitations, guided students one-on-one and in groups, helped students conduct their own experiments online, graded for a large introductory psycholinguistics course..

Mentoring

2015-present	Hold weekly meetings for my team of undergraduates, co-led by Linda Liu. We bring in guest lecturers, hold tutorials and career talks, along with discussions of papers that they have recently read.
2015-2016	Along with Kodi Weatherholtz, Florian Jaeger, and later Linda Liu, served as a mentor for an undergraduate team who learned how to run experiments from start to finish by conducting a replication and extension of an important paper in accent adaptation, Clarke & Garrett (2004).

Open-source software

Contributor:

Typos	Contributed bug and documentation fixes for R packages in the "Hadleyverse" (e.g. **purrr**, **tidyr**)
Silly	Contributed to R-Ladies' **praise** R package: a silly package for a group with a serious message about gender diversity

Projects:

Useful	Created various the **acl2017** package, which converts R Markdown into a format compatible with the ACL 2017 paper submission standards
Useful	Created and maintain the **zplyr** R package as a collection of functions useful for my research, and R packages for working with Rochester Computer Science compute cluster.
Cool/Ongoing	*"Translations Never": When to Give Up Hoping for Updates* In the process of creating a Bayesian model to predict when content creators will stop updating, using web-scraped data from webcomic archives and manga translations.