

Curriculum Vitae

XIN XIE

Department of Brain and Cognitive Sciences
University of Rochester

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RESEARCH INTERESTS

Speech perception and production, neural correlates of spoken language processing, perceptual learning (and disorders), native and non-native speech communication, language plasticity, computational modeling, language acquisition, bilingualism, voice perception

EDUCATION

- Summer 2017 Kavli Summer Institute in Cognitive Neuroscience, UC Santa Barbara, Santa Barbara, CA.
- 2009-2015 Ph.D. in Psychology (Language & Cognition Concentration), University of Connecticut
Advisors: Emily Myers and Carol Fowler
Dissertation: “Phonetic adaptation to foreign-accented speech”
Committee: Emily Myers (chair), Carol Fowler, James Magnuson, Rachel Theodore
- 2005-2009 B.S.E. in Systems Science and Engineering, Zhejiang University, China

RESEARCH POSITIONS

- 2016-present Postdoctoral Associate. University of Rochester, Department of Brain and Cognitive Sciences. PI: Florian Jaeger.
- 2015-2016 Postdoctoral Researcher. University of Connecticut, Department of Speech, Language and Hearing Sciences. PI: Emily Myers.

PEER-REVIEWED PUBLICATIONS

- Xie, X., Weatherholtz, K., Bainton, L., Rowe, E., Burchill, Z., Liu, L., & Jaeger, T. F. (2018). [Rapid adaptation to foreign-accented speech and its limits.](#) *Journal of the Acoustical Society of America*, 143, 2013-2031.
- Xie, X., & Myers, E. (2018). [Left inferior frontal gyrus sensitivity to phonetic competition in receptive language processing: a comparison of clear and conversational speech.](#) *Journal of Cognitive Neuroscience*, 30, 267-280.
- Xie, X., Earle, F. S. & Myers, E. B. (2018). [Sleep facilitates generalization of accent adaptation to a new talker.](#) *Language, Cognition and Neuroscience*, 33, 196-210.

- Xie, X.,** & Myers, E. B. (2017). [Learning a talker or learning an accent: Acoustic similarity constrains generalization of foreign accent adaptation to new talkers.](#) *Journal of Memory and Language*, 97, 30-46.
- Xie, X.,** Theodore, R.M., & Myers, E. B. (2017). [More than a boundary shift: perceptual adaptation to foreign-accented speech reshapes internal structure of phonetic categories.](#) *Journal of Experimental Psychology: Human Perception and Performance*, 43, 206 - 217.
- Xie, X.,** & Myers, E. B. (2015). [The impact of musical training and tone language experience on talker identification.](#) *Journal of the Acoustical Society of America*, 137, 419-432.
- Xie, X.,** & Myers, E. B. (2015). [General language ability predicts talker identification.](#) In Noelle, D. C., Dale, R., Warlaumont, A. S., Yoshimi, J., Matlock, T., Jennings, C. D., & Maglio, P. P. (Eds.), *Proceedings of the 37th Annual Meeting of the Cognitive Science Society* (pp. 2697-2702). Austin, TX: Cognitive Science Society.
- Xie, X.,** & Fowler, C. A. (2013). [Listening with a foreign-accent: The interlanguage speech intelligibility benefit in Mandarin speakers of English.](#) *Journal of Phonetics*, 41, 369-378.

BOOK CHAPTERS

- Myers, E., Johns, A.R., Earle, F.S., and **Xie, X.** (2017). [Invariance problem in the acquisition of non-native phonetic contrasts: from instances to categories.](#) In Lahiri, A. and S. Kotzor (Eds.). *The Speech Processing Lexicon: Neurocognitive and Behavioural Approaches* (pp. 52-84). Berlin: De Gruyter/Mouton.
- Fowler, C. A., & **Xie, X.** (2016). [Involvement of the speech motor system in speech perception.](#) In P. van Lieshout, B. Maassen, and H. Terband (Eds.). *Speech motor control in normal and disordered speech: Future developments in theory and methodology* (pp. 1-24). Rockville, MD: ASHA Press.

MANUSCRIPTS IN PREPARATION

* indicates manuscripts prepared with mentored students

- Xie, X.,** & Jaeger, T. F. (in preparation). Learning to understand foreign accents: Adaptation and generalization as inference under uncertainty.
- Xie, X.,** & Jaeger, T. F. (in preparation). From talker variability to talker knowledge.
- *Li, R., **Xie, X.,** & Jaeger, T. F. (in preparation). A new cross-linguistic speech corpus for acoustic and production research.
- Xie, X.,** Liu, L., & Jaeger, T. F. (in preparation). Adaptation and generalization to foreign-accented speech.
- Xie, X.,** & Myers, E. B. (in preparation). Contextual information aids perceptual adaptation to speakers of low intelligibility.
- Xie, X.,** & Myers, E. B. (in preparation). Consistency matters: Effects of within-talker acoustic variability on rapid learning of foreign accents.
- Xie, X.,** Myers, E. B., Magnuson, J. S., Mencl, W. E., Irwin, J. R., Brancazio, L., & Rueckl, J. (in preparation). Encoding articulator information in the brain during speech perception.

CONFERENCE PRESENTATIONS

* indicates presentations completed with mentored students

Xie, X., *Li, R., & Jaeger, T. F. (September, 2018). Disentangling *intra-* and *inter-*talker variability in L2 phonetic production: L2 speech, but not talkers, is more variable. Poster presented at *The 24th Architectures and Mechanisms for Language Processing*. Berlin, Germany.

Xie, X., & Jaeger, T. F. (September, 2018). Modeling prior knowledge in the perception of native and foreign-accented speech. Poster presented at *The 24th Architectures and Mechanisms for Language Processing*. Berlin, Germany.

*Li, R., **Xie, X.,** & Jaeger, T. F. (September, 2018). A corpus of native and non-native speech for speech production research. Poster presented at *The 24th Architectures and Mechanisms for Language Processing*. Berlin, Germany.

Xie, X., *Li, R., & Jaeger, T. F. (June, 2018). Perceiving native- and foreign-accented speech: A problem of probabilistic inference under uncertainty. Poster presented at *International Max Planck Research School for the Language Sciences Conference 2018*. Nijmegen, Netherlands.

*Li, R., **Xie, X.,** & Jaeger, T. F. (April, 2018). Speech variability across talkers and accents. Talk presented at *The National Conferences on Undergraduate Research 2018*. Edmond, OK.

Xie, X., Myers, E. B. (November, 2017). Inferior frontal gyrus activation is modulated by phonetic competition: An fMRI study of clear and conversational speech. Poster presented at *The Ninth Annual Meeting of the Society for the Neurobiology of Language*. Baltimore, ML.

Rothermich, K., Saltzman, D., **Xie, X.,** & Myers, E. B. (November, 2017). Sensitivity to phonetic competition in people with aphasia. Poster presented at *The Ninth Annual Meeting of the Society for the Neurobiology of Language*. Baltimore, ML.

Rothermich, K., Saltzman, D., **Xie, X.,** & Myers, E. B. (September, 2017). Sensitivity to phonetic competition in people with aphasia. Poster presented at *12th Annual Eleanor M. Saffran Conference on Cognitive Neuroscience and Rehabilitation of Communication Disorders*. Philadelphia, PA.

Xie, X., Myers, E. B. (September, 2017). Inferior frontal gyrus activation is modulated by phonetic competition: An fMRI study of clear and conversational speech. Talk presented at *The 23rd Architectures and Mechanisms for Language Processing*. Lancaster, United Kingdom.

*Oey, L., *Lee, C., *Simon, E., **Xie, X.,** & Jaeger, T. F. (September, 2017). Talker generalization of accent adaptation: Questioning its robustness. Poster presented at *The 23rd Architectures and Mechanisms for Language Processing*. Lancaster, United Kingdom.

*Lee, C., *Oey, L., *Simon, E., **Xie, X.,** & Jaeger, T. F. (September, 2017). An investigation into audio perception studies on Amazon Mechanical Turk. Poster presented at *The 23rd Architectures and Mechanisms for Language Processing*. Lancaster, United Kingdom.

Jaeger, T. F., Kleinschmidt, D., Liu, L., & **Xie, X.** (September, 2017). Understanding accents and dialects: Speech perception as inference under uncertainty. Talk presented at *The 20th Conference of the European Society for Cognitive Psychology (ESCoP)*. Potsdam, Germany.

- Liu, L., **Xie, X.**, Weatherholtz, K., & Jaeger, T. F. (March, 2017). Talk presented at *The 30th Annual CUNY Conference on Human Sentence Processing*. Cambridge, MA.
- Xie, X.**, Myers, E. B. (December, 2016). Sleep facilitates talker generalization of accent adaptation. Poster presented at *The 172nd Annual Meeting of the Acoustical Society of America*. Honolulu, HI.
- Xie, X.**, *Fisher, R., *Patel, D., & Myers, E. B. (April, 2016). Talker similarity guides accent adaptation and its generalization. Poster presented at *The 6th Annual UCONN Language Fest*. Storrs, CT.
- Xie, X.**, Myers, E. B. (March, 2016). Learning a talker or learning an accent? Cross-talk generalization of phonetic adjustment to foreign-accented speech. Poster presented at *The 29th Annual CUNY Conference on Human Sentence Processing*. Gainesville, FL.
- Xie, X.**, Theodore, R. M., Myers, E. B. (November, 2015). Perceptual adaptation to foreign-accented speech reshapes the internal structure of phonetic categories. Poster presented at *The 56th Annual Meeting of the Psychonomic Society*. Chicago, IL.
- Xie, X., & Myers, E. B. (July, 2015). General language ability predicts talker identification. Poster presented at *The 37th Annual Meeting of the Cognitive Science Society*. Pasadena, CA.
- Xie, X.**, *Patel, D., *Bugden, J., & Myers, E. B. (April, 2015). Effects of intra-talker variability on adaptation to foreign accents. Poster presented at *The 5th Annual UCONN Language Fest*. Storrs, CT.
- Xie, X.**, *Bugden, J., *Patel, D., & Myers, E. B. (April, 2015). Adaptation to a talker to adaptation to an accent. Poster presented at *The 5th Annual UCONN Language Fest*. Storrs, CT.
- Xie, X.** & Myers, E. B. (November, 2014). Individual differences in talker identification: Do musical experience and linguistic background matter? Poster presented at *The 55th Annual Meeting of the Psychonomic Society*. Long beach, CA.
- Xie, X.** & Myers, E. B. (September, 2013). The role of language and musical experience in talker identification: investigating language familiarity effect. Poster presented at *The 19th International Conference of Architectures and Mechanisms for Language Processing (AMLaP)*, 2013). Marseille, France.
- Xie, X.** & Fowler, C. A. (July, 2013). Listening with a foreign-accent: The interlanguage speech intelligibility benefit in Mandarin speakers of English. Poster presented at *Linguistic Society of America, Summer Institute 2013 Workshop: How the brain accommodates variability in linguistic representations*. Ann Arbor, MI.
- Xie, X.**, *Ciullo, B. & Myers, E. B. (April, 2013). Individual differences in pitch perception and phonetic perception and their contribution to talker identification. Poster presented at *The 4th Annual UCONN Language Fest*. Storrs, CT.
- Xie, X.**, *Ragonesi, M. & Myers, E. B. (April, 2013). The role of language and musical experience in talker identification: investigating language familiarity effect. Poster presented at *The 4th Annual UCONN Language Fest*. Storrs, CT.

INVITED TALKS

Speech perception as probabilistic inference over structured representations. *Auditory Neuroscience Lab, Boston University*. March 2018.

Dealing with speech variation in a multilingual society: The adaptive brain as a statistician. *Department of Psychology, American University*. January 2018.

The adaptive road to robust speech recognition: How do we accommodate phonetic variation in speech? *Department of Linguistics, University of California, Davis*. January 2017.

Encoding articulator information in the brain during speech perception. *Alvin and Isabelle Liberman Memorial Workshop, University of Connecticut*. June 2016.

Phonetic adaptation to foreign accents. *Department of Speech, Language and Hearing Sciences, Boston University*. December 2015.

Phonetic adaptation to foreign accents. *Bilingualism and Psycholinguistics Research Group, Northwestern University*. October 2015.

HONORS & AWARDS

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| 2017 | Fellow, Kavli Summer Institute in Cognitive Neuroscience, UC Santa Barbara. |
| 2015 | Psychonomic Society Graduate Student Travel Award, Psychonomic Society. |
| 2014 | Doctoral Dissertation Fellowship: Graduate School, University of Connecticut. |
| 2013 | Conference Travel Grant: Graduate School, University of Connecticut. |
| 2013 | Student Travel Award: LSA workshop “How the brain accommodates variability in linguistic representations”, Linguistic Society of America. |
| 2009-2015 | Graduate Scholarship: Department of Psychology, University of Connecticut. |
| 2009 | Award for Excellence in Undergraduate Thesis, Zhejiang University. |

TEACHING & MENTORING EXPERIENCE

2012-2018 **Research Mentor, 15 Undergraduates**

Mentored undergraduate students who were research assistants, conducting independent study projects and/or completing honors theses. Taught experimental design, acoustic manipulation and analysis techniques, statistical analyses and other aspects of training in conducting research.

Fall 2017 **Co-instructor, Language & Psycholinguistics**

Gave lectures (~100 students), designed course materials

Spring 2015 **Coordinator, Language & Cognition Seminar**

Coordinated seminar talks

Spring 2015 **Teaching Assistant, Psychology of Language**

Held office hours, graded exams, papers and assignments

Spring 2014 **Instructor of Record, Psychology of Language**
 Gave lectures (~50 students), designed course materials, designed and graded exams

2010-2013 **Lab Instructor, Principles of Research in Psychology**
 Gave weekly lectures (~12-14 students), mentored group research projects, held office hours, graded papers and assignments, assisted student poster presentation at a department-level research event

2009-2010 **Lab Instructor, General Psychology I**
 Gave weekly lectures (~20-25 students), held office hours, wrote/graded assignments

Fall 2009 **Teaching Assistant, General Psychology I; Cognitive Psychology**
 Graded exams and assignments, prepared materials for online mini- experiments

PROFESSIONAL SERVICE & MEMBERSHIPS

Ad-Hoc Reviewer:

Attention, Perception, & Psychophysics
 Cognition
 Cognitive Science Society Annual Conference
 CUNY Sentence Processing Annual Conference
 Journal of the Acoustical Society of America
 Journal of Experimental Psychology: Human Perception and Performance
 Journal of Experimental Psychology: Learning, Memory, & Cognition
 Journal of Speech, Language and Hearing Research
 Psychonomic Bulletin & Review
 Laboratory Phonology
 Language Learning
 Language and Speech Linguistics Vanguard
 The Quarterly Journal of Experimental Psychology

Professional Memberships:

Society for the Neurobiology of Language
 The Acoustical Society of America
 Association for Laboratory Phonology
 Psychonomic Society
 International Speech Communication Association Women in Cognitive Science

LANGUAGES

Mandarin	Native
English	Proficient
Cantonese	Proficient
Japanese/Spanish/French	Basic speaking and reading knowledge