

# Nichol Castro

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## **EDUCATION**

2017 (expected)	Ph.D.	Dual-Title Ph.D. in Psychology (Cognitive and Brain Sciences) and Gerontology Minor in Quantitative Psychology	University of Kansas
2014	M.A.	Psychology (Cognitive and Brain Sciences) Thesis: <i>“What Turns Speech into Song? Investigations of the Speech-to-Song Illusion”</i>	University of Kansas
2011	B.A.	Psychology, Minor in Cognitive Studies Magna cum Laude with High Distinction	University of Colorado, Colorado Springs
2009	A.A.	Psychology Magna cum Laude	Pikes Peak Community College

## **RESEARCH EXPERIENCE**

- 2015                      Fellow, Summer Institute in Cognitive Neuroscience at UC-Santa Barbara
- PI: Dr. George Magnus, NIMH 2R25 MH057541
  - Topics: Computational & Methodological Cognitive Neuroscience and Neuroscience of Development
- 2013-2015              Trainee, T32: Training Researchers in Language Impairments at the University of Kansas
- PI: Dr. Mabel Rice, NIH T32DC000052
- 2013 – present        Dr. Jonathon Brumberg’s Speech and Applied Neuroscience Laboratory
- Electrophysiological research and Brain-Computer Interface development on speech processing and motor control
- 2012 – present        Dr. Michael Vitevitch’s Spoken Language Laboratory
- Utilizing Network Science tools to investigate speech perception and language production in young and older adults
- 2010 – 2012            Dr. Lori James’ Cognitive Aging Laboratory
- Investigating situational factors (e.g., stress and arousal) on language production in young and older adults
  - Honor’s Thesis: “The Effects of Anxiety on Language Production in Young and Older Adults”

## **TEACHING EXPERIENCE**

- Fall 2015                      Instructor of Record  
 PSYC 104: General Psychology
- 4 sections of 45 students each semester
  - Create and implement engaging, in-class discussions and activities for a flipped designed classroom
  - Assess student learning with online activities, papers, and exams
  - Maintain open communication through email and office hours
- Spring 2015                    Graduate Research Consultant  
 SPLH 320: The Communicating Brain (Intro. to Speech Neuroscience)  
 Dr. Jonathan Brumberg
- Develop and facilitate group research projects (40 students)
  - Lead class discussions and workshops on the research process
- Spring 2013                    Graduate Teaching Assistant  
 PSYC 318: Cognitive Psychology  
 Dr. Christopher Ramey
- Maintain accurate and up-to-date gradebook
  - Hold office hours for a section of 150 students
- Fall 2012                      Graduate Teaching Assistant  
 PSYC 104: General Psychology  
 Dr. David Holmes
- Hold office hours for a section of 1000 students

## **PEER-REVIEWED PUBLICATIONS**

- Vitevitch, M. S., & **Castro, N.** (2015). Using network science in the language sciences and clinic. *International Journal of Speech-Language Pathology*, 17(1), 13-25.
- Vitevitch, M. S., Siew, C. S. Q., **Castro, N.**, Goldstein, R., Gharst, J. A., Kumar, J. J., & Boos, E. B. (2015). Speech error and tip-of-the-tongue diary for mobile devices. *Frontiers in Psychology*, 6:1190. doi: 10.3389/fpsyg.2015.01190.
- Castro, N.**, & James, L. E. (2013). Differences between young and older adults' speech in descriptions of negative versus neutral pictures. *Aging, Neuropsychology, and Cognition: A Journal on Normal and Dysfunctional Development*, 21, 222-238.

## **PUBLICATIONS (under review)**

- Castro, N.**, Mendoza, J. M., Tampke, E. C., & Vitevitch, M. S. (submitted). What turns speech into song? An account of the speech-to-song illusion using node structure theory.
- James, L. E., Schmank, C. J., **Castro, N.**, Hendricks, M. A., & Buchanan, T. W. (submitted). Salient and concurrent psychosocial stress increases tip-of-the-tongue states.

## **CONFERENCE PROCEEDINGS**

Brumberg, J. S., **Castro, N.**, & Rao, A. (2015). Temporal dynamics of the speech readiness potential, and its use in a neural decoder of speech-motor intention. In *Interspeech-2015*, 1126-1130.

Vitevitch, M. S., Goldstein, R., Siew, C. S. Q., & **Castro, N.** (2014). Using complex networks to understand the mental lexicon. In *The Yearbook of the Poznan Linguistic Meeting, 1(1)*, 119-138.

## **INVITED PRESENTATIONS**

**Castro, N.** (March, 2016). *Using Network Science to Develop a Word Training Protocol for Individuals with Aphasia*. Invited to present at the Child Language Proseminar at the University of Kansas.

**Castro, N.** (April, 2014). *Electrophysiological Evidence of the Verbal Transformation Effect*. Invited to present at Dr. Brumberg's Speech Perception class at the University of Kansas.

**Castro, N.**, & Vitevitch, M. S. (October, 2013). *Repetition Brings Out the Music in Speech*. Invited to present at the Child Language Proseminar at the University of Kansas.

## **CONFERENCE PRESENTATIONS**

**Castro, N.**, Tampke, E. C., & Vitevitch, M. S. (2015, November). *Identifying the Cognitive Mechanism of the Speech-to-Song Illusion Using Node Structure Theory*. Poster presented at the Annual Meeting of the Psychonomic Society, Chicago, IL.

**Castro, N.**, & Brumberg, J. S. (2014, November). *Predicting Speech Onset Using the Bereitschaftspotential: An ERP Application for Brain-Computer Interfaces*. Poster presented at American Speech-Language-Hearing Association Convention, Orlando, FL.

**Castro, N.**, & Brumberg, J. S. (2014, March). *Using the Bereitschaftspotential to Predict Speech and Other Voluntary Motor Movements*. Oral presentation at the Graduate Student Research Competition, Lawrence, KS.

James, L. E., Schmank, C. J., & **Castro, N.** (2013, November). *The Impact of Stress on Young and Older Adults' Word Retrieval*. Oral presentation at the Annual Meeting of the Psychonomic Society, Toronto, Canada.

James, L. E., **Castro, N.**, & Schmank, C. J. (2013, August). *Word Retrieval is Harmed by Stressful Condition*. Poster presented at the American Psychological Association Convention, Honolulu, HI.

James, L. E., Schmank, C. J., **Castro, N.**, Hendricks, M. A., & Buchanan, T. W. (2013, April). *Recent Discoveries Regarding Stress and the Tip-of-the-Tongue Phenomenon*. Oral presentation at the Rocky Mountain Psychological Association Convention, Denver, CO.

**Castro, N.**, & Vitevitch, M. S. (2013, March). *Neighborhood Density and Word Count Impact the Perception of the Speech-to-Song Illusion*. Oral presentation at the Graduate Student Research Competition, Lawrence, KS.

**Castro, N., & James, L. E.** (2012, April). *How Anxiety Provoking Pictures Impact Speech Production In Young and Older Adults*. Poster presented at the Cognitive Aging Conference, Atlanta, GA.

**Castro, N., & James, L. E.** (2011, April). *The Effects of Anxiety on Language Production in Young and Older Adults*. Poster presented at the Rocky Mountain Psychological Association Convention, Salt Lake City, UT.

### **AWARDS**

2015 Finalist for APA Division 3's (Society for Experimental Psychology and Cognitive Science) Best Student Poster at the Psychonomic Society Conference

2015 Friends of the Life Span Institute Graduate Research Assistant Award

### **SERVICE**

2015 – present Graduate Advocate for Executive Board of Association for Psychological Science Student Caucus

2014 – present Editorial Assistant, *Infancy*

2013 – 2014 Sigma Xi Judge for Oral Presentations at the Undergraduate Research Symposium, Lawrence, KS

2013 Panelist for “Undergraduate Research Experiences for the Social Sciences” at the Undergraduate Research Symposium, Lawrence, KS

2013 – present Graduate Student Representative for Sigma Xi - University of Kansas Chapter #004

- On Planning Committee for Science Outreach Event Fall 2016

2012 – present Peer Mentor for Association for Psychological Science Student Caucus

2012 – present Reviewer for Association for Psychological Science Student Caucus  
RISE Research Award  
Student Research Award  
Student Grant Competition

2010 – 2011 Secretary for Psi Chi - University of Colorado, Colorado Springs Chapter

Ad Hoc Reviewer Aging, Neuropsychology, and Cognition (co-reviewed with Dr. Vitevitch)  
Gerontology and Geriatric Medicine  
Language and Speech (co-reviewed with Dr. Vitevitch)  
Translational Issues in Psychological Science

### **PROFESSIONAL ORGANIZATIONS**

American Psychological Association

Member of Division 20 (Adult Development and Aging)

American Speech-Language-Hearing Association

Association for Psychological Science

Gerontological Society of America

Psi Chi

Phi Theta Kappa

Sigma Xi