

# Kathryn P. Connaghan, Ph.D. (CCC-SLP)

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## **EDUCATION**

2004	Ph.D.	Speech Science	University of Washington
1993	M.A.	Communication Disorders	University of Minnesota
1989	BSc.	Biopsychology	University of British Columbia

## **PROFFESIONAL EXPERIENCE**

**Research Associate** May 2018 - current  
Speech and Feeding Laboratory  
Department of Communication Sciences & Disorders  
Massachusetts General Hospital Institute of Health Professionals  
Jordan Green, Director

**Associate Research Scientist** Jan. 2014 - current  
**Research Fellow** Sept. 2010-Dec. 2013  
Communication Analysis & Design Laboratory,  
Department of Communication Sciences & Disorders  
Northeastern University  
Rupal Patel, Director

**Academic Research Assistantships**  
Laboratory of Speech Physiology, University of Washington 1999-2004  
Christopher A. Moore, Director

Laboratory of Quantitative Neurology, University of Minnesota 1991-1993  
John Sidtis, Director

## **Mentoring**

Master's Theses, Northeastern University

- Chelsea Wertheim: *Attitudes Toward Speakers with Dysarthria: A Comparison of Naïve, Clinician, and Emergency Worker Listener Judgments* (Advisor) 2014-2015
- Zachary Kopp: *Acoustic-Phonetic Convergence by Typically Developing Adolescents Speakers* (Advisor) 2017-2018

- Julie Peters: *An Examination of Maternal Language and Prosody During Feeding and Play* (Committee Member) 2017-2018
- Paige McCarthy: *An Examination of Non-Nutritive Suck in Healthy Full-Term Infants* (Committee Member) 2017-2018
- Jessica Bren: *Effects of Automaticity and Melody on Speaking Rate in Preschoolers* (Committee Member) 2019-current

Electrical and Computer Engineering Capstone 2016-2017  
*A Kinect-enabled Game to Support Speech and Motor Retraining for Children with Cerebral Palsy.* Co-supervisors: Waleed Meleis & Danielle Levac

**Teaching**

- Invited Lecturer - *Motor Speech Disorders*, Arizona State University Spring 2018
- Invited Lecturer - *Motor Speech Disorders*, MGH-Institute of Health Professions Spring 2018
- Invited Lecturer – *Motor Speech Disorders*, Northeastern University Spring 2011-2014, 2017
- Invited Lecturer – *Speech Science*, Northeastern University Fall 2017
- Invited Lecturer – *Speech Sound Disorders Across the Lifespan*, Northeastern U Spring 2014
- Co-instructor - *Motor Speech Disorders*, Northeastern University Spring 2012
- Co-instructor - *Motor Speech Disorders*, U. of Washington (UW) Spring 2002
- Instructor - *Neuroanatomy and Neurologic Disorders Across the Lifespan*, UW Summer 2001
- Teaching Assistant – *Anatomy & Physiology for Speech and Hearing*, UW Spring 2001
- Teaching Assistant – *Speech and Language Disorders*, UW Fall 1998

**Speech-Language Pathologist**

Clinic Supervisor – University of Washington Fall 1998 – Summer 1999  
 Seattle, WA

Pediatric Speech-Language Pathologist, Asante Health Care, 1996-1998  
 Medford, OR

Speech-language Pathologist, Rehabilitation Associates, 1994-1996  
 Boise, ID

**PEER REVIEWED PUBLICATIONS**

**Connaghan, K.P.**, Green, J.R., Paganoni, S., Chan, J., Weber, H., Collins, E., Richburg, B., Eshghi, M., Onnela, JP\*, & Berry, J.D.\* (\*shared senior author; In press). Use of Beiwe smartphone app to identify and track speech decline in amyotrophic lateral sclerosis (ALS). *INTERSPEECH* 2019.

Berry, J.D., Paganoni, S., Carlson, K., Burke, K., Weber, H., Staples, P., Salinas, J., Chan, J., Green, J.R., **Connaghan, K.**, Barback, J., & Onnela, J.P. (2019). Design and Results of a Smartphone-based Digital Phenotyping Study to Quantify ALS Progression. *Annals of Clinical and Translational Neurology*, 6(5), 873-881.

- Zimmerman, E., **Connaghan K.P.**, Hoover, J., Alu, D. & Peters. J. (2019). Is feeding the new play? An examination of the maternal language and prosody used during infant feeding and its relation to oromotor behaviors. *Infant Behavior and Development*, 54, 120-132.
- Connaghan, K.P.** & Patel, R. (2017). The impact of contrastive stress on vowel acoustics and intelligibility in dysarthria. *Journal of Speech, Language, and Hearing Research*, 60(1), 38-50. doi:10.1044/2016\_JSLHR-S-15-0291
- Kember, H., **Connaghan, K.P.**, & Patel, R. (2016). Inducing speech errors in dysarthria using tongue twisters. *International Journal of Language & Communication Disorders*, 52(4), 469-478. doi:10.1111/1460-6984.12285
- Patel, R. & **Connaghan, K.P.** (2014). Park Play: A picture description task for assessing childhood motor speech disorders. *International Journal of Speech-Language Pathology*, 16(4), 337-343.
- Patel, R., **Connaghan, K.P.**, & Campellone, P.J. (2013). The effect of rate reduction on signaling prosodic contrasts in dysarthria. *Folia Phoniatrica et Logopaedica*, 65(3), 109-116.
- Patel, R., **Connaghan, K.**, Franco, D., Edsall, E., Forgit, D., Olsen, L., Ramage, L., Tyler, E. & Russell, S. (2013). The Caterpillar: A novel reading passage for assessment of motor speech disorders. *American Journal of Speech Language Pathology*, 22, 1-9.
- Connaghan, K.P.** & Moore, C.A. (2013). Indirect estimates of jaw muscle tension in children with suspected hypertonia, suspected hypotonia, and matched controls. *Journal of Speech, Language, and Hearing Research*, 56, 123-136.
- Connaghan, K.P.** & Patel, R. (2012). Vowel intelligibility in motor speech impairment. *Journal of Medical Speech-Language Pathology*, 20(4), 133-139.
- Patel, R., Hustad, K., **Connaghan, K.P.** & Furr, W. (2012). Relationship between prosody and intelligibility in children with dysarthria. *Journal of Medical Speech-Language Pathology*, 20, 95-99.
- Connaghan, K.P.**, Moore, C.A., & Higashikawa, M. (2004). Respiratory kinematics during vocalization and nonspeech respiration in children from 9- to 48- months. *Journal of Speech, Language, and Hearing Research*, 47, 70-84.
- Connaghan, K. P.**, Moore, C.A., Reilly, K.J., Burkard, K., & Steeve, R.W. (2001). Development of coordination across speech systems in the production of syllabic and sentential stress. In B. Maassen, W. Hulstijn, R. Kent, H.F.M. Peters, P.H.M.M. van Lieshout (Eds.), *Proceedings of the 4<sup>th</sup> International Speech Motor Conference* (pp. 110-112). Nijmegen, the Netherlands: Uitgeverij Vantilt.

Campbell, T.F., Dollaghan, C.A., Adelson, P.D., Janosky, J., Balason, D., Nash, T., Rusiewicz, H., Feldman, H., Shriberg, L., Moore, C., **Connaghan, K.**, Brown, S.D., Pitcairn, D., & Reilly, K. (2001). Speech change in young children after severe traumatic brain injury. In B. Maassen, W. Hulstijn, R. Kent, H.F.M. Peters, P.H.M.M. van Lieshout (Eds.), *Proceedings of the 4<sup>th</sup> International Speech Motor Conference* (pp. 106-109). Nijmegen, the Netherlands: Uitgeverij Vantilt.

Skinder, A., **Connaghan, K.**, Strand, E., & Betz, S. (2000). Acoustic correlates of perceived lexical stress errors in children with developmental apraxia of speech. *Journal of Medical Speech Pathology, 8*, 279-284.

### **SELECTED PEER REVIEWED CONFERENCE PRESENTATIONS**

**Connaghan, K.P.**, Green, J.R., Paganoni, S., Chan, J., Weber, H., Collins, E., Richburg, B., Eshghi, M., Onnela, JP\*, & Berry, J.D.\* (\*shared senior author). Use of Beiwe smartphone app to identify and track speech decline in amyotrophic lateral sclerosis (ALS). INTERSPEECH, Graz, Austria, 2019.

Green, J.R., **Connaghan, K.P.**, Yunusova, Y., Stipancic, K., Gutz, S., Rowe, H. Cordella, C., & Berry, J. Exploring voice measures to track disease onset and progression in Amyotrophic Lateral Sclerosis (ALS). 29th International Symposium on ALS/MND, Glasgow, Scotland, 2018.

Zimmerman, E., Hoover, J., Alu, D. & Peters, J., & **Connaghan K.P.** Is feeding the new play? An examination of the maternal language and prosody used during infant feeding and its relation to oromotor behaviors. Presented to the American Speech-Language-Hearing Association, Boston, MA, 2018.

**Connaghan, K.P.** & Kopp, Z. Speech accommodation by adolescents across communication partners. Acoustical Society of America, Victoria, BC, Canada, 2018.

Green, J.R., **Connaghan, K.P.**, Yunusova, Y., Stipancic, K., Gutz, S., Rowe, H. Cordella, C., & Berry, J. Vocal changes across disease progression in Amyotrophic Lateral Sclerosis (ALS). Acoustical Society of America, Victoria, BC, Canada, 2018.

**Connaghan, K.P.**, Reilly, D., & Patel, R. Listener impressions of speakers with dysarthria secondary to cerebral palsy. Conference on Speech Motor Control, Savannah, GA, 2018.

Zimmerman, E., Alu, D., & **Connaghan, K.** Exploring the relationship between oromotor behaviors and maternal prosody. Conference on Speech Motor Control, Savannah, GA, 2018.

Kopp, Z, & **Connaghan, K.** Acoustic–phonetic convergence during adolescence. American Speech-Language-Hearing Association Convention, Los Angeles, CA, 2017.

Alu, D., Zimmerman, E., & **Connaghan, K.** An examination of maternal prosody in feeding and play. American Speech-Language-Hearing Association Convention, Los Angeles, CA, 2017.

**Connaghan, K.P.** & Rusiewicz, H.L. The impact of deictic gesture on vowel acoustics in childhood apraxia of speech. Acoustical Society of America, Boston, MA, 2017.

**Connaghan, K.P.** & Patel, R. The impact of contrastive stress on word and sentence intelligibility across severity of dysarthria due to cerebral palsy. American Speech-Language-Hearing Association Convention, Philadelphia, PA, 2016.

Reilly, D., **Connaghan, K.P.** & Patel, R. Speech characteristics and listener attitudes toward speakers with dysarthria secondary to cerebral palsy. American Speech-Language-Hearing Association Convention, Philadelphia, PA, 2016.

**Connaghan, K.P.** & Patel, R. Listener-oriented speech modulation in dysarthria. Conference on Speech Motor Control, Newport Beach, CA, 2016.

Rusiewicz, H.L. & **Connaghan, K.P.** The influence of deictic gestures on prosodic stress produced by children with and without childhood apraxia of speech. Conference on Speech Motor Control, Newport Beach, CA, 2016.

Fisk, D., **Connaghan, K.P.**, & Patel, R. The impact of musical training on perception of dysarthric speech. Conference on Speech Motor Control, Newport Beach, CA, 2016.

**Connaghan, K.P.** & Patel, R. Pitch perturbation of prosodic contrasts in speakers with and without cerebral palsy. Presented to the American Speech-Language-Hearing Association Convention, Denver, CO, 2015.

Patel, R., **Connaghan, K.**, Smith, B., & O'Donovan, C. The Park Play App: A web-based assessment tool for childhood motor speech disorders. American Speech-Language-Hearing Association Convention, Orlando, FL, 2014.

Rusiewicz, H.L. & **Connaghan, K.P.** Gesture-prosody interaction. American Speech-Language-Hearing Association Convention, Orlando, FL, 2014.

Kember, H., **Connaghan, K.P.**, & Patel, R. Inducing speech errors in dysarthria using tongue twisters. Conference on Speech Motor Control, Sarasota, FL, 2014.

**Connaghan, K.P.** & Patel, R. The impact of prosodic strategies on intelligibility in childhood motor speech disorders. Conference on Speech Motor Control, Santa Rosa, CA, 2012.

Patel, R., Hustad, K., **Connaghan, K.**, Wiegand, K., & Furr, W. Relationship between prosody and intelligibility in children with dysarthria. Conference on Speech Motor Control, Santa Rosa, CA, 2012.

Venkatesh, L., Moore, C.A., Reilly, K.J., **Connaghan, K.P.**, & Steeve, R.W. Timing of oronasal coupling in children. American Speech-Language-Hearing Association Convention, Chicago, IL, 2003.

Rusiewicz, H.L., **Connaghan, K.P.**, Moore, C.A., & Campbell, T.F. Segmental, suprasegmental, and speech movement characteristics following pediatric brain injury. American Speech-Language-Hearing Association Convention, Atlanta, GA, 2002.

Reilly, K.J., Moore, C.A., Steeve, R.W., **Connaghan, K.P.**, & Almand, K.B. Respiratory and laryngeal modulation of  $f_0$  and intensity in 7-month-olds. Conference on Speech Motor Control, Williamsburg, Virginia, 2002.

**Connaghan, K.P.**, Moore, C.A., Reilly, K.J., Almand, K.B., & Steeve, R.W. Acoustic and physiologic correlates of stress production across systems. American Speech-Language-Hearing Association, New Orleans, L.A., 2001.

**Connaghan, K.P.**, Moore, C.A., Reilly, K.J., Campbell, T.F., Green, J.R. & Steeve, R.W. Inter-articulator coordination in children with impaired speech motor control. American Speech-Language-Hearing Association, Washington D.C., 2000.

Reilly, K.J., Moore, C.A., **Connaghan, K.P.**, Campbell, T.F., Green, J.R., & Steeve, R.W. Lip shape during speech by adult speakers and children with motor speech disorders. American Speech-Language-Hearing Association, Washington D.C., 2000.

Steeve, R.W., Moore, C.A., **Connaghan, K.P.**, & Reilly, K.J. Time-varying measures of chest wall kinematics. American Speech-Language-Hearing Association, Washington D.C., 2000.

**Connaghan, K.P.**, Reilly, K.J., Moore, C.A., Campbell, T.F., Green, J.R., & Steeve, R.W. Kinematics of motor speech disorders in children. Conference on Speech Motor Control, San Antonio, Texas, 2000.

**Connaghan, K.P.**, Skinder, A.E., Strand, E., & Changala, S. Reliability of judgments of lexical stress produced by speech disordered and typically developing children. Conference on Speech Motor Control, San Antonio, Texas, 2000.

Moore, C.A., Boliek, C.A., Steeve, R.W., Reilly, K.J., & **Connaghan, K.P.** Dynamic coordination of respiratory movement in 6-month-old children. Conference on Speech Motor Control, San Antonio, Texas, 2000.

Steeve, R.W., Moore, C.A., **Connaghan, K.P.**, & Reilly, K.J. Dynamic measures of chest wall kinematics. Conference on Speech Motor Control, San Antonio, Texas, 2000.

**Connaghan, K.P.**, Skinder, A.E., Strand, E., Hodge, M., & Steeve, R.W. Perception of stress production in children with speech disorders and typically developing peers. American Speech-Language-Hearing Association, San Francisco, 1999.

**Connaghan, K.P.,** Liss, J.M., & Sidtis, J. Relational timing in ataxic dysarthria. Conference on Speech Motor Control, Sedona, Arizona, 1994.

## **INVITED TALKS**

**Connaghan, K.P.** Speech production and communication disability in amyotrophic lateral sclerosis (ALS): Application of the Beiwe research platform. Presentation to the Onnela Lab, Department of Biostatistics Harvard T.H. Chan School of Public Health (July, 2019)

**Connaghan, K.P.** Social interaction and participation experiences of adolescents with motor speech disorders. Presentation to Doctoral Seminar in Rehabilitation Research, MGH Institute of Health Professions (October, 2018)

**Connaghan, K.P.** It's not just *what* you say, it's *how* you say. Prosody in pediatric motor speech disorders. Presentation to the Framingham Public Schools, Dept. of Speech-Language Pathology (August, 2018)

## **IN THE NEWS**

The ASHA Leader's August 2018 Foundational Questions column. "It's not *what* you say, but *how* you say it". <https://www.ashfoundation.org/News/Grant-Recipient-Investigates-the-Role-of-Prosody-in-Dysarthria/>

## **OTHER EXPERIENCE AND PROFESSIONAL MEMBERSHIPS**

1994-current American Speech and Hearing Association (ASHA) Certification of Clinical Competence in Speech-Language Pathology  
2012-current Ad-hoc Reviewer – *Journal of Speech, Language, and Hearing Research*  
2013-current Ad-hoc Reviewer – *Journal of Communication Disorders*  
2014 Ad-hoc Reviewer – *Folia Phoniatica et Logopaedica*  
2014-current Ad-hoc Reviewer – *American Journal of Speech Language Pathology*  
2014-current Ad-hoc Reviewer – *International Journal of Speech Language Pathology*  
2016-current Ad-hoc Reviewer – *International Journal of Language & Communication Disorders*  
2017 Ad-hoc Reviewer – *Scientific Reports*  
2018 Ad-hoc Reviewer – *Journal of the Acoustical Society of America Express Letters*  
2013, 2016 Member - Motor Speech in Adults and Children Program Committee for the American Speech-Language-Hearing Association (ASHA) Convention  
2013-current Fellow - American Academy of Cerebral Palsy and Developmental Medicine  
2014-current Associate Member – Acoustical Society of America  
2014 ASHA Progeny Mentor

- 2015 Reviewer – ASHA Students Preparing for Academic & Research Careers (SPARC) Awards
- 2017 Judge – Speech Communication Student Poster Competition, 173rd Meeting of the Acoustical Society of America
- 2018 Judge – Student Presentation Competition, Conference on Speech Motor Control
- 2018 Judge – Speech Communication Student Poster Competition, 176th Meeting of the Acoustical Society of America
- 2019 Member – Speech & Language Science Topic Committee for the American Speech-Language-Hearing Association (ASHA) Convention

## **HONORS**

- 2000 Travel Fellowship, Science and Research Career Forum, American Speech-Language-Hearing Association
- 2002 Graduate Student ASHFoundation Scholarship
- 2004 Raymond H. Stetson Scholarship in Phonetics and Speech Science, Honorable Mention
- 2014 ASHA Pathways Protégé
- 2014 Attendee – ASHA Grant Reviewer and Reviewer Training
- 2015 ASHA Lessons for Success Mentee

## **GRANTS & FELLOWSHIPS**

- New Century Scholars Research Grant 01/01/2014-12/31/2014  
 American Speech-Language-Hearing Foundation (ASHFoundation)  
*Prosodic Categories in Speakers with Dysarthria Due to Cerebral Palsy*  
 Role: PI (\$10, 000)
- The Ethel & Jack Hausman Clinical Research Scholars Award 01/01/2014-12/31/2016  
 Cerebral Palsy International Research Foundation (CPIRF) NCE – 12/31/2017  
*The Interaction Between Prosody and Intelligibility of Speech in Cerebral Palsy*  
 Role: PI (\$225, 000)
- Tufts CTSI Pilot Grant 05/01/2018-04/30/2019  
 National Center for Advancing Translational Sciences, National Institutes of Health (UL1TR002544)  
*Adaptation and Usability of Social Participant and Navigation (SPAN) for Adolescent Speakers with Dysarthria*  
 Role: PI (\$44,966; \$29,966 Connaghan - \$15,000 Bedell, G. Co-PI)
- Mary Switzer Merit Fellowship 10/01/2018-09/30/2019  
 National Institute of Disability, Independent Living, and Rehabilitation Research (NIDILRR 90SFGE0007-01-00) NCE – 09/30/2020  
*Social Communication and Participation of Adolescents with Motor Speech Disability*  
 Role: PI (\$70,000)