

Curriculum Vitae

Elaine Kearney, Ph.D.

A. Biographical Information

Primary Address Department of Speech, Language, & Hearing Sciences
Sargent College of Health & Rehabilitation Sciences
Boston University
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1. EDUCATION AND RESEARCH POSITIONS

Degrees

2013 Jan – 2017 Nov **Ph.D.**, Speech-Language Pathology, Speech Production Laboratory, Rehabilitation Sciences Institute, University of Toronto, Canada. Committee: Drs. Yana Yunusova (Advisor), Luc de Nil, and Luc Tremblay
2007 Sept – 2011 Jun **B.Sc.**, Speech and Language Therapy, Department of Speech and Hearing Sciences, University College Cork, Ireland. Advisor: Dr. Alice Lee

2. EMPLOYMENT

Current Positions

2019 Sept – Present **Course Instructor**, SH700 Research Methods in Speech-Language Pathology and Audiology, Department of Speech, Language, & Hearing Sciences, Sargent College of Health and Rehabilitation Sciences, Boston University, MA.
2018 Jan – Present **Postdoctoral Research Associate**, Speech Neuroscience Laboratory, Department of Speech, Language, & Hearing Sciences, Sargent College of Health & Rehabilitation Sciences, Boston University, Boston, MA. Advisors: Drs. Frank H. Guenther and Jason A. Tourville

Previous Positions

2017 Sept – 2017 Dec **Course Instructor**, SLP1520 Principles of Clinical Practice, Department of Speech-Language Pathology, Faculty of Medicine, University of Toronto, Canada.
2013 Jan – 2017 Dec **Research Assistant**, Vocal Tract Visualization Laboratory, Toronto Rehabilitation Institute, Toronto, Canada.
Project "Visual Feedback Systems in Speech Rehabilitation". Principal Investigator, Dr. Yana Yunusova
2014 May – 2017 June **Teaching Assistant**, SLP1521 Augmentative and Alternative Communication, Department of Speech-Language Pathology, Faculty of Medicine, University of Toronto, Canada.
2015 Sept – 2017 April **Teaching Assistant**, JLS476 Linguistics in the Workforce: Clinical Practice and Research, Department of Speech-Language Pathology, Faculty of Medicine, University of Toronto, Canada.
2015 Sept – 2016 Dec **Teaching Assistant**, SLP 1514 Applied Audiology, S Department of Speech-Language Pathology, Faculty of Medicine, University of Toronto, Canada.
2014 Mar – 2016 April **Teaching Assistant**, SLP1535 Advanced Principles of Clinical Practice, Department of Speech-Language Pathology, Faculty of Medicine, University of Toronto, Canada.
2014 Mar – 2016 April **Teaching Assistant**, SLP1528 Research in Speech-Language Pathology, Department of

Speech-Language Pathology, Faculty of Medicine, University of Toronto, Canada.

2013 Sept – 2015 Dec	Teaching Assistant , SLP1528 Neurocognitive Communication, Department of Speech-Language Pathology, Faculty of Medicine, University of Toronto, Canada.
2013 Sept – 2015 Dec	Teaching Assistant , SLP1534 Motor Speech Disorders, Department of Speech-Language Pathology, Faculty of Medicine, University of Toronto, Canada.
2012 Jun – 2012 Dec	Research Assistant , Speech and Stuttering Institute, Toronto, Canada. <i>Project “Motor Speech Treatment Protocol for Developmental Motor Speech Disorders”.</i> <i>Principal Investigator, Dr. Aravind Namasivayam</i>

3. HONOURS

Distinctions and Research Awards

2019 Aug	Professional Development and Postdoctoral Affairs Travel Award , Boston University. (Research) <i>Total Amount: 500 USD</i>
2019 Jun	ASHA’s Research Mentoring: Pathways Program , American Speech-Language-Hearing Association. (Research) <i>Total Amount: Travel, accommodation and food costs for duration of workshop</i>
2017 Jun	Polatajko- Howell Student Conference Presentation Fund , University of Toronto, Canada. (Research) <i>Total Amount: 300 CAD</i>
2017 May	Rehabilitation Sciences Institute Peer Mentorship Award , University of Toronto, Canada. (Distinction) <i>Total Amount: 100 CAD</i>
2017 May	Rehabilitation Sciences Institute Presentation Award , University of Toronto, Canada. (Distinction) <i>Total Amount: 300 CAD</i>
2016 Mar	Office of Research Trainees Conference Travel Award , University Health Network (UHN), Toronto, Canada. (Research) <i>Total Amount: 500 CAD</i>
2015 Nov	Graduate Scholarship Prize , Toronto Rehabilitation Institute - University Health Network (TRI - UHN), Toronto, Canada. (Distinction) <i>Total Amount: 1,000 CAD</i>
2014 Nov	School of Graduate Studies Conference Grant , University of Toronto, Canada. (Research) <i>Total Amount: 850 CAD</i>
2014 Mar	Speech-Language Pathology Travel Award , University of Toronto, Canada. (Research) <i>Total Amount: 425 CAD</i>
2010 May	Undergraduate College Scholarship , University College Cork, Ireland. (Distinction) <i>Total Amount: 1,000 EUR</i>

4. PROFESSIONAL AFFILIATIONS AND ACTIVITIES

Professional Associations

2018 Oct – Present	Non-Clinical Member , American Speech-Language-Hearing Association (ASHA)
2018 April – Present	Postdoctoral Member , Society for the Neurobiology of Language (SNL)
2014 Nov – 2015 Nov	Member , National Student Speech Language Hearing Association (NSSLHA)
2011 Jun – 2013 Dec	New Graduate Member , Irish Association of Speech and Language Therapists (IASLT), Ireland

Peer Review Activities

MANUSCRIPT REVIEWS

2019 – Present	Reviewer , Neurorehabilitation and Neural Repair, Number of Reviews: 2
2018 – Present	Reviewer , Journal of Speech, Language, and Hearing Research, Number of Reviews: 4
2018 – Present	Reviewer , American Journal of Speech-Language Pathology, Number of Reviews: 5
2018 – Present	Reviewer , Clinical Linguistics & Phonetics, Number of Reviews: 1

PRESENTATION REVIEWS

2019	Reviewer , Boston Speech Motor Control Symposium 2019
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GRANT REVIEWS

2019	Reviewer , LVST Small Student Grant
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Administrative Activities

2018 April – 2019 June	Member , Organizing Committee, Boston Speech Motor Control Symposium 2019, Boston University, Boston, MA
2015 Sept – 2017 Aug	Member , Trainee Representative Committee, Toronto Rehabilitation Institute – University Healthy Network (TRI-UHN), Toronto, Canada
2015 Sept – 2016 Aug	Member , Rehabilitation Sciences Graduate Student Union (RSGSU) Social Committee, Rehabilitation Sciences Institute, University of Toronto, Canada
2013 Sept – 2015 Aug	Member , Speech-Language Pathology Social Committee, Speech-Language Pathology, Faculty of Medicine, University of Toronto, Canada

B. Publications

1. PEER REVIEWED

1. **Kearney, E.**, & Guenther, F. H. (2019). Articulating: The Neural Mechanisms of Speech Production. *Language, Cognition, and Neuroscience*, 34(9), 1214-1229.
2. Bailey, K., **Kearney, E.**, Roberts, E., & Yunusova, Y. (2019). Towards movement-based outcome measures for apraxia of speech: A systematic review. *Aphasiology*, 33(8), 943-969.
3. Haworth, B., **Kearney, E.**, Faloutsos, P., Baljko, M., & Yunusova, Y. (2019). Electromagnetic articulography (EMA) for real-time feedback application: Computational techniques. *Computer Methods in Biomechanics and Biomedical Engineering: Imaging and Visualization*, 7(4), 406-413.
4. **Kearney, E.**, Shellikeri, S., Martino, M., & Yunusova, Y. (2019). Augmented visual feedback-aided interventions in motor rehabilitation in Parkinson's disease: A systematic review. *Disability and Rehabilitation*, 41(9), 995-1011.
5. **Kearney, E.**, Haworth, M. B., Scholl, J., Faloutsos, P., Baljko, M., & Yunusova, Y. (2018). Treating speech-movement hypokinesia in Parkinson's disease: Does movement size matter and to what extent? *Journal of Speech, Language, and Hearing Research*, 61, 2703-2721.
6. **Kearney, E.**, Giles, R., Haworth, M. B., Faloutsos, P., Baljko, M., & Yunusova, Y. (2017). Sentence-level movements in Parkinson's disease: Loud, clear, and slow speech. *Journal of Speech, Language, and Hearing Research*, 60, 3426-3440.
7. Yunusova, Y., **Kearney, E.**, Haworth, M. B., Faloutsos, P., & Baljko, M. (2017). Game-based augmented visual feedback for enlarging speech movements in Parkinson's disease. *Journal of Speech, Language, and Hearing Research*, 60, 1818-1825.
8. **Kearney, E.**, Granata, F., Yunusova, Y., van Lieshout, P., Hayden, D., & Namasivayam, A. (2015). Outcome measures in developmental speech sound disorders with a motor basis. *Current Developmental Disorders*, 2(3), 253-272.

9. Namasivayam, A., Pukonen, M., Hard, J., Jahnke, R., **Kearney, E.**, Kroll, R., & van Lieshout, P. (2015). Motor Speech Treatment Protocol for developmental motor speech disorders. *Developmental Neurorehabilitation*, 18(5), 296-303.
10. Lee, A., Gibbon, F. E., **Kearney, E.**, & Murphy, D. (2014). Tongue-palate contact during selected vowels in children with speech sound disorders. *International Journal of Speech-Language Pathology*, 16(6), 562-570.

2. SUBMITTED

1. **Kearney, E.**, Nieto-Castañón, A., Weerathunge, H. R., Falsini, R., Daliri, A., Abur, D., Ballard, K., Chang, S-E., Chao, S-C., Heller Murray, L., Scott, T., & Guenther, F. H. *A Simple 3-Parameter Model for Examining Adaptation in Speech and Voice Production*. Manuscript submitted.

3. IN PREPARATION

1. **Kearney, E.**, Golfopoulos, E., Tourville, J.A., Nieto-Castañón, A., & Guenther, F. H. *Behavioural and cortical correlates of fast, clear, and emphatic speech production*. Manuscript in preparation.
2. Smith, D. J., **Kearney, E.**, Stepp, C., & Guenther, F. *Contributions of auditory and somatosensory feedback in vocal motor control*. Manuscript in preparation.

4. PROCEEDINGS

1. Haworth, M. B., **Kearney, E.**, Baljko, M., Faloutsos, P., & Yunusova, Y. (2014). Electromagnetic articulography in the development of "serious games" for speech rehabilitation. *Proceedings from PMHA 2014: The 2nd International Workshop on Biomechanical and Parametric Modeling of Human Anatomy*. Vancouver, Canada.

C. Presentations

1. INTERNATIONAL

Invited Presentations

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| 2017 Sept | The speech movement disorder in Parkinson's disease and its rehabilitation using augmented visual feedback. Boston Speech Motor Control Working Group, Boston University, MA. Presenter(s): Kearney, E. , Haworth, M. B., Faloutsos, P., Baljko, M., & Yunusova, Y. (Oral presentation). |
| 2015 Mar | Development of augmented feedback targets for speech rehabilitation in Parkinson's disease. Speech and Hearing Sciences, University College Cork, Ireland. Presenter(s): Kearney, E. , Haworth, M. B., Faloutsos, P., Baljko, M., & Yunusova, Y. (Oral presentation). |

Other Presentations

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| 2020 Feb | Contributions of auditory and somatosensory feedback to vocal motor control. 19 th Biennial Conference on Motor Speech. Santa Barbara, California, USA. Presenter(s): Kearney, E. , Smith, D., Stepp, C., & Guenther, F. (Refereed poster presentation) |
| 2019 Aug | SimpleDIVA: A 3-parameter model for examining adaptation in speech and voice production. 11 th Annual Meeting of the Society for Neurobiology of Language. Helsinki, Finland. Presenter(s): Kearney, E. , Nieto-Castañón, A., Daliri, A., & Guenther, F. H. (Refereed poster presentation) |
| 2017 Jul | Game-based speech therapy using visual feedback in Parkinson's disease. 7 th International Conference on Speech Motor Control. Groningen, Netherlands. Presenter(s): Kearney, E. , Haworth, B., Scholl, J., Giles, R., Faloutsos, P., Baljko, M., & Yunusova, Y. (Refereed poster presentation) |

- 2016 Mar Speech movements and intelligibility in Parkinson's disease. 18th Biennial Conference on Motor Speech. Newport Beach, California, USA. Presenter(s): **Kearney, E.**, Shellikeri, S., Giles, R., Haworth, M. B., Faloutsos, P., Baljko, M., & Yunusova, Y. (Refereed oral presentation)
- 2016 Mar Movement-based speech therapy for dysarthria in Parkinson's disease and apraxia of speech. 18th Biennial Conference on Motor Speech. Newport Beach, California, USA. Presenter(s): Yunusova, Y., **Kearney, E.**, Haworth, M. B., Faloutsos, P., & Baljko, M. (Refereed oral presentation)
- 2015 Nov Measuring participation in developmental speech sound disorders with a motor basis. American Speech-Language-Hearing Association Convention. Denver, Colorado, USA. Presenter(s): **Kearney, E.**, Granata, F., Yunusova, Y., van Lieshout, P., Hayden, D., & Namasivayam, A. (Refereed poster presentation)
- 2015 Oct Instrumental outcome measures in developmental speech sound disorders with a motor basis. International Association of Orofacial Myology Convention. Orlando, Florida, USA. Presenter(s): Granata, F., **Kearney, E.**, Yunusova, Y., van Lieshout, P., Hayden, D., & Namasivayam, A. (Refereed poster presentation)
- 2015 Aug Artifact removal techniques for 3D electromagnetic articulography. 3rd International Workshop on Biomechanical and Parametric Modeling of Human Anatomy. Montreal, Canada. Presenter(s): Moghaddam, A., Haworth, B., **Kearney, E.**, Faloutsos, P., Baljko, M., & Yunusova, Y. (Refereed oral presentation)
- 2014 Nov Articulatory working space in older adults across speaking conditions. American Speech-Language-Hearing Association Convention. Orlando, Florida, USA. Presenter(s): **Kearney, E.**, Haworth, M. B., Faloutsos, P., Baljko, M., & Yunusova, Y. (Refereed oral presentation)
- 2014 Aug Electromagnetic articulography in the development of serious games for speech rehabilitation. 2nd International Workshop on Biomechanical and Parametric Modeling of Human Anatomy. Vancouver, Canada. Presenter(s): Haworth, M. B., **Kearney, E.**, Baljko, M., Faloutsos, P., Yunusova, Y. (Refereed oral presentation)
- 2014 Feb Articulatory working space as a kinematic target in augmented feedback applications. 17th Biennial Conference on Motor Speech. Sarasota, Florida, USA. Presenter(s): **Kearney, E.**, Haworth, M. B., Faloutsos, P., Baljko, M., & Yunusova, Y. (Refereed poster presentation)
- 2014 Feb Rehabilitative speech computer game calibration using empirical characterizations of articulatory working space. 17th Biennial Conference on Motor Speech. Sarasota, Florida, USA. Presenter(s): Haworth, M. B., **Kearney, E.**, Yunusova, Y., Faloutsos, P., & Baljko, M. (Refereed poster presentation)
- 2012 Jun Tongue-palate contact during selected vowels in children with speech sound disorder of unknown origin. International Clinical Phonetics and Linguistics Association Conference. Cork, Ireland. Presenter(s): Lee, A., **Kearney, E.**, & Gibbon, F. E. (Refereed poster presentation)

2. NATIONAL

Invited Presentations

- 2017 May The speech movement disorder and its rehabilitation in Parkinson's disease using augmented visual feedback. École d'Orthophonie et d'Audiologie, Faculté de Médecine, Université de Montreal, Canada. Presenter(s): **Kearney, E.**, Haworth, M. B., Faloutsos, P., Baljko, M., & Yunusova, Y. (Oral presentation)

Other Presentations

- 2019 Jun Investigating the Neural Mechanisms of Speech Rate, Clarity, and Emphasis. Boston Speech

Motor Control Symposium. Boston, MA. Presenter(s): **Kearney, E.**, Tourville, J.A., Nieto-Castañón, A., & Guenther, F. (Refereed poster presentation)

- 2019 Mar A 3-parameter model for fitting and interpreting speech sensorimotor adaptation data. Neural Bases of Speech Production. San Francisco, CA. Presenter(s): Guenther, F., **Kearney, E.**, Daliri, A., & Nieto-Castañón, A. (Oral presentation)
- 2017 Sept Speech movements in apraxia of speech. Canadian Stroke Congress. Calgary, Canada. Presenter(s): Roberts, E., **Kearney, E.**, Bailey, K., Graham, N., Rochon, E., & Yunusova, Y. (Refereed poster presentation)
- 2017 Sept Game-based augmented visual feedback treatment for apraxia of speech after stroke. Canadian Stroke Congress. Calgary, Canada. Presenter(s): Yunusova, Y., **Kearney, E.**, Scholl, J., Janik-Jones, C., Haworth, B., Roberts, E., Faloutsos, P., & Baljko, M. (Refereed poster presentation)
- 2011 Nov Tongue-palate contact during selected vowels in children with speech sound disorder of unknown origin. Irish Association of Speech and Language Therapists (IASLT) Biennial Conference. Dublin, Ireland. Presenter(s): Lee, A., **Kearney, E.**, & Gibbon, F. E. (Refereed poster presentation)

3. LOCAL

Invited Presentations

- 2019 Aug A 3-parameter model for examining sensorimotor adaptation in speech and voice production. Boston Speech Motor Control Working Group, Boston University, MA. Presenter(s): **Kearney, E.** (Oral presentation).

Other Presentations

- 2017 Mar Development of augmented visual feedback therapy for speech rehabilitation in Parkinson's disease. Department of Speech-Language Pathology, Faculty of Medicine, University of Toronto, Canada. Presenter(s): **Kearney, E.** (Refereed oral presentation)
- 2016 Nov Game-based speech therapy using visual feedback in Parkinson's disease. Toronto Rehabilitation Institute Research Day. Toronto, Canada. Presenter(s): **Kearney, E.**, Haworth, M. B., Scholl, J., Faloutsos, P., Baljko, M., & Yunusova, Y. (Refereed poster presentation)
- 2016 Nov Acoustic-kinematic relationships in speech: Improving assessment and treatment of speech disorder in Parkinson's disease. Toronto Rehabilitation Institute Research Day. Toronto, Canada. Presenter(s): Giles, R., **Kearney, E.**, Haworth, M. B., Faloutsos, P., Baljko, M., & Yunusova, Y. (Refereed poster presentation)
- 2016 Jun Evidence-based practice: Critical appraisal and quality of evidence in clinical research. The Hanen Centre, Toronto. Presenter(s): Namasivayam, A. K., **Kearney, E.**, Sanjeevan, T., Wong, W.Y.S., Granata, F., & Rampersaud, D. (Oral presentation)
- 2016 Mar Speech movements in Parkinson's disease. Department of Speech-Language Pathology, Faculty of Medicine, University of Toronto, Canada. Presenter(s): **Kearney, E.** (Oral presentation)
- 2015 Nov Speech intelligibility in Parkinson disease. Toronto Rehabilitation Institute Research Day. Toronto, Canada. Presenter(s): Giles, R., **Kearney, E.**, Haworth, M. B., Faloutsos, P., Baljko, M., & Yunusova, Y. (Refereed poster presentation)
- 2015 Mar Development of augmented feedback targets for speech rehabilitation in Parkinson's disease. Department of Speech-Language Pathology, Faculty of Medicine, University of Toronto, Canada. Presenter(s): **Kearney, E.** (Oral presentation)
- 2013 Nov Towards development of augmented visual feedback targets for speech rehabilitation:

Articulatory working space. Toronto Rehabilitation Institute Research Day. Toronto, Canada. Presenter(s): **Kearney, E.**, Haworth, M. B., Faloutsos, P., Baljko, M., & Yunusova, Y. (Refereed poster presentation)

- 2013 Nov Enabling serious games for speech rehab: movement space transformation. Toronto Rehabilitation Institute Research Day. Toronto, Canada. Presenter(s): Haworth, M. B., Yunusova, Y., **Kearney, E.**, Faloutsos, P., & Baljko, M. (Refereed poster presentation)
- 2013 Oct Augmented visual feedback in speech rehabilitation. Department of Speech-Language Pathology, Faculty of Medicine, University of Toronto, Canada. Presenter(s): **Kearney, E.** (Oral presentation)
- 2012 Nov Motor speech treatment protocol: Preliminary data. Toronto Rehabilitation Institute Research Day. Toronto, Canada. Presenter(s): **Kearney, E.**, Namasivayam, A., Pukonen, M., van Lieshout, P., Jahnke, R., Spavor, C., & Kroll, R. (Refereed poster presentation)

D. Teaching

1. CERTIFICATE

- 2016 April Teaching in Higher Education (THE500). Woodsworth College, University of Toronto, Canada.

2. EXPERIENCE

- 2019 Sept – 2019 Dec **Course Instructor**, SH700 Research Methods in Speech-Language Pathology and Audiology, Department of Speech, Language, & Hearing Sciences, Sargent College of Health and Rehabilitation Sciences, Boston University, MA.
- 2019 Nov **Guest Lecturer**, “SimpleDIVA software tutorial”, SH680 Neural Control of Speech, Department of Speech, Language, & Hearing Sciences, Sargent College of Health and Rehabilitation Sciences, Boston University, MA. [included assignment development and grading]
- 2019 Jul **Guest Lecturer**, “Advancements in treatment for dysarthria”, CD833 Neuromotor Speech Disorders, Massachusetts General Hospital – Institute of Health Professions, MA.
- 2017 Sept – 2017 Dec **Course Instructor**, “Research to practice”, SLP1520 Principles of Clinical Practice, Department of Speech-Language Pathology, Faculty of Medicine, University of Toronto, Canada.
- 2016 Oct **Guest Lecturer**, “Quantitative methods”, JLS476 Linguistics in the Workforce: Clinical Practice and Research. Department of Speech-Language Pathology, Faculty of Medicine, University of Toronto, Canada.
- 2016 Mar **Guest Lecturer**, “Communicative excellence”, SLP1535 Advanced Principles of Clinical Practice. Department of Speech-Language Pathology, Faculty of Medicine, University of Toronto, Canada.
- 2016 Feb **Guest Lecturer**, “Outcome measures in articulation disorders”, SLP1503 Articulation and Related Disorders. Department of Speech-Language Pathology, Faculty of Medicine, University of Toronto, Canada.
- 2015 Nov **Guest Lecturer**, “Introduction to motor speech disorders”, JLS473 Adult Language Disorders. Department of Speech-Language Pathology, Faculty of Medicine, University of Toronto, Canada.
- 2015 Sept **Guest Lecturer**, “Neuroanatomy for motor speech disorders”, SLP1534 Motor Speech Disorders. Department of Speech-Language Pathology, Faculty of Medicine, University of Toronto, Canada.

2015 April	Guest Lecturer , “Outcome measures in developmental speech sound disorders with a motor basis”, SLP1528 Research in Speech-Language Pathology. Department of Speech-Language Pathology, Faculty of Medicine, University of Toronto, Canada.
2014 Sept	Guest Lecturer , “Principles of motor learning”, SLP1534 Motor Speech Disorders. Department of Speech-Language Pathology, Faculty of Medicine, University of Toronto, Canada.
2014 Sept	Guest Lecturer , “Technology for assessment and intervention in motor speech disorders”, SLP1534 Motor Speech Disorders. Department of Speech-Language Pathology, Faculty of Medicine, University of Toronto, Canada.

E. Technical Skills

Process	Subcategory	Hardware/software
Data acquisition	Speech acoustics	Praat Audacity TF32
	Speech kinematics	Electromagnetic articulography (Wave, Northern Digital Inc.)
	Speech perturbation	Audapter
	Experiment presentation	MatLab E-Prime
Signal processing and analysis	Speech/Neuroimaging	MatLab
	Neuroimaging	Functional Connectivity Toolbox FreeSurfer FMRIB Software Library (FSL)
Statistical analysis	-	R Statistical Computing
Design software	-	Affinity Designer Adobe InDesign
Bibliographic management	-	Endnote Mendeley