STEVEN M. BARLOW, Ph.D.
Corwin Moore Distinguished Professor
Depts Special Ed & Communication Disorders, and Biological Systems Engineering
Biomedical Research Team: Center for Brain, Biology and Behavior
University of Nebraska

Curriculum Vita (abbreviated) Aug 2025

Educational History:

Institution	Major/Minor	Degree	Date
University of Wisconsin	Speech Pathology Biology	B.S. Grad w/Honors	1976
University of Wisconsin	Speech-Hearing Sci Speech Path	M.S.	1980
University of Wisconsin	Speech Physiology Neurobiology	Ph.D.	1984
Boys Town National Institute	Speech Physiology Neuroscience	Postdoc/ Scientist	1984-89

Professional Appointments

University of Nebraska

- Corwin Moore Distinguished Professorship, SECD (Jan 2014-present)
- Special Ed and Communication Disorders Chair/Director (2021-2022)
- Associate Director: Center for Brain, Biology, and Behavior. (Oct 2015-Sept 2024)
  - Rebuild CB3 policy & administrative and scientific infrastructure, biomed engineering fac hires
- Biomedical Research Team Leader Center for Brain, Biology, and Behavior.
- Professor (affiliate), Biological Systems Engineering (2014-present)
- Director: Communication Neuroscience Laboratories (2014-present)
- Director: fNIRS Laboratory (2018-present)

University of Kansas

- Professor, Dept of Speech-Language-Hearing: Sciences and Disorders (2004-2013)
- Professor and Chair, Dept of Speech-Language-Hearing: Sciences & Disorders (2000-04)
- Professor, Programs in Neuroscience, Human Biology, and Bioengineering (2000-2013)
- Director, Communication Neuroscience Laboratories
- Director, Digital Electronics & Engineering Core NIH P30, Center for Biobehavioral Neurosciences in Human Communication
- Core, Center for Neurological Disorders

Syracuse University

- Professor and Chair, Communication Sciences and Disorders, Affiliate Professor of Bioengineering and Neuroscience (1999-2000), Syracuse University

Indiana University

- Professor, Department of Speech and Hearing Sciences (July 1993-Aug 1999)
- Program Neural Science (1992-1999, Core faculty and member of executive committee)
- Associate Professor, Department of Speech and Hearing Sciences (1/1/90)

Boys Town National Institute

- Coordinator and Staff Scientist, Speech-Orofacial Physiology Lab, BTNI 1987-89.

- Associate Professor, Dept Otolaryngology, Creighton Univ School of Medicine 1987-89.
- Co-Coordinator and Research Assoc, Speech-Orofacial Physiology Lab, BTNI 1984-87.
- Assistant Professor, Dept of Otolaryngology, Creighton Univ School of Medicine 1984-86.

Honors, Awards, and Distinctions:

- Graduated with honors (University of Wisconsin, 1976).
- Recipient of the **James M. Keck Faculty Development Award** for outstanding scientific achievement. Creighton University - (1985).
- Recipient of the **University of Kansas Excellence in Teaching Award** (2002)
- Recipient of the **4th Willard R. Zemlin Memorial Science Award** for excellence in speech science research, *American Speech-Language-Hearing Association*, November 2003.
- Invited technology innovator by the Kauffman Foundation and academic scientist presenter, **DEMO 2008** national convention, Palm Springs, California (Jan 28-30, 2008)
- National Program Chair for **Speech Motor Control** conference - **2010**
- **Best Scientific Article of 2008** for *Physiological Measurement*. Popescu EA, Popescu M, Wang J, Barlow SM, Gustafson K. (2008). Non-nutritive sucking recorded *in utero* via fetal magnetography. *Physiol Measurement*, 29, 127-139.
- **ASHA Fellow Award 2009** for distinguished research and service.
- **2009 Editor's and publisher (Elsevier) award,** *Journal Neonatal Nursing***,** Estep, Barlow, Vantipalli, Lee, Finan. (2008) Non-nutritive suck burst parametrics in preterm infants with RDS and oral feeding complications. *J Neonatal Nursing*, 14(1), 28-34.
- **2009 Editor's and publisher (Elsevier) award,** *Journal Neonatal Nursing***,** Zimmerman, Barlow. (2008). Pacifier stiffness alters the dynamics of the suck central pattern generator. *J Neonatal Nursing*, 14(3), 79-86.
- **2009 Editor's and publisher (Elsevier) award,** *Journal Neonatal Nursing***,** Stumm, Barlow, Estep, Lee, Cannon, Gagnon, Carlson, Finan. (2008). The relation between respiratory distress syndrome and the fine structure of the non-nutritive suck in preterm infants. *J Neonatal Nursing*, 14(1), 9-16.
- **Higuchi Bioscience Award – 2009 Dolph C. Simons, Sr. Award in the Biomedical Sciences**
- Nominated finalist for **2010 Callier Prize for Outstanding Scientific Achievement. Callier Center, UT Dallas, Texas**
- **Founder:** Neonatal Feeding Club, American Pediatric Society, *Pediatric Academic Society*. Sanctioned 2011.
- **KU Leading Light Research Award 2012** in recognition of consecutive $1M+ extramural grant awards per year over multiple grant cycles (10+ years)
- **Louise Byrd Graduate Research Teaching Award 2012** in recognition for outstanding graduate research mentoring and education, presented by Chancellor Bernadette Gray-Little.
- Invited to the editorial board of the **Frontiers in Pediatrics** (Lausanne, Switzerland) 2013
- **ASHA Meritorious Poster Award 2015**.
- **ASHA HONORS Award 2015** for distinguished scientific research career and service.
- **Society for Pediatric Research 2016** – Neonatology Research Faculty Recognition
- **Invited: Brain Research through Advancing Innovative Neurotechnologies(r) (BRAIN) Initiative** and **US Congressional Neuroscience Caucas,** Briefing by Walter J. Koroshetz, M.D., Director of the National Institute of Neurological Disorders and Stroke, and Joshua A. Gordon, M.D., Ph.D., Director of the National Institute of Mental Health, **2018.**
- Recipient **2019 Callier Prize for Outstanding Scientific Achievement**. International: Callier Center, UT Dallas, Texas, April 14-16. https://www.youtube.com/watch?v=W1vXBSBTmhA
- Distinguished Guest Scientist: **March of Dimes and Richard B Johnston, Jr., MD Prize in Developmental Biology** Reception, April 29, 2019. Baltimore, MD.
- ASHA Lifetime Member granted July 24, 2019

- **Laurels 2019 Recognition for Research**, University of Nebraska, Sep 5, 2019.
- **iidex 2020 Invention-Innovation-Design Exposition**, **Bronze Award** presented to:
  - Dr. Chu Shin Ying Universiti Kebangsaan Malaysia, Kuala Lumpur, Malaysia
  - Dr. Jaehoon Lee Texas Tech University, Lubbock, USA
  - Dr. Steven M. Barlow University of Nebraska, Lincoln, Nebraska USA
  - Dr. Boaz Ben-David Baruch Ivcher School Psychology, Herzliya, Israel
  - Dr. Kai Xing Lim Universiti Kebangsaan Malaysia, Kuala Lumpur, Malaysia

  Title: Oral-DDK: MALMAN (An Oromotor Function Assessment Protocol for Speech Therapist)
- **Outstanding Author – Editor's Award,** 1-25-2024. ***Pediatric Medicine***, ISSN 2617-5428. Barlow SM, Liao C, Lee J, Kim S, Maron JL, Song D, Jegatheesan P, Govindaswami B, Wilson BJ, Bhakta K, Cleary J. (2023). ***Spectral features of NNS dynamics in extremely preterm infants***. *Pediatric Medicine,* doi:10.21037/pm-21-91.

University of Nebraska

2021-2022	Chair, Dept Special Education and Communication Disorders
2014-present	Corwin Moore Distinguished Professor (endowed), Dept Special Ed & Communication Disorders
2014-present	Professor (affiliate), Dept Biological Systems Engineering - Renewed through 2027
2015-2024	Associate Director: Center for Brain, Biology, and Behavior (CB3)
2014-present	Director, Communication Neuroscience Laboratories
2015-present	Co-Director, Functional Near Infrared Spectroscopy Laboratory at CB3

Faculty Search Committees at UNL

2015	Targeted recruitment, MEG-MRI Biomed Engineer - hired Dr. Yingying Wang (SECD) Recruitment Speech Path-Voice-Swallowing, hired Dr. Angela Dietsch (SECD)
2015	CB3 Assistant Research Professor of Physics Medical Imaging (Dept Psychology/CB3)
2015-18	Co-Chair of CB3 national open search for a new Director of CB3
2015	Chair, Recruit & interview Dr. Phil Lee as Consulting Faculty Physicist for CB3, signed contract.
2017	CB3 Res Asst Professor MRI Analyst – Member search committee (6/2017)
2018	CB3: Chair Search Comm – tenure track MRI Analytics (2/2018)
2018	CB3: Round 2, Search Comm – tenure track MRI Analytics fac position (8/2018)
2022-23	CB3: Search Committee for new Center Director

SECD Committees

- Chair Advisory Committee (2014-2016, 2021-present)
- Com Dis Governance Committee for Graduate Studies (2014-2017)
- Graduate Faculty (2014-present)
- Chair Search Committee for 2 tenure-track faculty positions in Speech-Language Pathology (2018-2019)
- Barkley-2 Building Expansion Committee (2018-2022)
- Search Committee for SECD Chair-Director (2019-present), search cancelled Nov 2020
- Search Committee for SECD, Admin Associate (2021, Oct-Nov)
- Search Committee for SECD, Med Coding/Billing Staff (2021, Nov-Dec)
- Search Committee for SECD, Student Services Associate (2022, Aug).

CEHS Committees

- Technology (2022-2023)
- CEHS Advisory Board – Dr. Barlow lead the Research Roundtable 3-14-25

CB3 Committees

- MRI User's Committee (2015-present)
- MRI Science Forum (2015-present)
- CB3 Space Committee (2015-present)
- MRI Physicist Committee (Chair, 2015-present)
- CB3 Director National Search Committee (Co-Chair w/Dave Hansen) (2015-2017)
- MEG Laboratory initiative. In 2015 & 2016, Dr. Barlow consulted with Dr. Vishal Shah at QuSpin, Inc. (Louisville, CO) to develop preliminary plans to implement the Atomic MEG at the University of Nebraska, known currently as the high-density, Optically-Pumped MAG Array for functional brain imaging studies in humans at the CB3.
- Barlow and Greenwood completed Gauss field study mapping of prospective MEG space (Sept-Dec 2016).
- CB3 Tour: organized and led tour for the Raikes School of Design (7/25/2016)
- CB3 Tour: organized and led tour for Biological Systems Engineering (9/27/2016)
- CB3 Tour: organized and led tour for Nebraska Biomedical Engineering Society (11/17/2016)
- CB3 tenure-track MRI faculty – CoChair search committee (6/2017)
- CB3 Res Asst Professor MRI Analyst – Member search committee (6/2017)
- CB3 Tour: organized and led tour for Nebraska Biomedical Engineering Society (7/12/2018)
- CB3 Chair Search Committee – tenure track MRI Analytics fac position (2/2018-6/2018)
- CB3 Search Committee member – tenure track MRI Analytics fac position (8/2018-6/2019)
- CB3 Search Committee member – operations administrator position (1/2019-7/2019)
- CB3 Tour: organized and led tour for Nutrition Science (7/9/2019)
- CB3 Tour: scientific demonstation of brain imaging fNIRS Biomedical Engineering Society (7/11/2019)
- CB3 Tour: DARPA – US Dept of Defense scientific demonstation of fNIRS (8/5/2019)
- CB3 External Site Visit & Program Review – Dec 13-14, 2021 (Savage, Barlow, Neta)
- CB3 Tour: parent/student DEC 2023

University Committees

- President's Excellence Awards committee member, appointed by Susan M. Fritz, PhD, Executive Vice President and Provost (3-year term, 2020-2023)

TECH TRANSFER: Inventions and PATENTS

Licensed to KC BioMedix (Shawnee, Kansas):

1. PACIFIER SYSTEM FOR STIMULATING AND ENTRAINING THE HUMAN OROFACIAL SYSTEM

KUCTC ID No. 04KU023L; *aka* N-Trainer
60/605,578 – Provisional application
11/209,177 – Utility application – link to on USPTO PatFT / Google
PCT/US2005/031,169 – International application; link to WIPO WO/2006/033801
Patent issued
United States Patent No.: US 8,979,896 B2 Date of Patent: March 17, 2015

2. PACIFIER SYSTEM FOR STUDYING AND STIMULATING THE HUMAN OROFACIAL SYSTEM

KUCTC ID No. 04KU022L; aka Actifier II
60/605,607 – Provisional application
11/209,029 – Utility application – link to on USPTO PatFT / Google
PCT/US2005/030,869 – International application; published under WO/2006/026623 **June 22, 2006**

Patent issued
United States Patent No.: US 8,251,926 Date of Patent: August 28, 2012

3. SYNTHETIC OROCUTANEOUS STIMULATION ENTRAINS SUCK IN PRETERM INFANTS WITH FEEDING DIFFICULTIES

KUCTC ID No. 09KU071L; aka Non-Nutritive Suck Spatiotemporal Index (NNS STI)
61/030,484 – Provisional application

4. METHOD AND APPARATUS FOR MEASURING NON-NUTRITIVE SUCK PATTERN STABILITY

KUCTC ID No. 09KU072L; aka Non-Nutritive Suck (NNS)
United States Patent (Barlow et al). 5-27-14. Patent No. 8,734,367
61/036,304 – Provisional application (claims priority from provisional application 61/030,484 above)
12/390,142 – Utility application – link to on USPTO PatFT/ Google – Notice of Allowance Mailed
Patents issued
United States Patent No.: US 8,226,579 Date of Patent: July 24, 2012
United States Patent No.: US 8,734,367 Date of Patent: May 27, 2014

5. ENHANCED THERAPEUTIC STIMULUS SYSTEM AND METHOD OF USE

13/457,059 – non-provisional application (claims priority to previous two provisional applications).
Not yet on USPTO PatFT or Google; there is a reference to this application on the USPTO Public PAIR under the Continuity Data tab of the related applications above.
Patents issued
United States Patent No.: US 9,220,654 Date of Patent: December 29, 2015
United States Patent No.: US 8,939,919 Date of Patent: January 27, 2015

6. METHODS OF USING AN ENHANCED THERAPEUTIC STIMULUS FOR NON-NUTRITIVE SUCK ENTRAINMENT SYSTEM

13/457,154 –Non-provisional application – claims priority to the previous two provisional patent applications, plus the utility application 12/390,142. Not yet on USPTO PatFT or Google; there is a reference to this application on the USPTO Public PAIR under the Continuity Data tab of the related applications.

7. ENHANCED THERAPEUTIC STIMULUS FOR NON-NUTRITIVE SUCK ENTRAINMENT SYSTEM AND METHOD

13/457,203 – Non-provisional application – claims priority to the previous two provisional patent applications, plus the utility application 12/390,142. Not yet on USPTO PatFT or Google; there is a reference to this application on the USPTO Public PAIR under the Continuity Data tab of the related applications.
Patent issued
United States Patent No.: US 9,037,266 Date of Patent: May 19, 2015

Licensed to Epic Medical Concepts & Innovations (EMCI):

8. DEVICE, SYSTEM, AND METHOD FOR DETERMINATION OF ORAL/LIP STIFFNESS

KUCTC ID No. 10KU002L; aka OROStiff
61/237,200 – Provisional application
13/392,064 – Utility application – not yet on USPTO PatFT or Google; can be found on USPTO Public PAIR
PCT/US2010/046,787 – International application; published under WO/2011/028598
Patent issued
United States Patent No.: US 9,351,667 Date of Patent: May 31, 2016
European Patent No.: 2470071 Date of Patent: November 08, 2016

9. DEVICE, SYSTEM, AND METHOD FOR MECHANOSENSORY NERVE ENDING STIMULATION
KUCTC ID No. 10KU003L; aka TAC-Cell (GALILEO Somatosensory System)
61/237,211 – Provisional Application
61/554,762 – Provisional Application (second rolling provisional using skin as membrane)
13/404,178 – Utility application – not yet on USPT PatFT, Google, or USPTO Public PAIR
PCT/US2010/046,792 – International application; published under WO/2011/028602
US20140046231 A1 Feb 13, 2014

10. MEDICAL DEVICE FOR THERAPEUTIC STIMULATION OF THE VESTIBULAR SYSTEM
KUCTC ID No. 11KU067L; aka VestibuGLIDE
61/476,943 – Provisional application
Utility not filed (PCT only filed), must file in U.S. prior to October 2013 deadline to preserve U.S. rights.
PCT/US2012/034,238 – International application; not yet published
United States Patent No.: US 9,844,483 Date of Patent: DEC 19, 2017

Foreign Filings:
Both KC BioMedix (Innara Health, Inc.) and Epic Medical Concepts & Innovations, Inc. have filed in numerous foreign countries. Additional information about these foreign patent applications is available on the WIPO website. In order to see this information, click on one of the above international publication numbers (they start with WO) and then click on the "National Phase" tab.

NUtech Transfer – Patents

11. **MUSCLE ASSESSMENT SYSTEM AND METHOD: ForceWIN10.**
S.M. Barlow (inventor) and Jake Greenwood (co-inventor). Biomedical project application to map muscle force dynamics in brain injured patients, sponsored by **NUtech Ventures**. Ongoing commercial prototype development by Dr. Barlow and the Raikes School of Design and Engineering (2015-2017). US Provisional Application No. 62/329145 filed 4-28-16 titled Muscle Assessment System and Method; and United States patent application submitted March 28, 2017. PCT/US2017/030221 titled Muscle Assessment System and Method.
US Patent No. 11,202,595 granted December 21, 2021.

12. **NeoNNS**.
S.M. Barlow (inventor) and Chunxiao Liao (co-inventor). Biomedical project application to map non-nutritive suck dynamics in preterm infants. IP submitted to NUtech. United States patent application in process 2018. Licensed by NUtech to INNARA Health, Inc., August 2021, Feb 2022-present. Generating royalties to UNL and SECD: 2023-present.

13. **Tactile Stimulation Device - pTACS.**
S.M. Barlow (co-inventor) and Jacob Greenwood (co-inventor). A portable, rechargeable, lightweight multichannel pneumotactile stimulator for human use in the hospital emergency room, patient transport (ambulance), neuroimaging, or clinical setting for activation andor therapeutics of somatosensory and/or sensorimotor control systems involved in skilled motor behavior in premature infants, children and adults. Publication No. US-2022-0015634-A1. Publication Date: 01/20/2022. 11-8-24 USPTO notice of Patent to be awarded Feb 25, 2025.
US Patent No. 12,232,845 B2 granted February 25, 2025.

Memberships held in Professional Organizations:

- Society for Neuroscience, Acoustical Soc America, Assoc Res Otolaryngology, National Head Injury Foundation, Pediatric Academic Soc, Am Acad Clin Neurophysiology, American Speech and Hearing

Association, Acad Neurologic Commun Disorders and Sciences, Am Acad Neurology, Pediatric Academic Society, Am Academy of Neurology, International Society for Advancement of Clinical MEG

<u>Administrative Services</u> in the areas of Speech-Language Pathology, Audiology, Speech-Language-Hearing Sciences, Neurosciences, Human Biology, and Bioengineering.

University of Nebraska

- Corwin Moore Endowed Distinguished Professorship, SECD (Jan 2014-present)
- Associate Director: Center for Brain, Biology, and Behavior. (Oct 2015-Sept 2024)
  - Rebuild CB3 policy and administrative and scientific infrastructure, biomed faculty hires
- Professor (affiliate), Biological Systems Engineering (2014-present)
- Director: Communication Neuroscience Laboratories (2014-present)

University of Kansas

- Professor, Dept of Speech-Language-Hearing: Sciences and Disorders (2004-2013)
- Professor and Chair, Dept of Speech-Language-Hearing: Sciences & Disorders (2000-04)
- Professor, Programs in Neuroscience, Human Biology, and Bioengineering (2000-2013)
- Director, Communication Neuroscience Laboratories
- Director, Digital Electronics & Engineering Core NIH P30, Center for Biobehavioral Neurosciences in Human Communication
- Core, Center for Neurological Disorders

Syracuse University

- Professor and Chair, Communication Sciences and Disorders, Affiliate Professor of Bioengineering and Neuroscience (1999-2000), Syracuse University

Indiana University

- Professor, Department of Speech and Hearing Sciences (July 1993-Aug 1999)
- Program Neural Science (1992-1999, Core faculty and member of executive committee)
- Associate Professor, Department of Speech and Hearing Sciences (1/1/90)

Boys Town National Institute

- Coordinator and Staff Scientist, Speech-Orofacial Physiology Lab, BTNI 1987-89.
- Associate Professor, Dept Otolaryngology, Creighton Univ School of Medicine 1987-89.
- Co-Coordinator and Research Assoc, Speech-Orofacial Physiology Lab, BTNI 1984-87.
- Assistant Professor, Dept of Otolaryngology, Creighton Univ School of Medicine 1984-86.

<u>University Service:</u>

Creighton University Medical School

- Department of Otolaryngology - BTNI (Human Communication Laboratories).
- Committee on Capital Equipment. 1987 (chair), 1984-86
- Committee of Space Utilization and Needs. 1986 (chair)
- Committee on Computer Usage and Software Development. 1986-89
- BTNI Animal Care and Use Committee. 1988-89 (chair)
- Creighton Animal Care and Use Committee. 1988-89

Indiana University

- Indiana University Human Subjects Committee. 1990-93
- Department of Speech and Hearing Science - Computer Technology 1990-95, Space 1990-94, Comprehensive Exam 1990-99, Curriculum (Chair) Fall 1991-92, Doctoral Student Com-(Chair 1992-95), Graduate Admissions (Chair 1995-96), Executive Com-Program Neural Science 1992-99, Undergraduate Com 1996-97, Research Development 1997-98, Chair 1998-99.

University of Kansas

- Speech-Language-Hearing Science – **Department Chair**, 2000-04, Instrumentation & Computer Tech 2000-present, UG Curriculum–ongoing, Assist Prof Search Com–Phonology, Chair (2000), Assist Prof Search Com–Audiology, Chair (2001), Assist Prof Search Com–Neurosci, Chair (2002), Prof Search Committee–Cog Neurosci (2004), Prof Search Committee–Audiology (2005), Tenure Review Com 2005.
- Intercampus Prog Communication Disorders – **Co-Director**, 2000-04, Grad Curric Com-ongoing
- Human Biology Program–Executive Committee, 2000-2010
- CLAS: GRF – grant reviewer 2005-06
- Bioscience Initiative on *KU Neuroscience* : requested by Chancellor Hemenway. 2004
- Search Committees for Mechanical Engineering and Bioengineering Initiative KU–2003-05
- Collaborator with KU Technology Transfer Office, 2002-2013
- KU Interdisciplinary Bi-campus Team Builder, 2000-2013
- KU Conflict of Interest Committee – KU Research & Graduate Studies, 2010-2013
- KU Higuchi Bioscience Review Committee, 2010, 2011, 2012, 2013

University of Nebraska

- Faculty mentor for Dr. Angela Dietsch (2015-present), met 3-15-19 to plan NIH grant
- Faculty mentor for Dr. Yingying Wang (2016-present), met 4-15-19 to plan NIH grant. R21 funded 6/19
- Faculty mentor for Dr. Marc Brennan (2017-present). R21 funded
- Faculty mentor for Dr. Amanda Rodriguez (2018-2021). R01 funded
- Faculty mentor for Dr. Kevin Pitt (2019-present), NIH sponsor, met Spring 2020, periodically through 2022. NSF funded

Boys Town National Research Hospital

- NIH Cobre P20 GM109023. Dr. Barlow research mentor for Dr. Angela AuBuchon, Aug-2019 to 2024

Universiti Kebangsaan Malaysia August 2019-present
Faculty of Health Sciences
Adjunct Professor, research advisory committee

Candidate	:	Sai Tarishini a/p Sathiyasenan (P97153)
Programme	:	Master of Health Science (Hearing & Speech)
Chair of Committee	:	Dr. Chu Shin Ying

SERVICE to ASHA

- Editorial Consultant: JSHR, JSLHR, JSHD (28+ years)
- Associate Editor. Journal Speech and Hearing Research (1991-1994)
- Special Biomechanics Topics Associate Editor (JSLHR) for Editor Dr. Anne Smith. (2011)
- Special Neuroscience Topics Associate Editor (JSLHR) for Editor Dr. Verdolini (2007-2008)
- Special Physiology Topics Associate Editor (JSLHR) for Editor Dr. Anne Smith (2011-2012)
- ASHA, Chair and convention coordinator of Speech Science Program Committee (2000)
- ASHA Educational Publications Board (2001-2004)
- Member of an invited external advisory committee for academic program review of Speech-Language-Hearing-Science at the University of Arizona (April 12-15, 2006).
- ASHA-NIH Research Symposium planning committee (2007-2013), Scientific Coordinator for 2008 topic "*Neurobiological Determinants of Human Communication*." Co-authored NIH grant renewal with Dr. Sharon Moss (PI) for the NIH-ASHA Research Symposium series (**funded**)
- Editorial Board. ASHA SID 5: Speech Science (2008-present)
- ASHA Research Roundtable**: Developing Multidisciplinary Scientific Collaborations, 2000-present**

- Program chair and organizer, 2008 ASHA-NIH Research Symposium "*Neurobiological Determinants of Human Communication*." Nov 21st Chicago, Ill.
- ASHA Research Science Advisory Committee (**RSAC**), regular member, 2009-2012.
- ASHA Research Science Advisory Committee (**RSAC**), Lesson 4 Success ASHA-NIH workshop April 2011, Mentoring Faculty, mock NIH study section reviews, Teaching grant writing presentations
- ASHA Research Science Advisory Committee (**RSAC**), Lesson 4 Success ASHA-NIH workshop April 2012, Mentoring Faculty, mock NIH study section reviews, Teaching grant writing presentations
- ASHA-NIH Research Symposium planning committee (2013-2018), Scientific Coordinator and principal author for topic "*Neuroprotection and Impact on Human Communication Systems*." Co-authored NIH grant renewal with Dr. Margaret Rogers (PI) for the NIH-ASHA Research Symposium series
- ASHA-NIH U24 National Clinical Scientist Mentoring Network (**CSMN**). Pathways conference. Feb 1-3, 2013. Rockville, MD. SM Barlow – Distinguished Faculty and Presenter "NIH Grant Application – Pitfalls in Writing the Application" and panelist for "Establishing MultiCenter Collaborations."
- ASHA-NIH U24 grant. National Clinical Scientist Mentoring Network (**CSMN**). Invited as a **distinguished scholar member** of the executive scientific advisory team for this NIH project (2012-present).
- ASHA Pathways Program Scientific Reviewer. (2015-present)
- ASHA Pathways Scientific Mentor (2015-2017) for Dr. François-Xavier Brajot - Assistant Professor @Ohio University
- ASHA CPRI Scientific Mentor-Advisor for Dr. Cara Stepp – Assistant Professor @ Boston University in collaboration with Dr. Christopher Moore (DEAN of Sargent College at BU), and Dr. Margaret Rogers (Chief Science Officer @ ASHA) (2016). Recent recipient of a new NIH R01.
- ASHA CSMN Pathways Scientific Mentor (2016-2017) for Dr. Nicki Etter - Assistant Professor @ Penn State University
- ASHA CSMN Pathways Scientific Mentor (2017-2018) for Dr. Katlyn McGrattan – Postdoctoral Fellow, Northwestern University, Quantitative Aerodigestive Physiology.
- Invited panelist for the **2018 ASHA Focus Group on CSD Science Courses** (neuroscience, anatomy and physiology, speech science, language science, hearing science) to review evidence-based, high impact teaching practices. ASHA's Academic Affairs Board (AAB), Thursday, Nov 15, 3:30-5:00 pm @ ASHA Convention, Boston, MA.
- ASHA CSMN Pathways Scientific Mentor (2019-2020) for Dr. Elaine Kearney – Postdoctoral Fellow, Boston University, Speech Neuroscience of Parkinson's disease. ASHA National Office, June 16-18. Rockville MD.
- ASHA CSMN Pathways (2020) invited speaker. Programmatic Research Career. ZOOM talk. ASHA National Office, June 2020. Rockville MD.
- ASHA CSMN Pathways (2022) invited speaker. Programmatic Research Career. ZOOM talk. ASHA National Office, June 13-15, 2022. Primary scientific mentor (2022-2023) to Pathways protogés, **Dr. Camille Wynn** and **Dr. Caroline Spencer**, Rockville MD. CSMN follow-up with Drs. Wynn and Spencer May 2023, 2025.

SERVICE to Society for Pediatric Research (SPR), Pediatric Academic Society (PAS)

- Founder: Neonatal Feeding Club, American Pediatric Society, *Pediatric Academic Society*. 2010
- Neonatal Feeding Club officially Sanctioned by PAS in 2011.
- Chair of Neonatal Feeding Club, Annual Scientific Sessions, *Pediatric Academic Society*, 2011- present

Membership in Professional Organizations

Soc Neuroscience, Acoust Soc America, Assoc Res Otolaryngology, National Head Injury Foundation
Am Acad Clin Neurophysiology, ASHA, ANCDS, American Academy of Neurology, Pediatric Academic Society (Society for Pediatric Research), Nebraska Academy of Science

Associate Editor. Journal Speech and Hearing Research (1991-1994)

Editorial Board (Basic Research). Pediatric Medicine (2019-present).
http://pm.amegroups.com/user/view/65387
2020-2024 Distinguished Guest Editor – Special Series: Neonatal Feeding and Developmental Issues, n preterm development and neonatology. 8 articles were commissioned in 2022 by Dr. Barlow, Editor – Neonatology Section, "*Neonatal Feeding and Developmental Issues*" published in *Pediatric Medicine*. All articles have undergone external peer review.

Pediatric Medicine. **Distinguished Editorial Board Member**. July 1, 2024 - December 31, 2025

Associate Editor. Frontiers in Pediatrics [IF=3.42] (2022-present). Overseeing the research topic - *SARS-CoV-2: Implications for Maternal-Fetal-Infant and Perinatal Mortality, Morbidity*
www.frontiersin.org
Frontiers Media Limited, 35 New Broad St., London EC2M 1NH, United Kingdom

Frontiers in Pediatrics [IF=3.42] (2024-present). *SARS-CoV-2: Implications for Maternal-Fetal-Infant and Perinatal Mortality, Morbidity, Pregnancy Outcomes and Well-Being.* Editors: B. Govindaswami, SM Barlow, A Ojo, Xianhua Piao, D Song, R Wallerstein.
SARS-CoV-2: Implications for Maternal-Fetal-Infant and Perinatal Mortality, Morbidity, Pregnancy Outcomes and Well-Being | Frontiers Research Topic (frontiersin.org)

Editorial Consultant
JSHR, JSHD, JSLHR, JASA, Int Journal Speech-Language Pathology, Exp Neurology, Arch Physical & Rehab Medicine, J Neurophysiology, Child Development, Brain Res, Exp Brain Res, NeuroImage, Pediatric Res, J Perinatology, J Nursing Res, Dysphagia, J Perinatology, J Clin Nursing, Acta Paediatrica, Pediatrics, Int J Pediatrics, Am J Perinatology, American Journal of Physiology, J Biomechanics, J Physiology, IEEE Transactions on Biomedical Engineering, Neurorehabilitation & Neural Repair, Physiology & Behavior, Birth Defects Research, Pediatric Medicine, Journal Integrative Neuroscience, Neuroscience Letters, PLOS_one, Frontiers Neuroscience Aging, Brain Connectivity, Transactions Biomedical Engineering, Frontiers Pediatrics

TEACHING

Lecturer, Dept of Neurology, University of Wisconsin. Evoked Potential Training Program. Somatosensory evoked potentials. Department of Neurology, University of Wisconsin, Madison, WI, (1980-1982).

Courses taught in the Dept Otolaryngology, Creighton Medical School, Omaha, Nebraska.
Directed Indep Study (Otolaryngol (OTL) # 495) - 1985. Rdgs Speech Physiol (5 sem. hrs)
Directed Indep Research (OTL # 497) - 1984. Research in Speech Physiology (5 sem. hrs)
Directed Indep Research (Graduate Level OTL - School of Dentistry) - 1985 and 1986. Electrophysiology of the Orofacial Mechanism. This directed study resulted in a data-based journal publication and student award (Mr. Erick Rath) from Creighton Dental School and an invited presentation to the Nebraska Dental Society (1986).
Directed Readings in Neuroanatomy and Neurophysiology (OTL # 493) - 1989 (3 sem. hrs)
Directed Independent Study (OTL 495) - Sum/Fall 1989 (4 cr.)
Directed Independent Study (OTL 795) - Summer 1989 (4 cr.)
Directed the monthly Speech Physiology Seminar held at Boys Town National Institute (Dept Otolaryngology). Topics included discussion of recent scholarly publications, presentation of research methods, and experiment proposals. (1987-1988)

Courses taught in the Department of Speech and Hearing Sciences at Indiana University
Physiologic Assessment of Neuromotor Speech Disorders (3 cr), Anat & Physiol Speech (3 cr)

Rdgs Neural Control Larynx (3 cr), Rdgs Somatosensory Physiol (3 cr), Research Design and Methods (3 cr), Craniofacial Anomalies (3 cr), Voice Physiology (3 cr), Exp Design (3 cr)
Neurophysiol Sensory & Motor Systems Vocal Tract (2 cr), Laryngeal Physiology (3 cr.)
Instrumentation in Speech Physiology (2 cr), Neural Bases Speech (3 cr), Vocal Tract Physiology 0-3 years (2-3 cr), Clinical Instrumentation in Speech Pathology (2-3 cr.)

Courses taught in the Progam in Neural Science at Indiana University
Principles of Neural Science I - doct level (4 cr), Principles of Neural Science II - doct level (4 cr), Neuroscience Research Seminar - doctoral level (3 cr)

Courses taught at Syracuse University
Undergrad Res Speech Physiology & Neuroscience (3 cr), Neuroscience-grad (3 cr) N = 60

Courses taught at University of Kansas
Speech Science: Anatomy & Physiology (3 cr), Neural Bases of Speech and Voice (2 cr), Neuroscience of Com Dis (3 cr)
Advanced Topical Seminars in Neuroscience (Neuroprotection, ASD Brain, Mechanoreception, Thalamo-cortical Systems)

Neuroscience (3 cr), Infant Neurobiology & Development (2 cr), Sem Basal Ganglia Neurophysiology (2 cr), Sem Orofacial Myofunctional Disorders & Motor Control (2 cr), Seminar Infant Development (2 cr), Neurobiology of the Human Infant (2 cr), Seminar Speech Aerodynamics (2 cr), Seminar Orofacial Biomechanics (2 cr), AC/DC Circuits and Instrumentation Applications (2 cr), Clinical Speech Physiology (2 cr), Laboratory Practical on Instrumentation in Orofacial and Speech Physiology (2 cr), Research Ethics and Scientific Integrity (2 cr), Seminar Mirror Neuron Systems (2 cr), Res Methods in Human Communication (3 cr), Seminar Mechanoreceptors and the Somatosensory System (3 cr), Seminar Autism Spectrum Disorders and Multisensory Processing (3 cr), Seminar aEEG/rEEG Neonates (2 cr), Seminar Neuroprotection (2 cr), Intro Neuroscience of Human Communication (2 cr), Communicating Brain: The Ultimate Personal Computer (3 cr, Special University-wide offering beginning 2013).

Courses taught at the University of Nebraska (beginning Fall 2014-present)
SLPA 455 - Speech Physiology: Anatomy & Physiology (4 cr) – FALL 2014-2018
SLPA 853 – Neurological Bases of Communication Disorders (3 cr) – FALL 2014-2015
SLPA 453 – Neurological Bases of Communication Disorders (3 cr) – FALL 2016-2019, 2023
SLPA 453-700 – Neurological Bases of Communication Disorders (3 cr) – FALL 2020 (ONLINE version)
SLPA 981 – Neuroprotection, Neuroimaging, & Transcranial Doppler Human Brain (2 cr) – SPRING 2015
SLPA 981 – fNIRS (2 cr) – SPRING 2017
SLPA 998 – FALL 2023
SLPA 896 – Neonate neurobiology and neuroprotection – FALL 2016/SP 2017 (4-8 students)
SLPA 896 – Cerebral Hemodynamics and cw-NIRS brain in MCA Stroke – **Fall 2025** (Barlow/Harvey)
BSEN 896-002 – Neuroanatomy and Neurophysiology of Speech, Language, Hearing (3 cr) - FALL 2017-present
BSEN 896 – Anatomy and Physiology of Speech and Voice (3 cr) - FALL 2017-present
BSEN 896-009 – *f*NIRS, sensorimotor cortex mapping during functional tasks (3 cr) - Spring & Fall 2018
BSEN 896-008 – Somatosensory stimulus dynamics – Fall 2018

Workshops
Barlow SM - Coordinator: NIRx fNIRS Workshop Nov 30 – Dec 1, 2017 *Center for Brain, Biology, Behavior* and *SECD* [Barkley Trust]. University of Nebraska.
Barlow SM, Wang YY. 2017. Design & develop a new NIRx functional near-infrared spectroscopy (fNIRS) brain research laboratory at CB3, space remodel/reinstrument rm B74.

DOCTORAL/POSTDOCTORAL STUDENT TRAINING

Steven Barlow, PhD			
Trainee	**Level of training**	**Training period or year degree granted, research topic**	**Current or most recently known position**
Erick M. Rath	DDS	1987-1989 Somatosensory processing of mechanical inputs in cat cortex	NIH fellowship, Dentist-Oral Surgeon, South Dakota
Kevin Spangler	Postdoc, MD	1983-1985 Somatosensory neurophysiology	Boys Town National Institute [Omaha], NIH Postdoc, Physician, North Carolina Neuroradiology
Michelle Gentil	Postdoc	1994 Motor control of the orofacial system in humans	Senior Scientist, INSERM, Grenoble, France
Fred Diedrich	Postdoc	1995-1998, infant limb motor control and servo perturbation studies	Aptima Inc., Cognitive Neuroscientist, Woburn, MA
Don Finan	PhD	1994-1999, speech physiology & neuroscience	Professor/Chair, Dept Comm Scienes & Disorders, University N. Colorado
Richard Andreatta	PhD	1995-2000, speech physiology & neuroscience	Professor, Dept Com Scieences & Disorders, & Rehab and Health Science University of Kentucky
Amitava Biswas	PhD	1994-2002, speech physiology, engineering	Asst Professor, U of Texas-El Paso
Meredith Estep	PhD	2002-2009, fMRI & MEG, Neural control of speech/suck	Post-doc, Wash Univ Med School, Neonatology, fMRI/DTI preterm brain development. Investment Principal @ Plains Ventures
Michael Hammer	PhD	2002-2009, Laryngeal sensory physiol & vocalization in humans, NIH F31	Post-doc, Univ Wisconsin Scientist, Otolaryngology – Univ Wisconsin Assoc Professor, Comm Sci Disorders, UW-Whitewater 2015-present, NIH R01 funded
Susan Stumm	ABD	2003-2009, functional brain mapping, velocity encoding in sensorimotor cortex during speech	Speech-Language Pathologist, Bonner Springs, MO
Lana Seibel	MA, Pre-doc	2005-2007, Dev speech physiology	SLP Lawrence, KS Public Schools
Meredith Poore	PhD	2005-2011, Dev speech physiology	Olathe School System, Kansas
Monique Fees	MA, pre-doc	2004-2007, Dev speech physiology	SLP, neonatal feeding, Colorado, Europe
Mimi Urish	MA-MS	MA SLP 2004-05, MS Neuroscience 2007	Dev Speech Physiology, London, England
Emily Zimmerman	MA-PhD	MA SLP 2005-06, PhD Dev speech physiology 2006-2011	Post-doc Fellow, Harvard Medical School – MGH (2011-2013) Asst Professor - 2013, Northeastern University; NIH R01 funded, Professor and Chair - 2022

Shinying Chu	MA-PhD	MA SLP 2005-06, PhD Developmental speech physiology 2006-2010	Post-doc, Osaka, Japan. Scientist, National Rehabilitation Center for Persons with Disabilities, Saitama, Japan. Assoc Professor, Malaysia National University [1/2021] Dept Head-Speech Sciences Programme, Faculty of Health Sciences. Centre for Healthy Ageing and Wellness (HCARE) National University of Malaysia, Jalan Raja Muda Abdul Aziz, 50300 Kuala Lumpur
Marie Helen-Boudrais	PhD	2002-2007, Neuroscience, Encoding forelimb movements in SMA in primate. Committee member	Post-doc, Oxford, England Assoc Professor, McGill University, Canadian Research Foundation
Lalit Venkatesan	PhD	2006-2012, Bioengineering, Neurosci, MEG neural adaptation	Abbott Laboratories Director of Research and Development at Abbott Neuromodulation, Dallas TX. Senior Director, Global Medical Affairs at Saluda Medical (spinal cord stimulation technology)
Blythe LaGasse	PhD	2006-2009 Ph.D. Music Therapy and Communication Neuroscience, University of Kansas	Coordinator of Music Therapy Professor of Music, Colorado State University
Gustav VanAcker	MD-PhD	2007-2011, neuroscience, Monkey forelimb ICMS spatial maps	Cleveland Functional Electrical Stimulation Center, spinal cord stim & pain control. Case Western Reserve University - Assistant Professor of Physical Medicine & Rehabilitation
Austin Oder Rosner	PhD	2010-2013 Infant neurobiology 2014-2016 fNIRS neuroimaging cortical adaptation	grad student at KU grad student at UNL Postdoc (June 2016) Tufts Univ Med Ctr – Neonatology (Boston), Medical Writing Science Associate Director at Vertex Pharmaceuticals
Christine Kosirog	MA	2012-2013 neuro, autism	SLP Lawrence, KS
Rebecca Custead	MA, PhD postdoc	2010-2013 stroke/neuroplasticity, somatosensory physiology 2014-2016, stroke-plasticity, neuroimaging velocity encoding human face fMRI August 2016-July 2018	grad student at KU grad student at UNL Barkley postdoc UNL

Jari Billiot	MA	2012-2013 somatosensory-plasticity	Speech-Language Pathologist, Fredericksburg, VA
Hyuntaek Oh	PhD	2012-2013, Bioengineering, functional brain imaging, array processing 2014-2016, Biological Engineering with Dr. Greg Bashford as Co-Mentor, fMRI saltatory somatosensory velocity glabrous hand fMRI neuroimaging	grad student at KU grad student at UNL 2020 Postdoc @ Baylor College of Medicine. Assistant Professor @ Baylor College of Medicine. NIH/NIDA K25 Functional connectivity alterations among opioid users in treatment
Cathyrn Cortesa	PhD	2015-2016. EEG infant language,	grad student at UNL (Molfese is advisor, Barlow on doctoral committee) Johns Hopkins University, Dept Cognitive Science
Jessie Patterson	Au.D, PhD	2014-2016. Gait-Balance-Vestibular PhD quals & dissertation research	grad student at UNL (Honaker is advisor, Barlow on doctoral committee). Senior Audiology Research Associate, Boys Town National Research Hospital, Omaha NE. Audiologist.
Jake Greenwood	PhD-student Biomed Eng	UG in elect engineering at UNL 2016, PhD student 2017-present MCA ischemic stroke and somatosensory therapeutics. pTACS somatosensory dissertation in progress.	Barlow mentor-dissertation advisor, force dynamics, MEG neurophysiology, fNIRS, MRI, wireless sensor design, biomed engineering startup company
Chunxiao Liao	MS Computer Science & Eng	UG/MS engineering & computer science (China & UNL), MS student 2017-2018. M.S. Graduation & thesis July 19, 2018. PhD student in CS&E at Univ of Colorado 2023-present. Consultant on Barlow's NIH R01 through 2024.	summer 2017, Barlow mentor-research advisor, preterm neonate oromotor NNS dynamics and computational modeling. CS Engineer. PhD student and doctoral candidate @ Univ of Colorado July 2025
Ben Hage	MS PhD-student Biomed Eng	2016-present, Biomed Engineering. Transcranial Doppler MCA & Galileo Somatosensory velocity arrays Thesis defended 11-28-17. Jan 2018 enter Biomed PhD program. PhD awarded 2022.	Grad student at UNL, Barlow mentor, thesis committee Nov 2017. Barlow mentor, doctoral committee. Post-doc fellow at Univ Nebraska
Mohsen Hozan	PhD student Biomed Eng	2017-present, Biomed Engineering & Com Dis, DSP Force Dynamics. Dissertation defense (**8-5-25**). *ROBUST QUANTIFICATION OF CORTICAL HEMODYNAMIC RESPONSE TO TACTILE STIMULATION: A COMPREHENSIVE FNIRS METHODOLOGY*	Grad student at UNL Biomedical Engineering, Barlow dissertation mentor, Dr. Bashford co-mentor, Biomechanics, data analytics, fNIRS human neuroimaging

		TO MITIGATE PHYSIOLOGICAL CONFOUNDS	
Max Twedt	PhD student Biomed Eng	2017-present, Biomed Engineering. Doppler.	Grad student at UNL, Barlow, doctoral advisory committee member 2018-present.
Michaela Sullivan	MS student, SLP	Fall 2017-Summer 2019, SLP, MS Thesis orofacial force dynamics. Completed	fNIRS, orofacial biomechanics Thesis Chair, SLP-CFY
Alejandra Marquez	MS student,SLP	Jan 2018-Summer 2019, SLP, MS Thesis on NeoNNS STI in EPI, completed	Neonate Oromotor Thesis Chair
McKenzie Ochoa	MS student, SLP	Jan 2018-Summer 2019, SLP, MS Thesis on NeoNNS suck dynamics in EPI infants	Neonate Oromotor Thesis Chair
Meghana Kurupalli	MS student CS&E	Aug 2018-2020, Computer Science & Engineering	Aerodynamics MS Project Co-Chair
Faitma Sibaii	MS student, Biomed Eng	Aug 2019-present, Biomed Engineering	fNIRS & fTCD somatosensory modulation, Thesis defense 11-19-24
Elizabeth Hoffman	MS student, SLP	UG Honors thesis, Fall 2018-May 2020, SLP, MS thesis	Biomechanics, VIBROS somatosensory Thesis Chair
Alyssa Molina	MS student, SLP	Fall 2019-2021, SLP, MS thesis	Pediatric Facial Nerve Plasticity, Thesis Chair
Ross Westemeyer	SLP doc student	Spring 2020-Spring 2023, PhD defended	Swallowing plasticity, neuro. Doc advisory committee and dissertation committee member, Postdoc fellow Northeastern Univ, University of Northern Iowa – Asst Professor SLP
Chris Engsberg	MS, PhD Biomechanics	Fall 2022 – present, outside rep, Mukherjee chair @ UNO Biomechanics Am Heart Assoc – Predoc Grant Award 2024	Neural control of gait and balance in CVA Stroke, PhD student UNO-Biomechanics
Rahul Krishnamurthy	PhD student ComDis	Fall 2022 – Spr 2024, committee member	Neuroplasticity of Swallowing, MRI. Post-doc at Univ Nebraska Med Ctr. Asst Professor
David Sanchez	MS Speech Pathology	Spring 2023-Fall 2024	Cog/Memory Cerebral Oximetry in Neurotypical (MS thesis)
Tara Hull	MS Speech Pathology	Fall 2023-present	Adult MCA Stroke brain hemodynamics
Bridget Slagle	MS Speech Pathology	Fall 2024-present	Adult multisensory cerebral hemodynamics

UNL Students mentored in research at Communication Neuroscience Laboratories (YR 2015)

1. Ivy Diehl UCARE
2. Jennifer Nawrocki UCARE
3. Michaela Sullivan UG University Honors
4. Maddie Lorenzen UG Res Asst
5. AnnaJean Scarborough UG Res Asst
6. Kayla Kivett GRAD-SLP
7. Claire Miner GRAD-SLP
8. Brianna Jallo GRAD-SLP
9. Kaisha Hilgenkamp GRAD-SLP

10. Grace Wilder GRAD-SLP
14. Chelsey Krug GRAD-SLP CNL Research Assistant
15. Kelsey Sestak GRAD-SLP CNL Research Assistant
16. Austin Oder Rosner GRAD Doctoral – Barkley Fellow
17. Rebecca Custead GRAD Doctoral – Barkley Fellow
18. Hyuntaek Oh GRAD Doctoral – Barkley Fellow

UNL Students mentored in research at Communication Neuroscience Laboratories (YR 2016)

1. Ivy Diehl GRAD SLP
2. Michaela Sullivan UG University Honors Thesis (Barlow – mentor)
3. Maddie Lorenzen UG Res Asst
4. AnnaJean Scarborough GRAD Res Asst
5. Brianna Wardyn GRAD Res Asst
6. Kaytlin Tippin GRAD Res Asst
7. Austin Oder Rosner GRAD Doctoral – Barkley Fellow, now postdoc at Tufts Medical Ctr
8. Rebecca Custead Postdoctoral – Barkley Fellow
9. Hyuntaek Oh GRAD Doctoral – Barkley Fellow, now postdoc at Baylor Coll Medicine
10. Jake Greenwood UG Electrical Engineering
11. Chunxiao Liao GRAD Computer Science

UNL Students mentored in research at Communication Neuroscience Laboratories (YR 2017)

1. Ivy Diehl GRAD SLP - SECD
2. Michaela Sullivan UG University Honors Thesis (Barlow – primary mentor 2016-2017)
    i. SLPA Master's thesis student
3. Elizabeth Hoffman UG University Honors Thesis (Barlow – primary mentor 2017-2018)
4. Maddie Lorenzen UG Res Asst - SECD
5. AnnaJean Scarborough GRAD Res Asst - SECD
6. Brianna Wardyn GRAD Res Asst - SECD
7. Kaytlin Tippin GRAD Res Asst – SECD
8. Lauren Poulicek GRAD SLP - SECD
9. Kara Guittar GRAD SLP - SECD
10. Rebecca Custead Postdoctoral – Barkley Fellow
11. Jake Greenwood UG Electrical Engineering/PhD Biomed & ComDis (primary mentor)
12. Chunxiao Liao GRAD Computer Science/PhD Biomed (NIH GRA)
13. Mohsen Hozan GRAD PhD Biomed (primary mentor)
14. Alaina Martens GRAD SLPA – NIH R01 Salivary Gene Expression – St. E's NICU
15. McKenzie Sesterhenn GRAD SLPA – NIH R01 Salivary Gene Expression – St. E's NICU
    i. SLPA Master's thesis student
16. Alejandra Marquez GRAD SLPA – NIH R01 Salivary Gene Expression – St. E's NICU
    i. SLPA Master's thesis student
17. Emily Thrailkill May UG Biomed Eng – Honors Thesis (Barlow – mentor w/G Bashford)
18. Ben Hage GRAD MS Biomed Eng – Thesis (Barlow – mentor w/G Bashford 11-28-17)

UNL Students mentored in research at Communication Neuroscience Laboratories (YR 2018-2025)

1. Ivy Diehl GRAD SLP - SECD
2. Michaela Sullivan UG University Honors Thesis (Barlow – primary mentor 2016-2017)
   SLP Grad Research – (primary mentor, Fall 2017-present, fNIRS and orofacial biomech)
   SLPA Master's thesis student 2019
3. Elizabeth Hoffman UG University Honors Thesis (Barlow – primary mentor 2017-2018)
   SLP Grad Research – (primary mentor, Fall 2018-present, orofacial biomech),
   SLPA Master's thesis student 2019-2020, completed.

4. Brianna Wardyn GRAD Res Asst – SECD
5. Kaytlin Tippin GRAD Res Asst – SECD
6. Rebecca Custead Postdoctoral – Barkley Research Fellow, 2016 - July 2018.
7. Chunxiao Liao GRAD Computer Science & Biomed (NIH GRA) 2017-2018
8. Alaina Martens GRAD SLPA – NIH R01 Salivary Gene Expression
9. McKenzie Sesterhann GRAD SLPA – NIH R01 Salivary Gene Expression 2018-2019
   i. SLPA Master's thesis student
10. Alejandra Marquez GRAD SLPA – NIH R01 Salivary Gene Expression 2018-2019
    ii. SLPA Master's thesis student, YR 2021.
13. Max Twedt GRAD PhD Biomed Eng, doctoral comm, neural ultrasound ALZ 2017-present
14. Ben Hage GRAD MS Biomed Eng – Thesis, PhD student (Barlow – mentor w/G Bashford), 2016-present
15. Meghana Kurupalli GRAD MS Computer Science, AeroWIN vocal tract dynamics. Thesis project started 2018-2020
16. Amanda Evert GRAD MS SLPA – facial nerve dissection and experience-dependent plasticity (Barlow, Harvey advisors).
17. Alyssa Molina GRAD MS SLPA - facial nerve dissection and experience-dependent plasticity a 3 year old (Barlow, Harvey advisors) 2019-2021.
18. Jake Greenwood UG Electrical Engineering/PhD Biomed (primary mentor) 2017-present
19. Mohsen Hozan GRAD PhD Biomed (primary mentor) 2017-present
20. Kulbir Singh GRAD PhD Biomed, sensor systems 5/2022-7/2024
21. Tara Hull GRAD MS SLPA, Cerebral hemodynamics MCA stroke 2024-2025. UMK Medical School – 2025.
22. David Sanchez GRAD MS SLPA, Cerebral hemodynamics neurotypical, 2023-2024 (Aug)
23. Sara Feuker UG Com Dis, Cerebral hemodynamics, 2023-2024, GRAD Com Dis 2024
24. Sibaii Fatima GRAD MS Biomed Eng, fNIRS fTCD Nov 19, 2024 thesis orals
25. Bridget Slagle GRAD MS SLPA, Cerebral hemo MCA Stroke, cognition, sensory
26. Mande Wollesen GRAD MS SLPA, Cerebral hemo MCA Stroke, cognition, sensory

Research and Publications Contributing to the Knowledge Needed by the Professions.

Research Activities: Extramural/Intramural Funding.

Co-Investigator, NIH Program Project Grant, Communication Disorders in Children, Project Area IV - *Quantitative Methods for Assessing Speech Disorders*, April, 1984 to March, 1987 ($181,521 total budget). Boys Town National Institute.

Principal Investigator, Behavioral Research Support Grant (BRSG), *Mechanically Driven Evoked Potentials in Cat*, 1984 ($2,500). Boys Town National Institute.

Principal Investigator, Moody Research Grant (001). *Speech Biofeedback Project*, 04/01/85-12/31/90 ($231,000). Boys Town National Institute.

Principal Investigator, Health Futures Foundation - Creighton Univ Medical School, *Mechanically Driven Trigeminal-Facial Reflexes in Human*, Nov l, 1985 - October 31, 1986. ($8,150).

Co-Principal Investigator (Proj III and IV), NIH Program Project Grant, Competitive Renewal. Communication Disorders in Children, Project Area III - *Neurobiological Studies of Vocal Tract Control*, and Project Area IV - *Quantitative Methods for Assessing Speech Disorders*. April, 1987 to March, 1992 ($3,225,887 total budget). Boys Town National Institute (W. Jesteadt - PI).

Principal Investigator, NIH R01 Grant, *Reflex and Fine Force Dynamics of the Perioral System*, ($194,461 total direct costs). 04/01/87-09/30/90.

Co-Investigator, NIH R01 (Esther Thelen - PI, S.M. Barlow, Co-Inv) *Dynamic Factors in the Development of Motor Skills in Infants*. ($1,305,560 total direct costs). 03/01/92-02/28/97. Funded.

Co-Principal Investigator [Barlow & Thelen], *National Center for Infant Perceptual-Motor Learning*. Research Facilities Fund, Indiana Univ. ($190,000 total direct costs). 10/01/91-09/30/93. Funded.

Principal Investigator, NIH R01 *Reflex and Fine Force Dynamics of the Perioral System*, ($280,275 total direct costs). 09/01/91-08/30/95. Funded.

Co-Principal Investigator (Thelen & Barlow), NIH T32 *Training Program in Infant Perception-Action Systems*, ($ 1,195,340 total direct costs). 04/01/95-11/30/99. Funded.

Principal Investigator, IU Multidisciplinary Ventures Fund (Barlow & Garraghty), *Activity-Dependent Changes in the Orofacial Sensorimotor Cortex: Implications for Neuronal Plasticity*. $3,250 pilot research. Funded 1/96-1/99.

Primary Sponsor and Mentor [Barlow], NIH CAP grant, General Clinical Research Center at the Indiana Univ Med Center: *Electrophysiology of orofacial reflex systems in neonates*. Training support for A Dusick, MD. 12/01/96-11/30/99. ($225,524 total direct costs) Funded.

Principal Investigator, IU Riley Research Foundation [*intramural*], *Sensorimotor Control of the Neonate Orofacial System*, ($70,064 total costs). 01/01/97-07/31/99. Funded.

Co-Investigator, NIH R01 (Esther Thelen-PI) *Dynamic Factors in the Development of Motor Skills in Infants*. ($1,738,113 total direct costs). 03/01/97-02/28/02. Funded.

Co-Investigator, PMHP United Way. *Early Literacy Adult Program: Neuroscience, Language and Literacy.* ($300,000 total direct costs). 11/01/99-06/30/03. Funded

Principal Investigator, KU RDF (Barlow). *The Effects of Deep Brain Stimulator Implants on Limb and Orofacial Force Dynamics*. ($60,600). Funded. 10/01/00-12/30/02

Principal Investigator, NIH R01 DC003311 (Barlow). *Sensorimotor Control and Development of the Human Orofacial System*. ($2,120,000 total costs). 01/15/02 – 12/31/08. Funded.

Co-Investigator and Core PI (BioEngineering – Barlow), NIH P30 Research Center (Rice-PI). *Biobehavioral Neurosciences in Communication Disorders*. ($1,720,000 total costs). 01/01/03-12/31/12. Core 3: Engineering. $565,004. Funded.

Principal Investigator, Sutherland Foundation: Annual endowment to the Communciation Neuroscience Laboratories, $40,000 annually. 2005-2013.

Principal Investigator, KC BioMedix: Endowment support to the Communciation Neuroscience Laboratories, $25,000. 2008.

Core-Investigator, NIH R13 DC003383-11 (Sharon Moss – PI, Steven Barlow – Core Investigator). *ASHA Annual Research Conferences in Communcation Sciences & Disorders*. Renewal application. Barlow responsible for developing the 2008 Research Symposium Topic in Neurobiology of the Human Infant. 5-year renewal submitted Dec 1, 2006. ($170,000). Funded

Principal Investigator, GRF KU (Barlow). Cortical and Subcortical Contributions to Ororhythmic Behaviors: an fMRI Investigation (PreDoc, Meredith Estep). 7/1/08-6/30/09 ($13,018). Funded.

Co-Principal Investigator, NIH R01 (Trotman – PI, Barlow - PI) *Functional Outcomes of Cleft Lip Surgery*. ($2,100,902 total costs). Funded. 05/01/01-12/31/11.

Principal Investigator, NIH R01 DC003311 (Barlow). *Sensorimotor Control and Development of the Human Orofacial System*. ($2,433,000 total costs). Competing renewal. 07/01/08 – 06/30/13. Funded.

Principal Investigator, NIH R01 DC003311-06 ARRA EQ Supplement (Barlow). *Sensorimotor Control and Development of the Human Orofacial System*. ($50,000). NIDCD. 7/2009 Funded.

Principal Investigator, Higuchi Bioscience Award. 2009. KU Endowment Association. Acct #39733. $10,000.

Principal Investigator, NIH S10 RR 028745-01 (Barlow). *3 Tesla Magnetic Resonance Imaging of Human Perception Action and Biodynamics* ($3,087,514). Council Review, 10/2009. High-End Instrumentation grant to establish the Kansas University BioImaging Center at KU-L.

Co-Principal Investigator, NIH R43 SBIR (Stalling & Barlow). Vibratory Textured Pacifier for Non-nutritive Suck Entrainment in Preterm Infants, 07/01/11-06/30/13. $449,806. NIDCD. Submitted 9/17/10

Principal Investigator, NIH R21 (Barlow). aEEG Correlates of Orosensory Entrainment in Preterm Infants, 07/01/11-06/30/13. $275,000. NICHD/NIDCD. Submitted 10/18/10

Co-Principal Investigator, NIH R01 (Barlow & Popescu). Dynamics of Modular and Integrative Processes in the Human Somatosensory Cortex Over the Lifespan, 12/01/11-11/30/16. $3,113,940. NIDCD. Submit 2/7/11

Principal Investigator, K-CART (Autism) (Barlow, Anderson, Popescu). Neural and Pupillary Adaptation to Patterned Somatosensory Inputs in Adults with ASD. 10/01/11-12/31/13. $40,000. Funded.

Principal Investigator, NIH R01 DC003311 (Barlow). *Sensorimotor Control and Development of the Human Orofacial System*. (grant transfer to Univ Nebraska). January 01, 2014- June 30, 2014. Funded.

Principal Investigator, Barkley Trust. *Neurodevelopmental Outcomes Among Toddlers Born Preterm for the NTrainer RCT.* ($100,000). 01/01/14-6/30/15. Funded.

Principal Investigator, Research Grant Contract 70155, Epic Medical Concepts & Innovations. *Somatosensory and Motor Function in Individuals with Cerebral Stroke Following TAC-Cell Array Stimulation.* ($80,450). 01/01/15-6/31/17. Funded.

Principal Investigator, Nebraska Research Initiative (NRI). *ForceWin10: Real-time Muscle Force Dynamics for Diagnostic and Therapeutic Application in Neurologic Disorders Affecting Orofacial and Hand Motor Control Across the Lifespan*. 02/03/16-02/15/17. ($75,000). Funded.

Co-PI, NSF Major Research Instrumentation. Project Title "*MRI: Development of a Modular Cyberphysical Instrument for Thru-body Communication*." Instrument Development (Track 2). Pierobon-PI, Barlow, Ramamurthy, Co-PIs. The goal of this project is to develop an integrated cyber instrument for analyzing the flow of artificial information within the nervous system from a communication systems engineering perspective. The project will have a particular focus on communications through the somatosensory system, which is ubiquitously present in the body and easily accessible from outside in a non-invasive fashion. 5-yrs proposed, $1,974,676. Not funded

Scientific Mentor for Lee Baugh, PhD. Assistant Professor, Sanford School of Medicine, University of South Dakota. Great Plains IDeA-CTR Scholars Program, NIH/NIGMS, Clinical Translational Research. 01-13-17

Co-PI (Bashford G, Barlow SM, Truemper. American Heart Association. $750K. (3-year, $250K/yr), 7-1-2018 to 6-30-2021. LOI Proposal. Project Title "*Optimizing Neurorehabilitation through a Novel Pneumotactile Stimulation and Transcranial Doppler Ultrasound Monitoring Protocol*." 18CSA34060085 Nov 1, 2017.

Principal Investigator, 1 R01 NS117741-01 (SM Barlow), MPD's (GR Bashford (UNL BioEng), S Singh (Creighton Univ Medical School). Project Title: *Neuroprotection in Acute MCA Stroke by Somatosensory-Induced Collateral Blood Flow*. NINDS 5-year, [10/5/2019 new submission] $3,703,412.

Co-PI (M Mukherjee & SM Barlow), Project Title: *Improving gait outcomes in stroke survivors through tactile stimulation*. American Heart Association. $750K. (3-year, $250K/yr), 7-1-2020 to 6-30-2023. LOI Proposal. 2020 Collaborative Sciences Award application, application number 20CSA35310327

Sponsor (Barlow SM), Co-Sponsors (Bashford G, Wang Y). NIH F31 (Greenwood – PI). Cerebral Hemodynamics and Blood Flow cChanges Due to Pulsed Pneumotactile Somatosensory Stimulation of the Face using fNIRS and fTCD. 8-8-20, 2021-2024, $142,783.

Chu S (PI), Barlow SM (Co-Inv). PD Speech. Univ of Malaysia. 2021. Oral diadochokinesis among Malay speakers: A comparative study of young adults, healthy elderly and individuals with Parkinson's disease.

Chu S, Chai SC, Barlow SM, Tan JS, Ibrahim NM, Wei WS. Challenges, Barriers, and Needs of Access to Care among Malaysian Elderly in Parkinson's disease. Michael J Fox Foundation for Parkinson's Research. LOI 4-20-21.

Co-PI (M Mukherjee & SM Barlow), Project Title: *Improving gait outcomes in stroke survivors through tactile stimulation*. American Heart Association. $750K. (3-year, $250K/yr), 7-1-2021 to 6-30-2024. LOI Proposal. 2021 Collaborative Sciences Award application.

Co-Inv (SM Barlow), Project Title: M Mukherjee – PI, Y Wang – Co-Inv. NIH R21, Project Title: Improving gait outcomes in stroke survivors through tactile stimulation: Understanding the brain mechanisms 04/01/2022-03/31/2024, NINDS, FOA: PA-21-219, submitted.

Co-PI (SM Barlow), M Mukherjee – PI, Y Wang – Co-Inv. NASA Epscor, Project Title: Improving gait outcomes in astronauts following long duration space missions through tactile stimulation: understanding the brain mechanisms $263,052. 07/01/2022-06/30/2025, submitted.

Principal Investigator (SM Barlow), Y Wang, G Bashford, P Lee, J Lee (Co-Investigators). Somatosensory Evoked Collateral Cerebral Blood Flow Mapped Using Vessel-Encoded Pseudocontinuous Arterial Spin Labelling MRI in Human. Brain Research Foundation. $150,000 direct costs, 2022-2023, pending 10-5-21.

PI (Mukul Mukherjee), Co-PIs (Steven Barlow, Jose Baca). A biomechanics, machine learning and brain mapping collaboration to research tactile-augmented gait in stroke survivors. American Heart Association, Collaborative Sciences Award, LOIID: 959501, Jan 11, 2022.

PI (Steven Barlow), Co-I's (Kristy Weissling, Judy Harvey). Pneumotactile Somatosensory Stimulation Drives Experience-Dependent Plasticity for Restoring Hand and Orofacial Fine Motor Control in Chronic MCA Stroke Survivors. AHA - 2022 Nebraska Mission: Lifeline Advancing Stroke Care, *submitted* 3-23-22.

PI (Mukul Mukherjee), Co-PIs (Steven Barlow, Yingying Wang). Improving gait outcomes in stroke survivors through tactile stimulation: understanding the brain mechanisms. American Heart Association AIREA. Submitted Jan 12, 2022. 4-1-22 to 3-31-24. $11,730, $154,000. Funded.

PI (Mukul Mukherjee), Co-PIs (Steven Barlow, Yingying Wang). Tactile-augmented walking in stroke survivors: biomechanics and brain control. Collaboration Data Grant. 21-1710-6003. 7/1/22 - 6/30/23 Funded.

Principal Investigator, NIH R01 HD086088-01 - PI Steven M. Barlow - Project Title "*Somatosensory Modulation of Salivary Gene Expression and Oral Feeding in Preterm Infants*." Multicenter randomized controlled trial ([J Maron, MD MPH] Tufts Medical Center NICU-Boston, [BJ Wilson, MD] St. Elizabeth's NICU-Lincoln, [D Song, MD PhD] Santa Clara Valley Medical Center NICU-San Jose), J Lee (Texas Tech Univ). 5-year project ($2.8M), 9th percentile NICHD. April 01, 2016 – March 31, 2023. Funded.

Co-Inv, Institutional PI (SM Barlow), M Mukherjee – PI, J Baca – Collaborator NASA NNJ23ZSA001N-OMNIBUS. NASA Proposal Number: 23-23OMNI_1-0059NASA , Johnson Space Center , Human Exploration and Operations Mission Directorate , Human Research Program Project Title: Improving gait outcomes in astronauts following long duration space missions through tactile stimulation: understanding the brain mechanisms $263,052. LOI submitted Jan 6, 2023. Accepted for Phase 2 grant submission Feb 3, 2023. 10/1/23 – 9/30/24.

Co-PI (Barlow), Pierobon (PI), with Co-PI's S. Balasubramaniam, J. Cui, B. Sharif, H. Yu, Y. Wang, I. Haas, D. McChargue, M. Neta, W. Chai, B. Wang, A. Smith, A. Thompson. Catalyst Award Proposal to the 2023 Grand Challenges Catalyst Competition. Catalyst Project Title: *MindVerse: A Multi-layer and Cross-domain Computing Framework to Model How Information Drives the Human Emotional UniVerse.* $5,669,313, Project Period: 9/1/2023-8/31/2028. Submitted April 28, 2023, not funded.

PI (Steven Barlow), UNL Innovation Technology Award, $7,500. New Educational Tool in Human Neuroscience: Cerebral Oximetry to Assess Human Cognitive and Sensory Function Across the Lifespan in health and disease. July 31, 2023, funded. Cost object: 2217021218

Co-sponsor (Steven Barlow, Mukhul Mukherjee) for American Heart Association Predoctoral Fellowship (applicant Chris Engsberg). *Improving perception of gait asymmetry after stroke using tactile stimulation*, **9-6-23.** Funded Jan 2024.

Principal Investigator (PI): Mukul Mukherjee, (Co-PI): Steven Barlow, Jose Baca, Aaron Likens. Proposal Title: *Improving gait outcomes in astronauts following long duration space missions through tactile stimulation: understanding the brain mechanisms.* NSPIRES NASA [National Aeronautics Space Administration]. Submitted 11- 1, 2023

NU Collab Grant: Title: *Tactile-augmented walking in stroke survivors: biomechanics and brain control.* Collaborators – Steven Barlow (UNL), Yingying Wang (UNL), Carl Nelson (UNL), Zheng Cheng (UNMC), Pierre Fayad (UNMC). Term – 7/1/2022 to 6/30/2023 [Carryover to 6/30/2024] $100K

NU Collab Grant: Title: *Tactile-augmented walking in stroke survivors: biomechanics and brain control.* **PI -** Mukul Mukherjee (UNO), Co-Inv – Steven Barlow (UNL), Yingying Wang (UNL), Aaron Likens (UNO), Pierre Fayad (UNMC). Term – 7/1/2024 to 6/30/2026 $100K

PI (Steven Barlow), NIH R01 new - Project Title "*Somatosensory Modulation of Salivary Gene Expression and Oral Feeding in Preterm Hypoxic Ischemic Encephalopathy*." Multicenter randomized controlled trial ([J Maron, MD MPH] Tufts Medical Center NICU-Boston, [T Randis, MD] Tampa General Hospital NICU-Tampa, [D Song, MD PhD, P Jegatheesan, MD] Santa Clara Valley Medical Center NICU-San Jose), J Lee (Texas Tech Univ), C Liao (Univ Colorado). 5-year project ($5M), NICHD. 4/01/2025 – 3/31/2030, in prep.

PI (Mukul Mukherjee), Co-Inv's (Steven Barlow, Yingying Wang, Aaron Likens, Pierre Fayad). PA-20-183: Research Project Grant (Parent R01 Clinical Trial Required) (nih.gov). Project Title: *Understanding tactile-augmented gait in stroke survivors through a collaborative biomechanics, machine learning and brain mapping approach.* Project Dates: 12/01/2024 – 11/30/2029. $4M total.. $672,533 UNL subcontract. Submitted Feb 5, 2024.

Co-PI (Barlow), Pierobon (PI), with Co-PI's S. Balasubramaniam, J. Cui, B. Sharif, H. Yu, Y. Wang, D. McChargue, M. Neta, W. Chai, B. Wang, A. Smith, A. Thompson. Catalyst Award Proposal to the 2024 Grand Challenges Catalyst Competition. Catalyst Project Title: *MindVerse: A Multi-layer and Cross-domain Computing Framework to Model How Information Drives the Human Emotional UniVerse.* $6,347,997 Project Period: **9/1/2024 – 8/31/2029**. Submitted April 26, 2024.

Mukherjee M, Barlow SM, Fayad P, Likens A, Wang Y. (2024). University of Nebraska Collaboration Initiative Grant Application titled ***Tactile-augmented Walking in Stroke Survivors: Biomechanics and Brain Control***, funded for a one-year total of **$100,000.00**. Funded July 1, 2024 – June 30, 2025. #51228

AuBuchon A (PI), Goffman L, Barlow SM, Liao C. (2024). Development of Organizational Strategies in Verbal Working Memory. NIH R01 application July 2024.

Mukherjee M, **Barlow SM**. Improving gait outcomes in stroke survivors through tactile stimulation: understanding the brain mechanisms. **American Heart Association**. 04/01/22 – 03/31/2025. Subaward 46-1014-0014-201.

Barlow SM (PI), Wang Y (Co-PI), Bashford G (Co-Inv), Harvey J (Co-Inv), Fayad P (Co-Inv). Competition: CB3 Seed Grant Program. Application ID: 54092. Evoking Brain Hemodynamics and Neuroplasticity in MCA Stroke Survivors Through Repeated Sensory Stimulation and Task Dynamics (Cognition, Sensorimotor, Sensory). FUNDED, 01-01-25

NU Collab Grant: Title: *Tactile-augmented walking in stroke survivors: biomechanics and brain control.* **PI -** Mukul Mukherjee (UNO), Co-Inv – **Steven M. Barlow (UNL),** Yingying Wang (UNL), Aaron Likens (UNO), Pierre Fayad (UNMC). Term – 7/1/2024 to 6/30/2025 $100K, funded. Barlow cost object 21-1219-6010 $5,771.00

NU Collab Grant: Title: *Brain correlates of foot sole stimulation during gait-like tasks.* **PI -** Mukul Mukherjee (UNO), Co-Inv – **Steven M. Barlow (UNL),** Yingying Wang (UNL), Aaron Likens, David Warren (UNO), Pierre Fayad (UNMC). Term – 7/1/2025 to 6/30/2026 $100K.

PI (Mukul Mukherjee), **Co-PI (Steven M. Barlow),** Co-Inv (Yingying Wang, Aaron Likens, Pierre Fayad). PA-20-183: Research Project Grant (Parent R01 Clinical Trial Required) (nih.gov). NIH 1R01NS140816-01A1 (application ID 11298767), Project Title: *Understanding tactile-augmented gait in stroke survivors through a collaborative biomechanics, machine learning and brain mapping approach.* Project Dates: 12/01/2025 – 11/30/2030. $2,673,018 total direct cost. $717,967 UNL subcontract, SM Barlow site PI. Submitted Mar 5, 2025, MFSR Study Section June 5-6, 2025.

PI (Massimiliano Pierobon), **Co-PI (Steven M. Barlow),** Co-PI (Aron Barbey), Co-PI (Kristin Malek). Title: ***Emotionally Aware AI Assistants for Promoting Mental Wellness in Rural Nebraska Communities.*** **Nebraska Healthy Grant**, LOI submitted 5-16-25. Human Research=YES, Project Timeline: 1/1/2026 – 12/31/2026, Expected Project Cost: $100K. Grounded in the PI's research in **biological and human-centered information systems** and building upon ongoing work through the **UNL Scholarship of Engagement Fellows Program (College of Engineering)**, this project will involve **two-way co-development** with rural Nebraskan stakeholders to ensure relevance, usability, and cultural fit. The assistant will operate through tablet- or kiosk-based platforms in community-accessible locations (e.g., libraries, clinics, schools), and will use multimodal inputs—such as voice and facial cues—to detect emotional states and deliver supportive prompts, reflective questions, or connection to appropriate local or remote resources.

External University Reviews (*invited*)

Boston University – tenure/promotion review September 2016,

- Stanford University – faculty promotion review Dept Pediatrics, Div Neonatology – 2016, 2022
- Stanford University – faculty promotion review Dept Pediatrics, Div Neonatology – 2017
- Stanford University – faculty promotion review Dept Pediadtrics, Div Neonatology - 2022
- University of Florida – faculty promotion & tenure review, Dept of Speech-Language-Pathology – 2017
- Kansas University Medical School – faculty promo full professor, Dept Molec & Integr. Physiol– 2017
- Northwestern University – faculty review/appt full professor dysphagia position – 2017.
- University of Iowa - faculty review/appt requested by associate professor dysphagia position – 2019
- University of Missouri – faculty review/appt P&T Asst to Assoc professor – 2020, requested by [Dept Chair, Speech-Lang-Hearing Sciences].
- Northeastern University - faculty promotion & tenure review, School of Clinical and Rehabilitation Sciences [for] - **2025**.
- University of Minnesota - faculty promotion & tenure review, Dept Speech Language Hearing Sciences [for , Asst Professor] – **2025**.

National and International Scientific Review Appointments

- New Zealand Neurological Foundation - Scientific reviewer for neuroscience (09/95).
- Parkinsons Disease Society – England (2007), extramural grant reviewer
- NIH- Special session RTC grant review study section. 5/16/90-5/18/90.
- NIH- Res & Training Center grants, reverse site visit. 06/20-22, 1990. Bethesda, MD.
- NIH- Study Section CMS, October, 1991. Bethesda, MD.
- NIH- Study Section-Chair. CMS-Sensory Physiology, 04/92. Bethesda, MD.
- NIH- Study Section-Chair. Neurosci/Hearing Physiology, 11/92. Wash, DC.
- NIH- Center Research Grant-Study Section. Neurosci/Speech Physiology, 01/95. New Haven, CT.
- NIH- Center Research Grant-Study Sec-Spec Emphasis Panel. Neurosci/Speech Phys, 09/95. Wash, DC.
- NIH-Cntr Res Grant-Study Section-Special Emphasis Panel. Neurosci/Speech Physiol, 02/96.
- NIH-PPG-Study Section-Special Emphasis Panel. Sensory Neurosciences, 12/96. Wash, DC.
- NIH- Study Section- R03. Speech Science, Nov 3, 1999. Wash, DC.
- NIH- Study Section- K23. NINDS, June 19, 2002. Wash, DC.
- NIH- Study Section- R21. NIDCD, December, 2002. Wash, DC.
- NIH- Study Section- R03. NIDCD, June 09, 2006. Teleconf-Wash, DC.
- NIH- Study Section- P30. NIDCD, Sep 28, 2007. Teleconf-Wash, DC.
- NIH- Study Section- R01/R21/R03 NIDCD – Motor Function Speech Rehab Oct 06, 2008, Wash, DC.
- NIH- Study Section- P30. NIDCD, Feb 19, 2010. Teleconf-Wash, DC.
- NIH- Study Section- F31/32. R13/K25/99, CDRC, Bethesda, MD June 10-11, 2010
- NIH- Study Section- F31/32. R13/K25/99, CDRC, Bethesda, MD June 15-16, 2011
- NIH- Study Section- P30 Centers. Bethesda, MD July 14, 2011
- NIH-F31, F30, F32, T32 Policy/Program Review (invited by Drs. D Sklare & J Cyr) 8t 29, 2012, Bethesda, MD.
- NIH-Study Section- Bethesda, MD Sept, 2013.
- Medical Research Council (MRC) United Kingdom – Grant review. Neuroscience. 8-27-23

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PRESENTED PAPERS

1. Barlow SM & Abbs JH. Some evidence of auditory feedback contribution to the ongoing control of speech production. *Am Speech and Hearing Association*, San Francisco, CA, November, 1978.
2. Barlow SM & Abbs JH. Transducers for evaluation of articulatory muscle strength in dysarthria. *Am Speech and Hearing Association*, Atlanta, GA, November, 1979.
3. Cole KJ, Barlow SM & Abbs JH. Headmounted lip and jaw transducers for physiological studies of dysarthria. *Am Speech and Hearing Association*, Atlanta, GA, November, 1979.
4. Hunker C, Barlow SM & Abbs JH. Labial tonicity associated with Parkinsonian Dysarthria. *American Speech, Hearing and Language Association*, Detroit, MI, November, 1980.
5. Abbs JH, Hunker C & Barlow SM. Differential speech motor subsystem impairments in subjects with suprabulbar lesions: Neurophysiological framework and supporting data. *National Clinical Dysarthria Conference*, Tucson, AZ, February, 1982.
6. Barlow, S.M. (1982). Impaired regulation of orofacial force in congenital spasticity. *Soc Neurosci*, Minneapolis, MN.
7. DePaul R, Abbs JH & Barlow SM. Physiologic and acoustic analysis of the effect of a bite-block prosthesis in a spastic dysarthric. *Annual Clinical Dysarthria Conference*, Tucson, AZ (1984).
8. Barlow SM. (1984). Orofacial subsystem force control in dysarthria. *Clinical Dysarthria Conference*, Tucson, AZ.
9. Barlow, S.M. Fine force and position control of select limb and orofacial structures in the Upper Motor Neuron Syndrome. *Soc Neuroscience*, Anaheim, CA (1984).
10. Barlow, SM & Spangler K. Mechanically driven trigeminal evoked potentials in cat. *Soc Neurosci*, 11, 907 (1985).
11. Barlow, S.M. (1986). Frequency detection thresholds of the face to mechanical stimulation. *Assoc Res Otolaryngol*.
12. Barlow S & Netsell R. Force biasing of the perioral reflex. *Assoc Research Otolaryngol*, 135 (1986).
13. Netsell R & Barlow SM. Specificity of perioral reflexes. *Assoc Research Otolaryngol*, 135 (1986).
14. Barlow SM. A critical appraisal of force and position dynamics in the evaluation and management of dysarthria. An invited presentation. *3rd Annual Clinical Dysarthria Conference*, Tucson, AZ, 1986.
15. Barlow, S.M., & Netsell, R. Mechanically evoked responses of perioral muscles during fine force control. *Society Neuroscience*, Washington, D.C. (1986), p. 1539.
16. Barlow, S.M. High-speed data acquistion control systems for speech physiology. Invited: *American Speech and Hearing Association*, New Orleans, LA (1987).
17. Netsell R, Lotz WK & Barlow SM. (1988) A speech physiology examination for individuals with dysarthria. *National Clinical Dysarthria Conference* (February, San Diego).
18. Barlow SM & Netsell R. (1988) Clinical neurophysiology and the dysarthrias. *National Clinical Dysarthria Conference* (February, San Diego).
19. Barlow SM. (1988) High-speed data acquistion control systems for speech physiology. Invited: *National Clinical Dysarthria Conference* (February, San Diego).
20. Barlow SM & Creutz T. (1988) A specialized data acquisition control system for physiological studies of the perioral system in humans. *International Instrument Society of America - National Aeronautics and Space Administration.* (May, Albequerqe, New Mexico).
21. Barlow SM. (1988) Relation between probe configuration and the mechanically evoked perioral reflex. *Society Neuroscience*. (November, Toronto, Canada).
22. Barlow SM & Burton M. (1988) Orofacial force control impairments in brain-injured adults. *Assoc Research Otolaryngology* 11, 218.
23. Barlow SM. (1988) The relation between probe contactor area and the mechanically evoked perioral reflex. *Assoc Research in Otolaryngology* 11, 220.
24. Barlow SM. (1989) Use of instrumentation in assessment and treatment of communication disorders. Invited: *Illinois Speech-Language-Hearing Association*. (Feb 17, Chicago).

25. Barlow SM. (1989) Reflex and fine force dynamics of the perioral system. *American Speech, Hearing, and Language Association*. Published abstract. St. Louis, Mo.
26. Barlow SM, Essick G, Gracco V & Netsell R. (1989) Physiology and psychophysics: Developing applications in speech. *Am Speech, Hearing, and Language Association*. St. Louis, Mo.
27. Barlow SM, Suing G & Burton M. (1989) Digital signal acquisition and processing of resultant orofacial force. *Am Speech, Hearing, and Language Association*. St. Louis, Mo.
28. Farley G, Barlow SM & Netsell R. (1989) Conditioned cats as models for studying neural mechanisms of vocalization. *Am Speech, Hearing, and Language Association*. St. Louis, Mo.
29. Barlow SM. (1990) Spatial summation of mechanically evoked perioral reflexes in human. *Soc Neuroscience*. .
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31. Barlow SM. (1991) Neural control of the human vocal tract. Invited: *Indiana Speech-Language-Hearing Association*.
32. Barlow, S.M. (1991) Recent advances in clinical speech physiology. Invited: *Indiana Speech-Language-Hearing Association*. Indianapolis, Indiana.
33. Barlow, S.M. (1991) Physiologic intervention for dysarthria following traumatic brain injury. *Am Speech-Hearing-Language Association*. 78.
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37. D'Antonio, L., Barlow, S.M., Warren, D. (1992). Studies of oronasal fistulae: Implications for speech motor control. *Am Speech-Language-Hearing Association*. San Antonio, TX
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82. Finan, D.S., Boliek, C.A., & Barlow, S.M. (2003). Dynamic loading of the developing human respiratory system: A new method. 135-29. *ASHA National Convention*, November, Chicago, USA.
83. Hammer, M.J., Barlow, S.M., & Pahwa, R. (2003) Laryngeal engagement following bilateral deep rain stimulation in Parkinson's disease. 1000. *ASHA National Convention*, November, Chicago, USA.
84. Barlow, S.M. (2003) Sensorimotor speech disorders: Insights from Parkinson's disease. Invited: *National Institutes of Health, Workshop on Motor Speech Disorders*. Bethesda, MD.
85. Barlow, S.M. (2003). Physiological studies of the human vocal tract across the lifespan. 4th Annual Willard R. Zemlin Lecture in Speech Science Session. 1138. *ASHA National Convention*, Chicago.
86. Barlow, S.M., Finan, D.S., Seibel, L., Stumm, S., Urish, M., Fees, M., Ponnaboyina, S., Shantha, R., & Konopacki, R. (2004). ACTIFIER II: The dynamics of sensorimotor integration during suck in neonates and infants. 13th Bienniel National SPEECH MOTOR CONTROL Conference, Albuquerque, New Mexico, USA.
87. Seibel, L., Barlow, S.M., Finan, D.S., Stumm, S., Ponnaboyina, S., & Shantha, R. (2004). ACTIFIER II: The dynamics of non-nutritive suck in neonates and infants. 13th Bienniel National SPEECH MOTOR CONTROL Conference, Albuquerque, New Mexico, USA.
88. Vantipalli, R., & Barlow, S.M. (2004). AEROWIN RT: Clinical application for motor speech disorders. 13th Bienniel National SPEECH MOTOR CONTROL Conference, Albuquerque, New Mexico, USA.
89. Raghavendra, S., & Barlow, S.M. (2004). FORCEWIN *RT*: Clinical application for motor speech disorders. 13th Bienniel National SPEECH MOTOR CONTROL Conference, Albuquerque, New Mexico, USA.
90. Hammer, M., & Barlow, S.M. (2004). Laryngeal engagement following bilateral subthalamic nucleus deep brain stimulation in Parkinson's disease. 13th Bienniel National SPEECH MOTOR CONTROL Conference, Albuquerque, New Mexico, USA.

91. Hammer, M., & Barlow, S.M. (2004). Velopharyngeal aerodynamics following bilateral subthalamic nucleus deep brain stimulation in Parkinson's disease. 13th Bienniel National SPEECH MOTOR CONTROL Conference, Albuquerque, New Mexico, USA.
92. Hammer, M., & Barlow, S.M. (2004). Real-time biofeedback and speech aerodynamics: a prelim study of laryngeal motor control. 13th Bienniel National SPEECH MOTOR CONTROL Conf, Albuquerque, New Mexico, USA.
93. Barlow SM, Stimac MA, Estep M (2004) Mechanosensory modulation of the mechanically evoked perioral response in Parkinson's disease during speech. *Soc Neuroscience*. 69.7
94. Estep M., Barlow SM (2004) Mechanosensory modulation of trigeminofacial pathways during speech. *Soc Neuroscience*. 416.7
95. Barlow SM, Estep M, Vantipalli R, Finan DS. (2005) Mechanosensory modulation of the trigeminofacial system during non-nutritive suck in premature infants. *Soc Neuroscience*. 753.12.
96. Estep, M., Barlow, S.M., Stumm, S. Fees, M., Finan, D., Seibel, L. Poore, M., Cannon, S. (2005). Non-nutritive Suck Burst Parametrics in Preterm Infants, *Soc Pediatric Research*, 2141.
97. Seibel, L., Barlow, S.M., Vantipalli, R., Finan, D., Urish, M., Carlson, J. (2005). Spectral Dynamics of Non-Nutritive Suck in Preterm Infants, *Soc Pediatric Research*, 2139.
98. Stumm, S., Barlow, S.M., Vantipalli, R. Finan, D., Estep, M., Seibel, L., Urish, M., & Fees, M. (2005). Amplitude/Burst Dynamics of the Non-Nutritive Suck in Preterm Infants. *Soc Pediatric Research*, 2632.
99. Trotman, C-A., Barlow, S.M. (2005). Lip force dynamics in patients with cleft lip. *Int Assoc Dental Res,* 62058.
100. Barlow SM. (2005). Central Pattern Generation and the Motor Infrastructure for Suck, Respiration, and Speech. *ASHA-NIH National Research Symposium*. Invited paper. San Diego, CA.
101. Hammer, M., Barlow, S.M. (2006). The relation between laryngeal mechanosensory detection and laryngeal aerodynamics in Parkinson's disease, *Conference on Motor Speech*, March 23-26, 2006, Austin, Texas.
102. Barlow, S.M. & Finan, DS. (2006). A New Therapeutic Method for Entraining the Suck central pattern generator (CPG) in the Premature Infant. *Society Pediatric Research. 3153*
103. Zimmerman, E., Barlow, S.M., Seibel, L., Poore, M., Stumm, S., Estep, M., Chu, S., Fees, M., Urish, M., Gagnon, K., Cannon, S., Carlson, J. (2006). Pacifier stiffness alters the dynamics of the suck central pattern generator. *Soc Pediatric Research, 5571:393.*
104. Barlow SM, Finan, DS, Seibel L, Chu S, Poore M, Zimmerman E, Urish M, Estep M. (2006). Translational neuroscience: patterned somatosensory stimulation to entrain oromotor activity in premature infants. *5th International Speech Motor Conference, Nijmegen, June 7-10.*
105. Barlow SM, Finan, DS. (2006). Patterned Somatosensory Stimulation to Entrain Oromotor Activity in Premature Infants. *ASHA National Convention*, November 17, Miami, USA, Peer-reviewed abstract 1616.
106. Chu S, Barlow SM, Venkatesan L, Kieweg D. (2007). Biomechanical Measurements of Non-participatory Stiffness in the Male Perioral Complex. *Abstract Am Speech-Language-Hearing Assoc*, Boston, MA. Session 1945, 218.
107. Fees M, Barlow SM, Wang J, Finan D. (2007). Nutritive feed perturbations reorganize the suck CPG in infants. Abstract submission to the *American Speech-Language-Hearing Association*, Boston, MA. Session 1996.
108. Poore M, Barlow SM, Wang J. (2007). Preterm Infants' Respiratory Distress Syndrome History Predicts Suck Spatiotemporal Index. *Abstract American Speech-Language-Hearing Assoc*, Boston, MA. Session 1239.
109. Poore M, Barlow SM, Wang J, Estep M, Lee J. (2007). Respiratory Distress Syndrome history predicts suck spatiotemporal index in preterm infants. *ASHA Leader* 12(11), 129.
110. Urish M, Venkatesan L, Barlow SM. (2007). Frequency Modulation of sCPG in Preterm Infants with RDS. *American Speech-Language-Hearing Association*, Boston, MA. Session 1993.
111. Zimmerman E, Barlow SM, Lee J. (2007). Pacifier Stiffness Alters the Infants Suck Central Pattern Generator Dynamics. *American Speech-Language-Hearing Assoc*, Boston, MA. Sess 1994.

112. Hammer MJ, Barlow SM. (2007). Laryngeal mechanosensory detection and reflex thresholds in Parkinson's disease. *American Speech-Language-Hearing Association*, Boston, MA. Session 1163.
113. Barlow SM. (2007). Somatosensory patterns for the premature brain: A new approach towards developing oromotor feeding skills. Invited Speaker, Advanced Track. *Dev Therapists NICU National Convention*, Myrtle Beach, SC.
114. Barlow SM, Finan, DS. (2007). Patterns for the premature brain: driving the suck central pattern generator in premature infants with RDS. *Pediatric Academic Soc*, Toronto, Canada, 6430.5.
115. Estep M, Popescu M, Auer E, Popescu A, Gustafson K, Barlow SM. (2007). MEG registration of hand and face somatosensory inputs in human using patterned pneumatic-cutaneous pulse trains. *Soc Neuroscience*. San Diego, California. 74.12.
116. Barlow SM. (2007). Somatosensory patterns for the premature brain: A new approach towards developing oromotor feeding skills. Invited speaker at the *18th Annual Perinatal Association of Kansas,* Kansas City, KS, September 07.
117. Barlow SM. (2008). On Research: *Turning Ideas into Innovations. DEMO 08*. Sponsored by the Kauffman Foundation. Palm Desert, Ca. Jan 28-30.
118. Barlow SM. (2008). Patterns for the premature brain: Driving the suck central pattern generator in infants with RDS. Invited speaker: *Dysphagia Research Society 16th Annual Meeting*, Isle of Palms, S Carolina.
119. Barlow SM. (2008). Invited special session: Driving Critical Initiatives in Motor Speech. *14th Biennial Conference on Motor Speech: Motor Speech Disorders & Speech Motor Control*. Monterey, CA. March 6-9.
120. Poore M, Zimmerman E, Barlow SM, Wang J, Gu F. (2008). NTrainer patterned orocutaneous therapy improves suck and oral feeding in preterm infants. *14th Biennial Conference on Motor Speech: Motor Speech Disorders & Speech Motor Control*. Monterey, CA. March 6-9.
121. Estep M, Barlow SM, Auer E. (2008). Cortical and subcortical contributions to ororhythmic behavior. *14th Biennial Conference on Motor Speech: Motor Speech Disorders & Speech Motor Control*. Monterey, CA. March 6-9.
122. Barlow SM, Poore M, Zimmerman E, Wang J, Gu F. (2008). NTrainer patterned orocutaneous therapy accelerates suck pattern stability and oral feeding in preterm infants. *Pediatric Academic Society*, #754296, 5840.25. Hawaii.
123. Estep M, Barlow SM, Popescu M, Auer E. (2008). MEG registration of hand and face somatosensory inputs in human using patterned pneumatic-cutaneous pulse trains. *Kansas Speech-Language-Hearing Assoc*. Overland Park, KS.
124. Poore M, Zimmerman E, Barlow SM, Wang J, Gu F. (2008). NTrainer patterned orocutaneous therapy improves suck and oral feeding in preterm infants. *Kansas Speech-Lang-Hearing Assoc*. Overland Park, KS.
125. Poore M, Brady N, Barlow SM. (2008). Non-nutritive suck as a predictor of pre-speech vocalizations. *Kansas Speech-Language-Hearing Association*. Overland Park, Kansas.
126. Zimmerman E, Barlow SM, Lee J. (2008). Pacifier Stiffness Alters the Infants Suck Central Pattern Generator Dynamics. *Kansas Speech-Language-Hearing Assoc*. Overland Park, Kansas.
127. Barlow, SM. (2008). Invited presentation. Advances in Speech Physiology and Neuroscience. R.D. Kent (moderator). *American Speech-Language-Hearing Association*, Chicago, Ill. 11/20.
128. Barlow, SM. Co-Organizer and moderator with Jordan Green. 2008 ASHA-NIH Research Symposium "*Neurobiological Determinants of Human Communication*." 11/21/08, Chicago, Ill.
129. Zimmerman E, Barlow SM. (2008). Orocutaneous Therapy Promotes Faster Oral Feed Transitions in Preterm Infants, *American Speech-Language-Hearing Association*, Chicago, Ill, #2443.
130. Chu S, Barlow SM, Kieweg D, Lee J. (2008). Sampling & Automatic Analysis of Human Perioral Tissue Stiffness Without Head Restraint, *Am Speech-Lang-Hearing Assoc*, Chicago, Ill, #1276.
131. Estep M, Barlow SM, Auer E, Kieweg D, Lee S-P, Savage C. (2008). Functional neuroimaging correlates of speech and suck ororhythmic activity. *Soc Neuroscience*. Washington, DC. 473.13.

132. Venkatesan LK, Popescu M, Barlow SM. (2009). MEG localization of tactile somatosensory inputs delivered to the human hand and face using TAC-cell pulse trains. *Soc Neuroscience*, 562.
133. Estep ME, Barlow SM, Auer ET, Kieweg D, Savage CR. (2009). Task and Rate Specific Functional Correlates of Human Ororhythmic Behaviors. *Soc Neuroscience, 82.10*.
134. Barlow SM, Bless DM. (2009). Research survival skills: developing and nurturing research collaborations. *NIDCD-ASHA Research Symposium, ASHA.*
135. Barlow SM, Trotman CA, Chu SY, Lee J, Kieweg D. (2010). Modification of perioral stiffness in children with repaired cleft lip/palate. *American Cleft Palate Association*. 09-RA-241-ACPA.
136. Trotman CA, Faraway JJ, Barlow SM. (2010). Effects of lip revision surgery on lip force in patients with cleft lip/palate. *American Cleft Palate Association*. 09-RA-251-ACPA.
137. Venkatesan L, Barlow SM, Popescu M, Popescu A. (2010). MEG Registration of Short-Term Cortical Adaptation to TAC-CELL Inputs to Human Face and Hand. *National Speech Motor Control*, Savannah, GA.
138. Estep M, Barlow SM, Auer ET. (2010). Partially Overlapping Neural Substrates of Oromotor Control. *National Speech Motor Control*, Savannah, GA.
139. Barlow SM, Urish MM, Zimmerman EA, Poore M, Venkatesan L. (2010). Frequency modulation of the sCPG in preterm infants with RDS. *Pediatric Acad Society*, #753086, Vancouver, BC.
140. Barlow SM. (2010). Patterned Orocutaneous Stimulation Using NTrainer Drives Suck Development and Feeding Skills in Preterm Infants. *Cedar Sinai Medical Center – Neonatology*. Los Angeles, CA.
141. Barlow SM. (2010). Patterned Orocutaneous Stimulation Using NTrainer Drives Suck Development and Feeding Skills in Preterm Infants. *Kansas City Area Hospital Administrators*, Kansas City, KS.
142. Venkatesan L, Popescu M, Popescu A, Barlow SM. (2010). Cutaneous tactile inputs to human hand and lip induces short-term adaptation of the primary somatosensory cortex. *Soc Neurosci*, 178.11. San Diego, CA.
143. Barlow SM, Zimmerman EA, Jegatheesan P, Govindaswami B, Weiss S, Sakumura A, Song D. (2011). aEEG Correlates of Patterned Orosensory Stimulation in Preterm Infants. *Pediatric Academic Society*, #1419.202.
144. Zimmerman EA, Barlow SM, Kieweg D, Wang J. (2011). Vestibular Stimulation Alters Sensorimotor Integration of the Respiratory and Orofacial Central Pattern Generators in Preterm Infants. *Pediatric Academic Society*, #3123.8.
145. Barlow SM. (2011). The Role of Interneurons in Pattern-Generating Networks During Feeding. Neonatal Feeding Club. *Pediatric Academic Society*. May 1st.
146. Chu S, Barlow SM, Lee J, Pahwa R, Lyons K. (2011). Perioral biomechanics, kinematics, and electrophysiology in Parkinson's disease. *6th International Speech Motor Conference, Groningen-Nijmegen, June 9-11.*
147. Chu, S Y., Barlow, S, Lee, J. (2011). Perioral biomechanics, kinematics, and electrophysiology in Parkinson's disease. *Stem-Spraak-en Taalpathologi*e, Vol. 17, Supplement, pp. i-ii, p30. Nigmegen University Press.
148. Zimmerman E, Barlow SM, Kieweg D, Wang J, Lee J. (2011). Vestibular Stimulation Alters the Respiratory Central Pattern Generators in Preterm Infants. *Am Speech-Lang-Hearing Assoc,* #11495.
149. Barlow SM, Robbins J, Ramig L, Fu QJ. (2011). Bench-to-Bedside: Technology transfer in speech, swallowing, and hearing. *American Speech-Language-Hearing Association,* #11412.
150. Poore M, Barlow SM. (2011). Environmental catalysts of emergent canonical syllables. *American Speech-Language-Hearing Association,* #11519.
151. Loeb D, Barlow SM. (2011). Preterm Language Outcomes and Maternal Responsiveness. *American Speech-Language-Hearing Association,* #12221.
152. Plante E, Barlow SM, Souza P. (2011). Developing Scientific Collaborations. *ASHA Lessons for Success*, April 27-29, Gaethersburg, MD.

153. Plante E, Barlow SM. (2011). Mechanics of Grant Writing – NIH. *ASHA Lessons for Success*, April 27-29, Gaethersburg, MD.
154. Barlow SM. (2011). NTrainer Drives Suck Development and Feeding Skills in Preterm Infants. Invited session. *GE HealthCare & KC BioMedix*. Overland Park, KS. July 27.
155. Popescu M, Barlow SM, Popescu EA, Venkatesan L, Wang J. (2011). Dynamics of the evoked activity in primary and association somatosensory areas during sustained tactile hand stimulation in humans. *Society for Neuroscience*, 2011-S-6286-SfN, session 385.16 Nov 14 (Monday).
156. Barlow SM, Jegatheesan P, Govindaswami B, Weiss S, Venkatesan L, Song D. (2011). EEG correlates of patterned pneumatic oral stimulation in preterm infants. *Society for Neuroscience*, 2011-S-8653-SfN, session 385.21 /TT10 Nov 14 (Monday).
157. Barlow SM. (2011). Innovative sensorimotor therapies for better neurodevelopmental outcome. Invited session. 6th *Annual Perinatal/Neonatal Conference*, Sobrato Center, San Jose, CA. Nov 2-4.
158. Song D, Jegatheesan P, Weiss S, Govindaswami B, Conlan L, Griep J, Wang J, Barlow SM. (2011). EEG Correlates of Patterned Pneumatic Oral Stimulation in Preterm Infants. *HOT TOPICS in Neonatology*. Washington, DC.
159. Barlow SM, Jegatheesan P, Govindaswami B, Weiss S, Jagadeesh M, Sidel C, Song D. (2012). EEG Correlates of Patterned Pneumatic Oral Stimulation in Preterm Infants. 2nd Annual NANT Conference "Launching Best Practice for Neonatal Therapy." Ft. Worth, TX [May 4-5]. Invited presentation.
160. Barlow SM. (2012). The potential role of sensory stimulation for refinement of cortical connectivity and neuroprotection. *Pediatric Academic Society*, 4/29, Boston MA.
161. Barlow SM. (2012). Chair: Neonatal Feeding Club. *Pediatric Acad Society*, 4/29, Boston MA.
162. Barlow SM, Lee J, Wang J, Oder A, Hall S, Knox K, Weatherstone K, & Thompson D. (2012). NNS development in preterm infants is dependent on the spectral content of patterned somatosensory inputs. *Pediatric Academic Society*, 4/29-5/1, Boston MA.
163. Song D, Jegatheesan P, Weiss S, Govindaswami B, Wang J, Lee J, Barlow SM. (2012). EEG correlates of patterned pneumatic oral stimulation in preterm infants. *Pediatric Academic Society*, session 4506.68 Neonatal Neurology, Boston MA.
164. Song D, Jegatheesan P, Weiss S, Govindaswami B, Wang J, Lee J, Barlow SM. (2012). EEG correlates of patterned pneumatic oral stimulation in preterm infants. Special scientific session. *National Assoc Neonatal Therapists*, Ft. Worth, TX.
165. Oder A, Wang J, & Barlow SM. (2012). Effects of Chemotactile Experience on Ororhythmic Patterning in Neurotypical Infants. *American Speech-Language-Hearing Association,* #7919, 423.
166. Williamson L, Wang J, & Barlow SM. (2012). Mapping Oral Feed Skill Attainment in Preterm Infants. *American Speech-Language-Hearing Association,* #8017, 453.
167. Barlow SM, Green J, Martin N, & Burkard R. (2012). Introduction to grant writing. Invited 2-hr session sponsored by the ASHA RSAC. *American Speech-Language-Hearing Association,* #SC18.
168. Imgrund CM, Loeb D, & Barlow SM. (2012). Directive Language Input and Caregiver Responsiveness to Preterm Toddlers. *American Speech-Language-Hearing Association,* #7827, 380.
169. Loeb D, Imgrund CM, & Barlow SM. (2012). Neurodevelopmental Outcomes of Preterm Infants at 30 months. *American Speech-Language-Hearing Association,* #7789, 382.
170. Loeb D, & Barlow SM. (2012). Maternal Responsiveness During Shared Book Interaction with Toddlers Born Preterm. *American Speech-Language-Hearing Association,* #7835, 389.
171. Venkatesan L, Barlow SM, Popescu M, Popescu A. (2012). Short-term adaptation in the human somatosensory cortical network due to repeated stimulation of the hand and face. 884.17. *Society for Neuroscience*. New Orleans, LA.
172. Song D, Jegatheesan P, Weiss S, Govindaswami B, Wang J, Lee J, Barlow SM. (2012). EEG correlates of patterned pneumatic oral stimulation in preterm infants. 7th *International Conference on Brain Monitoring & Neuroprotection in the Newborn*, Tampa, FL [Sept 13-15].

173. Barlow SM, Lee J, Wang J, Oder A. (2012). Suck development in preterm infants is dependent on the spectral content of patterned somatosensory inputs. Invited Nanosymposium on *Oral Movements* at the 44th Annual meeting of the *Society for Neuroscience,* 14.05. New Orleans, LA
174. Barlow SM. (2012). Oral sensorimotor entrainment and neuroprotection in preterm infants. Invited presentation. *Boys Town National Research Hospital*, Omaha, Nebraska.
175. Barlow SM. (2013). The pitfalls to avoid when writing an NIH R-series grant. Pathways Conference – American Speech-Lang-Hearing Association, funded by NIH. Rockville, MD. Feb 1-3.
176. Barlow SM. (2013). Chair: Neonatal Feeding Club. *Ped Acad Society*, 5/6/2013, Wash DC.
177. Barlow SM, Lee J, Wang J, Oder A, Hall S, Knox K, Weatherstone K, Thompson D. (2013). NNS Development in Preterm Infants is Dependent on the Spectral Content of Patterned Somatosensory Inputs, *Pediatric Academic Society*, #755861, publication #2922.281, Washington, DC.
178. Imgrund CM, Loeb D, & Barlow SM. (2013). Directive Language Input to Children Born Preterm and Full Term. *American Speech-Language-Hearing Association.* 10888
179. Loeb D, Imgrund CM, & Barlow SM. (2013). Responsiveness and Assertiveness of Toddlers Born Preterm with a History of Chronic Lung Disease. *American Speech-Lang-Hearing Association.*
180. Barlow SM. (2013). Orocutaneous entrainment promotes oromotor development and electrocortical activity in preterm infants. Invited, *University of Nebraska*. April 19.
181. Custead R, Oh T, Oder A, Barlow SM. (2013). Adaptation of the cortical somatosensory evoked potential following pneumatic stimulation of the face in adults. *Society for Neuroscience*, 644.12723.
182. Barlow SM, Kosirog C, Hundley KB, and Kieweg D. (2014). Automatic adaptive single-interval up-down threshold tracking of vibrotactile stimuli in the face and hand of neurotypical adults. *2014 Conference on Motor Speech*, Sarasota, FL.
183. Custead R, Oh H, Lee J, Oder A, and Barlow SM. (2014). Adaptation of the cortical somatosensosry evoked potential following pneumatic stimulation of the face in adults. *2014 Conference on Motor Speech*, Sarasota, FL.
184. Barlow SM. (2014). Chair: Neonatal Feeding Club. *Pediatric Acad Soc*, May 2014, Vancouver.
185. Oder A, Custead R, Oh H, and Barlow SM. (2014). Hemodynamic changes in cortical sensorimotor systems following hand and orofacial motor tasks and pulse cutaneous stimulation. *Society for Functional Near Infrared Spectroscopy*, Oct 8-12, Montreal, Quebec Canada.
186. Loeb DF, Imgrund C, Barlow SM. (2014). Language abilities of infants born preterm to mothers with diabetes. *American Speech-Language-Hearing Association.*
187. Imgrund CM, Loeb DF, Barlow SM. (2014). When comprehension is weaker than production: Evidence from toddlers born preterm with chronic lung disease. *Am Speech-Lang-Hearing Association.*
188. Barlow SM. (2015). Chair: Neonatal Feeding Club. Neural network for swallowing in preterm infants. *Pediatric Academic Society*, April 27, 2015, San Diego.
189. Oder Rosner A, Barlow SM. (2015). Hemodynamic Changes in Sensorimotor Cortex following Hand and Orofacial Motor Tasks and Pulsed Cutaneous Stimulation. *American Speech-Language-Hearing Association. 5570, Technical platform, Nov 13, 10:30am. Denver, CO.*
190. Loeb DF, Imgrund CM, Freeman D, Gettino EM, & Barlow SM. (2015). Evaluation of language delay identification, intervention services, and Part-C criteria for children born preterm. *American Speech-Language-Hearing Association. 8543, poster 349. Nov 13, 08:30am. Denver, CO.*
191. Loeb DF, Budijardo C, Imgrund CM, & Barlow SM. (2015). Motor Skills and Speech Sound Abilities in Children Born Preterm. *American Speech-Language-Hearing Association. 8142, poster 432. Nov 12, 1:30pm. Denver, CO.* 2015 ASHA Award - Meritorious Scientific Poster Presentation.
192. Barlow SM. (2015). Invited, Satellite Symposium: Orofacial Neurophysiology, Feeding, Swallowing, *Society for Neuroscience*. Chicago, IL.
193. Oder Roser A, Barlow SM. (2015). Sensorimotor cortical hemodynamics following hand and orofacial motor tasks and pulsed cutaneous stimulation. *Society for Neuroscience*, Nanosymposium, Session 016, N226, Abstract 3638, Sat, Oct 17, 1:00pm. Chicago IL.

194. Oh H, Barlow SM. (2015). Saltatory pulsed TAC-Cell velocity array encoding in S1 and S2 to glabrous hand stimulation: fMRI study. *Society for Neuroscience,* Session 240, Abstract 8156. Sun, Oct 18, 1:00pm. Poster. Chicago IL.
195. Custead R, Oh H, Barlow SM. (2015). Saltatory pulsed TAC-Cell velocity array encoding in S1 and S2 to perioral stimulation: fMRI study. *Society for Neuroscience,* Nanosymposium, Session 016, N226, Abstract 8192, Sat, Oct 17, 1:00 pm. Chicago IL.
196. Barlow SM. (2015). Invited. Developing a Successful Research Career. *ASHA-NIH 2015 Pathways Conference*, Rockville, MD June 17-20.
197. Barlow SM. (2015). Invited. CPRI-ASHA. Boston University, Boston, MA. Aug 5-7.
198. Barlow SM. (2015). Invited Chair. *Educational Neuroscience Conf*, University of Nebraska.
199. Barlow SM, Adams-Chapman I, Song D. (2016). Critical Periods for Development of Oral Feeding in Preterm Infants and Neurodevelopmental Outcomes. *Pediatric Academic Society*, Baltimore.
200. Barlow SM. (2016). Chair: Neonatal Feeding Club. Neurodevelopmental outcomes among infants born preterm. *Pediatric Academic Society*, Baltimore.
201. Barlow SM. (2016). Invited. Neural Control of Sucking-Feeding in Preterm Infants. *California Association of Neonatologists and AAP Section on Neonatal-Perinatal Medicine. Cool Topics in Neonatology*. 22nd Annual Conference. March 4-6, Coronado, California.
202. Barlow SM, Oh H, Rosner A, Custead R, Krug C, Scarborough AJ. (2016). BrainStorm: Sunday with a Scientist. Morrill Hall, University of Nebraska, 3-13-16, 1:30-4:30pm.
203. Barlow SM. (2016). Optimizing Somatosensory Patterns and Motor Activity for Neurotherapeutic Change Across the Lifespan. Invited lecture. 2016 Nebraska Speech-Language-Hearing Association Fall Convention. Sep 15-16, 2016, Cornhusker Marriott in Lincoln, Nebraska
204. Barlow SM, Kent R. (2016). Invited. Developing a Successful Programmatic Research Career. *ASHA-NIH 2016 Pathways Conference*, Rockville, MD June 13-14.
205. Imgrund CM, Barlow SM. (2016). Language outcomes of children born preterm: Results from standardized assessment and language sample analysis *American Speech-Language-Hearing Association.* Nov 19, Philadelphia, PA. 9:30AM: Session 9146, Poster 440.
206. Loeb D, Barlow SM. (2016). Parental Speech, Language, and Attention Concerns of Children Born Preterm. *American Speech-Language-Hearing Association.* Nov 18, Philadelphia, PA. 9:00AM: Session 8552 Poster Board 338
207. Oh H, Wang Y, Custead R., Barlow SM. (2016). Brain encoding of saltatory velocity-scaled somatosensory array in glabrous hand among neurotypical adults. *Society for Neuroscience,* Session 151, abstract 4996, Nov 13_2016, 8:00a-12:00pm, San Diego, CA.
208. Custead R, Oh H, Wang Y, Barlow SM. (2016). Brain encoding of stimulus velocity within a saltatory pneumotactile array in the human perioral somatosensory system using fMRI. *Society for Neuroscience,* Session 618, abstract 5040, Nov 15_2016, 1:00-5:00pm, San Diego, CA.
209. Thrailkill E, Hage B, Alwataban M, Scarborough AJ, Greenwood J, Barlow SM, Bashford G. (2016). Cerebral hemodynamic responses to saltatory pneumotactile somatosensory stimulation. *Institutional Development Award Program (IDeA) Networks of Biomedical Research Excellence* (INBRE), University of Nebraska, Lincoln NE.
210. Barlow SM. (2016). GALILEO somatosensory arrays and functional imaging of human brain. Center for Brain, Biology, and Behavior. *Nebraska Young Alumni Academy.* Invited presentation.
211. Barlow SM. (2016). ForceWIN10: Emerging Application in Cerebrovascular Stroke. *NUtech Board of Directors*. Nov-18-16. Invited presentation.
212. Barlow SM. (2017). Chair: NEONATAL FEEDING CLUB: (1) Oral Feeding Monitoring Approaches in Support of Preterm Infants' *Individualized* Management Plan (Chantal Lau), and (2) The (RNA) Sequence of Events: Using Advanced Genetic Platforms to Uncover Disruptive Developmental Pathways Affecting Oral Feeding Success in the Newborn (Jill Maron). *Pediatric Academic Society*, 5/8/17 1:00p-2:30p. San Francisco, CA.
213. Barlow SM. (2017). Critical sensory periods for sCPG formation in extremely preterm infants. *Pediatric Academic Society*, 5/8/17 San Francisco, CA.

214. Hage B, Thrailkill E, Alwataban M, Scarborough A, Greenwood J, Barlow SM, Bashford G. (2017). Cerebral Hemodynamic Responses to Saltatory Pneumotactile Somatosensory Stimulation Measured using Transcranial Doppler Ultrasound, *Am Institute of Ultrasound in Medicine* (AIUM). Tampa, FL.
215. Hage B, Thrailkill E, Alwataban M, Barlow SM, Bashford G. (2017). Functional transcranial Doppler ultrasound to measure lateralization of cerebral hemodynamics in response to saltatory pneumotactile somatosensory stimulation, *Am Institute of Ultrasound in Medicine* (AIUM). Tampa, FL.
216. Liao C, Rosner A, Maron J & Barlow SM. (2017). Automatic Non-nutritive Suck Waveform Discriminator and Dynamic Feature Extraction in Preterm Infants. Neonatal Neurology: Preterm Newborns, *Ped Academic Soc*, San Francisco, CA. Sess: - 5/8/17 (4:15 -7:30 PM), 3853.12 – Board 555.
217. Barlow SM. (2017). Invited: The Role of Pulsed Somatosensory Stimulation in Motor Rehabilitation Across the Lifespan: Human Preterm and Adult Models. Department of Biomedical Sciences, *Creighton University*, 5-2-17.
218. Thrailkill E, Hage B, Alwataban M, Scarborough AJ, Greenwood, Barlow SM, Bashford G. (2017). Cerebral Hemodynamic Responses to Saltatory Pneumotactile Somatosensory Stimulation Measured using Transcranial Doppler Ultrasound. 127th NAS Annual Spring Meeting – Session B, Olin 112, April 21, 2017 *Wesleyan University, Nebraska Academy of Science,* 2017.
219. Barlow SM. (2017). Optimizing Somatosensory Patterns and Motor Activity for Neurotherapeutic Change Across the Lifespan. Center for Brain, Biology, and Behavior: University of Nebraska. *Nebraska Young Alumni Academy.* Invited keynote science presentation.
220. Barlow SM, Kent R. (2017). Invited. Developing a Successful Programmatic Research Career. *ASHA-NIH 2017 Pathways Conference*, Rockville, MD June 12-13.
221. Chu SY, Lee J, Wang J, Barlow SM. (2017). Dissolution of perioral muscle reciprocity in Parkinson's disease. Proposal ID:10863. Topic Area:Motor Speech Disorders. *American Speech-Language-Hearing Association*, Session Number: 9073 Poster Board 365, 11-11-17, Los Angeles, CA.
222. Imgrund C, Loeb D, Barlow SM. (2017). Language outcomes of children born preterm: Considering both standardized assessment and language sample analysis. *American Speech-Language-Hearing Association*, Session Number: 8353 Poster Board 668, 11-9-17, Los Angeles, CA.
223. Loeb D, Barlow SM. (2017). Parental Concern and Risk Factors Associated with the Communication Skills of Children Born Preterm. *American Speech-Language-Hearing Association*, Session Number: 8250 Poster Board 565, 11-9-17, Los Angeles, CA.
224. Evert A, Loeb D, Imgrund C, Barlow SM. (2017). Parental Concern and the Risk Factors Associated with the Communication Skills of Children Born Preterm. *Nebraska Speech-Language-Hearing Association,* 9-14-17, Lincoln NE.
225. Loeb D, Bigley J, Imgrund CM, Barlow SM. (2017). Early Developmental Milestones of Children Born Preterm. *American Speech-Language-Hearing Association*, Session Number: 8052 Poster Board 367, 11-9-17, Los Angeles, CA.
226. Jung K, Oh H, Lee J, & Barlow SM. (2017). An Efficient Modeling Approach for Brain Connectivity Analysis of Saltatory Pneumotactile Velocity Stimulus. *Society for Neuroscience,* Session 346, abstract 13045, Washington, DC.
227. Thrailkill E, Hage B, Alwataban M, Scarborough AJ, Greenwood J, Barlow SM, Bashford G. (2017). Cerebral hemodynamic responses to pneumotactile stimulation of the hand measured using Transcranial Doppler Ultrasound. UNL NIH-INBRE Summer Meeting.
228. Barlow SM. (2018). Invited Speaker. State of research initiatives in neurogenic speech disorders. NIH NIDCD workshop Motor Disorders. May 30.
229. Barlow SM & Bashford GR. (2018). Invited Keynote Speaker. Current Concepts in Stroke Prevention, Acute Care and Rehabilitation. *Dynamically-pulsed Pneumotactile Velocity Arrays to Modulate Brain Hemodynamics and MCA Blood Flow Velocity in Humans.* April 20, 2018. Clarkson, the Storz Pavilion. Sponsored by the The Medical Student Chapter of the American Association for Neurological Surgeons, University of Nebraska Medical Center.

230. Barlow SM. (2018). Invited Keynote Speaker. Forward Thinking in the Speech & Language Sciences: A Panel Presentation & Discussion. *American Speech-Language-Hearing Association*, Session Number 1037 Nov 15. 10:15a-12:15p, Boston.
231. Imgrund CM, Loeb D, Barlow SM. (2018). Longitudinal language outcomes of children born preterm at 30 months and four years of age. *American Speech-Language-Hearing Association*, Session Number 7713 Poster Board 539, Nov 16, 1:00p-2:30p, Boston, MA.
232. Ochoa M, Liao C, Marquez A, Rosner AO, Barlow SM. (2018). Automatic Feature Discrimination of Non-nutritive Suck Dynamics Among Extremely Preterm Infants. *American Speech-Lang-Hearing Association*, Sess Number 7802 Poster Board 628, Nov 16, 2:30p-4:00p, Boston, MA.
233. Marquez A, Liao C, Ochoa M, Rosner AO, Barlow SM. (2018). Non-nutritive Suck Pattern Stability in Extremely Premature Infants as a Function of Pulmonary Status. *American Speech-Lang-Hearing Association*, Session Number 8135 Poster Board 549, Nov 17, 11:30a-1:00p. Boston, MA.
234. Loeb DF, Imgrund CM, Lee J, Barlow SM. (2018). Language, Cognitive, and Motor Outcomes in Children Born Preterm. *American Speech-Language-Hearing Association*, Session Number 8029 Poster Board 443, 10:00a-11:30a, Nov 17, Boston, MA.
235. Barlow SM. (2018). Invited keynote. Beating cerebrovascular stroke: The right time for touch. Nebraska NIH Jumpstart, UNL Memorial Union – Ballroom. 5-1-18.
236. Greenwood J, Hozan M, Sullivan M, Barlow SM. (2018). Cortical fNIRS hemodynamics during saltatory pneumotactile glabrous hand stimulation in neurotypical adults. *Society for Neuroscience,* Session 392, abstract 13050, 2018-S-13050-SfN, Nov 5 @ 1pm, San Diego, CA.
237. Hozan M, Greenwood J, Sullivan M, Barlow SM. (2018). An fNIRS study of sensorimotor cortical hemodynamics in hand motor tasks coupled with pneumotactile stimulation at different traverse velocities. *Soc for Neuroscience,* Sess 671, abst 9846, 2018-S-9846-SfN, Nov 7 @ 8am, San Diego, CA.
238. Barlow SM. (2018). Chair: NEONATAL FEEDING CLUB: Relational Dynamics of Oral Feeding with Respiratory Support (Abrosimova M, Hasan S), Neonatal Salivary Transcriptomics (Rosner A, et al.), and Vocalization Development (Zimmerman E), Session 2535, 5-6-18, 1:15pm-2:45pm. *Pediatric Academic Society*. Toronto, CANADA.
239. Barlow SM. (2018). Hierarchical cluster analysis and feature detection of ororhythmic central patterning in extremely preterm infants. *Pediatric Academic Society*. Toronto, CANADA.
240. Rosner AOI, Maron JL, Song D, Jegatheesan P, Govindaswami B, Wilson BJ, Barlow SM. (2018). Using salivary profiles to better understand preterm infants' response to orocutaneous NTrainer therapy. *Pediatric Academic Society*. Session 2535, 5-6-18, 1:45pm-2:05pm. Toronto, CANADA.
241. Barlow SM, Wang YY, Fatima Sibaii, Avantika Mathur, Cristal Franco-Granados. (2018). Biobehavioral and Neuroimaging Survey of Human Brain Dynamics and Digital Signal Processing. Raikes School of Design & Engineering. Nebraska High School Computer Science & Engineering Honors Summer Camp. Center Brain, Biology, Behavior: Univ Nebraska. July 12, 2018 4:00-5:00pm.
242. Barlow SM, Wang YY, Jake Greenwood. (2018). Biobehavioral and fMRI and fNIRS Neuroimaging Survey of Human Brain Dynamics and Digital Signal Processing. Midwest Engineering Entrepeneur Network. NUtech Innovation. Center for Brain, Biology, and Behavior: University of Nebraska. Aug 9, 2018 2:15-3:00pm.
243. Wang YY, Barlow SM, Jake Greenwood. (2018). Biobehavioral and fMRI and fNIRS Neuroimaging Survey of Human Brain Dynamics and Digital Signal Processing. Biological Systems Engineering BSEN 101 presentation and tour. Center for Brain, Biology, and Behavior: University of Nebraska. Sept 25, 2018 2:00-3:15pm.
244. James D, Hage B, Greenwood J, Barlow SM, Bashford G. (2018). Cerebrovascular Impulse Response to Tactile Somatosensory and Motor Stimulation measured with fTCD. *Biomedical Engineering Society* (BMES) 2018 Annual Meeting. ID: #4120, Oct 17-20, 2018 in Atlanta, Georgia.
245. Barlow SM, Nelson J. Lorenz T, Calvi J, Neta M, Dodd M, Rodriguez A. (2018). Univ of Nebraska CB3 Tour for State of Nebraska Legislature Tour. fNIRS Laboratory demonstration: Jake Greenwood, Mohsen Hozan, Elizabeth, Steven Barlow. Nov 30, 2018. 1:00-2:45pm.

246. Barlow SM. (2019), (Chair). Emily Zimmerman (Co-Chair): NEONATAL FEEDING CLUB: Suck-Swallow-Breath Development During Nonnutritive Suck in Newborn Infants 4-28-19, 1:15pm-2:45pm. Abstract Session #312452. *Pediatric Academic Society*. Baltimore, MD. : "Neonatal Feeding Club: I. Infant Feeding Skills as a Biomarker of Communication Abilities. II. Suck-Swallow-Breath Development During Nonnutritive Suck in Newborn Infants." Session Proposal Id: 312452. Session Date: Sunday 4/28/2019. Sess: 1:15 PM - 2:45 PM
247. Chu SY, Barlow SM, Lee J, Wang J. (2019). Rate and Utterance Length on Lip Pattern Variability in Parkinson's disease. 31st International Association of Logopedics and Phoniatrics Congress, http://www.ialptaipei2019.org/abstracts.asp , Taipei, Taiwan.
248. Chu, SY, Barlow, SM, Lee, J, Ben-David, B., Lim, KX., Foong JH. (2019). Oral-Diadochokinetic Rates for Healthy Malaysian-Mandarin Speakers. The 31st International Association of Logopedics and Phoniatrics Congress, http://www.ialptaipei2019.org/abstracts.asp, Aug 18-22, Taipei.
249. Barlow SM. (2019). Invited presentation and recipient of the **2019 Callier Prize in Research**. *Translating Speech Physiology to Neurotherapeutics Across the Lifespan*. 4-17-19, Univ of Texas, Callier Center, Dallas TX.
250. Wang Y, Sibaii F, Oh H, Barlow SM. (2019). Functional connectivity evoked by saltatory pneumotactile stimuli on the glabrous hand. *Human Brain Mapping*.
251. Chu SY, Barlow SM, Lee J, Wang J. (2019). The effect of speech rate on lip kinematics in Parkinson's disease. 5th *World Parkinson Congress* (June 4-7, 2019), https://wpc2019.org/page/Abstract, ID:1230.
252. Loeb D, Johnson L, Imgrund CM, Lee J, Barlow SM. (2019). Feeding and Swallowing Difficulties of Children Born Preterm. *American Speech-Lang-Hearing Association*, Session Number: Poster, Orlando, FL.
253. Barlow SM. (2019). Invited. Developing a Successful Programmatic Research Career. *ASHA-NIH 2019 Pathways Conference*, Rockville, MD June 17-18.
254. Barlow SM. (2019). Invited. Somatosensory Modulation of Rhythmic Oromotor Patterns in Preterm Infants. 7th Shanghai Neonatal Forum, Shanghai, China, June 12-15.
255. Hozan M, Greenwood J, Barlow SM. (2019). Cerebral fNIRS Hemodynamic Response Encodes the Velocity of Patterned Tactile Stimuli. *Society for Neuroscience.* 2019-S-10323-SfN.
256. Wang Y, Sibaii F, Custead R, Oh H, Barlow SM. (2019). Functional brain connectivity during orofacial pneumotactile stimulation: an fMRI study. Invited paper to *Society for Neuroscience*.
257. Evert A, Greenwood J, Barlow SM, Harvey J. (2019). Pediatric congenital unilateral facial nerve palsy: Treatment considerations. Nebraska Speech-Lang-Hearing Assoc, Omaha, NE, October.
258. Barlow SM. (2019). Somatosensory-modulated Hemodynamics: Towards Neuroprotection in Humans. Invited, *Boys Town National Research Hospital*, Omaha, NE. Dec 19, 2019.
259. Hoffman E, Lee J,, Greenwood J, Barlow SM. (2020). Perioral and Digit Vibrotactile Threshold Estimation in Neurotypical Children. *Motor Speech Conference*, Santa Barbara, CA. February 2020.
260. Greenwood J, Barlow SM. (2020). pTACS: A New Platform for Neurotherapeutics and Neuroprotection in Large Vessel Ischemic Stroke. *Motor Speech Conference*, Santa Barbara, CA. February 2020.
261. Wang Y, Sibaii F, Custead R, Oh H, Barlow SM. (2020). Functional brain connectivity during orofacial pneumotactile stimulation: an fMRI study. *Motor Speech Conf*, Santa Barbara, CA. Feb 2020.
262. Hoffman E, Hozan M, Lee J, Greenwood J, Barlow SM. (2020). Orofacial and Digit Force Dynamics in Neurotypical Children. *Motor Speech Conference*, Santa Barbara, CA. February 2020.
263. Barlow SM, Lee J, Custead R, Hozan M, Greenwood J. (2020). Orofacial and Digit Force Dynamics in Chronic MCA Ischemic Stroke. *Motor Speech Conference*, Santa Barbara, CA. Feb 2020.
264. Barlow SM. (2020), (Chair). Emily Zimmerman (Co-Chair): (ID#: 346094) NEONATAL FEEDING CLUB: (1) Elucidating Feeding Correlates Among Healthy Non-Dysphagic Infants to Guide Diagnostic Thresholds and Aspiration Risks, and (2) Factors Related to Problematic Feeding in the First 7 Months of Life. *Pediatric Academic Society* (International). Philadelphia, PA. May 3, 7:30-9:00am, Pennsylvania Convention Center, CC 109, Sess ID: 346094. CME Compliance, Baylor College of Med.

265. B. Hage, J. Greenwood, S. M. Barlow & G. R. Bashford. (2020). Using transcranial Doppler ultrasound to measure effectiveness of a novel treatment on a population of stroke victims, UNL College of Engineering Graduate Student Symposium, Feb. 2020.
266. B. Hage, J. Greenwood, S. M. Barlow & G. R. Bashford. (2020). Using transcranial Doppler ultrasound to measure effectiveness of a novel treatment on a population of stroke victims, UNL Spring Research Fair.
267. Hoffman E, Lee J,, Greenwood J, Barlow SM. (2020). Perioral and Digit Vibrotactile Threshold Estimation in Neurotypical Children. *2020 CYFS Summit on Research in Early Childhood*, April 29 2020
268. Hoffman E, Hozan M, Lee J, Greenwood J, Barlow SM. (2020). Orofacial and Digit Force Dynamics in Neurotypical Children. *2020 CYFS Summit on Research Early Childhood,* April 29 2020.
269. Chu SY, Gan KB, Lee J, Barlow SM, Rogayah AR. (2020). Sentence complexity factors in speech performance during dual-task. 13th Allied Health Scientific Conference 2020. Embracing New Frontiers in Healthcare Reform. Putrajaya, Malaysia, June 24-25.
270. Barlow SM. (2020). 20/20 Vision for Research & Creativity: CEHS and *beyond. College of Education and Human Sciences.* University of Nebraska. 2-28-20.
271. Barlow SM. (2020). The Somatosensory Brain and Neurotherapeutic Applications using Pulsed Pneumotactile Stimulation. Research Seminar. *American Speech-Language-Hearing Association*, Session Number: 12364. San Diego, CA. Proposal accepted at the Annual Convention of the American Speech-Language-Hearing Association, San Diego, CA (Convention canceled - COVID).
272. Barlow SM. (2020). Invited. Crafting a Programmatic Line of Research. *ASHA-NIH 2020 Virtual Pathways Conference*, Rockville, MD. June 17-18.
273. Max L, & Barlow SM. (2020). Co-Chairs. Novel Approaches to Sensory Testing and Stimulation in the Field of Communication Sciences and Disorders Research Seminar. Submission/Proposal Number: 12364. *American Speech-Language-Hearing Association*, San Diego, CA. Annual Convention of the American Speech-Language-Hearing Association, San Diego, CA (peer-reviewed proposal accepted, Convention canceled due to COVID).
274. Foong, JH, Chu, SY, Lee, J, Ben-David, B, Hsu, C, & Barlow, SM. (2020). Oral-DDK Rates in Malaysian-Malay speakers. *Global Health Sciences Conference*, December 12, Malaysia.
275. Chu, SY, Lee, J, Barlow, SM, Ben-David, B., Lim, KX., Foong, JH. Oral-DDK:MALMAN: Assessment Protocol for Speech Therapist. *Invention, Innovation, & Design Exposition (iidex 2020)*. Online.
link: HTTPS://DRIVE.GOOGLE.COM/FILE/D/1RWC5GCAXGNICEOCZGU8XX3SHSU_VB2ET/VIEW?USP=SHARING
276. Barlow SM. (2021). Invited Keynote Presentation. Mechanosensation: Assessment, Functional Neural Networks, and Therapeutic Applications in Shaping Motor Behavior. *2021 Boston Motor Control Symposium*, June 18, 2021.
277. Barlow SM & Vojtek J. (2021). Advanced instrumentation in Speech Physiology Research. Workshop #3. *2021 Boston Motor Control Symposium*, June 18, 2021.
278. Barlow SM. (2021), (Chair). Emily Zimmerman (Co-Chair): (ID#: XXX) NEONATAL FEEDING CLUB: (1) Elucidating Feeding Correlates Among Healthy Non-Dysphagic Infants to Guide Diagnostic Thresholds and Aspiration Risks [Dr. Katlyn McGrattan – U Minnesota], and (2) Factors Related to Problematic Feeding in the First 7 Months of Life [Dr. Britt Pados – Boston College]. *Pediatric Academic Society.* May 2021 Virtual Meeting: Phase II. CME Compliance, Baylor College of Medicine. Course Number: 510-6-CL-L, May 10, 2021 from 1:00PM to 3:00PM.
279. Barlow SM, Liao C, Maron JL, Song D, Jegatheesan P, Govindaswami B, Wilson BJ, Bhakta K, Cleary JP, Lee J. (2021). Progressive Two-stage Pulsed Pneumotactile Oral Stimulation During Tube Feeding Drives Non-nutritive Suck Development in Extremely Preterm Infants. *Pediatric Academic Society*. May 2021 Virtual Meeting: Phase I. CME Compliance, Baylor College of Medicine. Platform presentation, May 4, 2021, 5:40 PM to 5:50 PM.

280. Maron JL, Barlow SM. (2021). Somatosensory Modulation of Salivary Gene Expression and Oral Feeding in Preterm Infants: Randomized Controlled Trial [R01HD086088]. *Interim analyses*. Invited presentation to the National Institute Child Human Development (NICHD), February 8, 2021.
281. 2021 EAC Annual Meeting. NIH IDeA Center for Biomedical Research Excellence (5 P20 GM109023-08), Project 11 (AuBuchon, McCreery, Conway, Barlow), 10:40-11:20am, May 25, 2021.
282. Barlow SM. (2021). Invited Presentation. Boston University Speech, Language, Hearing Sciences Lecture Series. FALL 2021.
283. Bashford GR, Hage B, Barlow SM. (2021) [*Invited*] Real-time monitoring of the cerebrovascular system by transcranial Doppler ultrasound. Oregon Health & Science University Biomedical Engineering Seminar Series, Portland, OR, 10/1/2021.
284. Barlow SM. (2022). (Chair, speaker). Emily Zimmerman (Co-Chair, speaker): Jill Maron (invited speaker) (ID# 1143677) NEONATAL FEEDING CLUB: *Pediatric Academic Society.* CME Compliance, Baylor College of Medicine. Session ID: 1143677. Session Title: Neonatal Feeding Club: Developmental Maturation of Oral Feeding in the Extremely Low GA Newborn: From A (Appetite) to Z (Zygomatic Arch). Session Date: Sunday April 24, 2022. Session Time: 6:30 AM - 8:00 AM
285. Barlow SM. (2022). Neonatal Feeding Club: Somatosensory-modulated ororythmic patterning and transition to oral feeds in EPIs: NIH RCT data. Sunday April 24, 2022. 6:30 AM – 6:40 AM
286. Hage B, James D, Barlow SM, Bashford G. (2022). Effect of Somatosensory and Active Motor Stimulation on CBFV Response. *American Society of Neuroimaging*. ASN/NNP Joint Annual Meeting.
287. Barlow SM, Weissling K, Harvey J, Greenwood J, Bashford G. (2022). ForceWIN and Galileo: Translational applications in stroke rehabilitation. *American Heart Association*, May 4, 2022.
288. Wang Y, Custead R, Oh H, Barlow SM. (2022). Dynamic Causal Modeling of Neural Responses to an Orofacial Pneumotactile Velocity Array. *Human Brain Mapping*, 3189, *Virtual poster presentations: June 7 - June 8 (two time zone blocks), *In-person poster presentations: June 19 - June 23, Glascow, Scotland.
289. Barlow SM. (2022). Invited presentation. Crafting a Successful Programmatic Research Career. *ASHA-NIH 2022 Pathways Conference*, Rockville, MD June 13-15.
290. Barlow SM, Maron JL, Song D, et al. (2022). Somatosensory-Modulated Non-nutritive Suck Dynamics, Transition to Oral Feeds, and Gene Expression in Extremely Preterm Infants. NSLHA 2022 Convention. October 15. Nebraska Innovation Campus.
291. Barlow SM, Custead R, Lee J, Hozan M, Greenwood J, Sandfort E. (2022). Wireless Sensing of Lower Lip and Digit 'Ramp-and-Hold' Isometric Force Dynamics in Neurotypical Children and Adults, and Unilateral MCA Ischemic Stroke. NSLHA 2022 state convention. October 14-15. Nebraska Innovation Campus.
292. Barlow SM, Maron JL, Song D, Jegatheesan P, Govindaswami B, Wilson BJ, Bhakta K, Cleary J, Lee J. (2023). Somatosensory-Modulated Ororythmic Patterning and Transition to Oral Feeds in EPIs: an NIH Randomized Controlled Trial. Invited platform presentation to *Global Summit on Nursing Trends 2023*: Developments and Challenges in Nursing Science & Healthcare. Rome, Italy, April 10-11.
293. Barlow SM, Maron JL, Song D, Jegatheesan P, Govindaswami B, Wilson BJ, Bhakta K, Cleary J, Lee J. (2023). Somatosensory-Modulated Suck Dynamics, Transition to Oral Feeds, and Gene Expression in Extremely Preterm Infants. Invited keynote: *California Association of Neonatologists (CAN),* Coronado, San Diego, March 3-5, 2023. Session#6 (Neuroprotection and Neonatal Sensory Development, 3/5, 10:15-11:00 platform presentation).
294. Barlow SM. (2023). (Co-Chair, speaker). Emily Zimmerman (Co-Chair, speaker): Pamela Dodrill, PhD (invited speaker) (ID# 1353517) Neonatal Feeding Club: The importance of tracking functional feeding outcomes in the newborn period and throughout childhood. *Pediatric Academic Society.* CME Compliance, Baylor College of Medicine. Saturday, April 29, 2023. Session Time: (12:30p-2:00p). Washington, DC.
295. Engsberg C, Rains A, Sado T, Wang Y, Barlow SM & Mukherjee M. (2023). The Effect of Gait-like Plantar Stimulation During Walking. *American Physiology Summit.*

296. Barlow SM, Maron JL, Song D, Jegatheesan P, Govindaswami B, Wilson BJ, Bhakta K, Cleary J, Lee J. (2023). Somatosensory-Modulated Suck Dynamics, Transition to Oral Feeds, and Gene Expression in Extremely Preterm Infants. Invited keynote: *California Association of Neonatologists (CAN),* Coronado, San Diego, March 3-5, 2023. Session#6 (Neuroprotection and Neonatal Sensory Development, 3/5, 10:15-11:00 platform presentation).
297. Barlow SM. (2023). Neonatal Feeding Club: Data pipeline, time/frequency domain analytics for NNS and transition to oral feeds in EPIs *Pediatric Academic Society.* CME Compliance, Baylor College of Med. ID 1353517. Saturday, April 29, 2023. Session Time: (12:30-12:45pm). Washington, DC.
298. Barlow SM. (2024). (Co-Chair, speaker). Emily Zimmerman (Co-Chair, speaker): Samudragupta Bora, PhD (invited speaker). Neonatal Feeding Club: Examining the cross-section of infant feeding and nutrition and subsequent neurodevelopment. *Pediatric Academic Society.* CME Compliance, Baylor College of Med. Session Time: (May 6, 2024 11:30p-1:00p). Toronto, Canada.
299. Barlow SM. (2024). Neonatal Feeding Club: Predictive Markers for Oral Feeding in Extremely Preterm Infants. *Pediatric Academic Society.* CME Compliance, Baylor College of Med. ID Session Time: (May 6, 2024 11:30p-1:00p). Toronto, Canada.
300. Barlow SM. (2024). Our Versatile Somatosensory System: Translational Neurotherapeutics Across the Lifespan. Invited speaker, University of South Florida, Tampa, FL. 1-9-24
301. Barlow SM. (2024). Somatosensory Modulation of Salivary Gene Expression and Oral Feeding in Extremely Preterm Infants – NIH RCT HD086088. Invited, Tampa General Hospital, Departments of Neonatology and Pediatrics. University of South Florida, Tampa, FL. 1-10-24
302. Barlow SM, Sanchez D, Hull T, Feuker S, Singh K, Rogers K, Harvey J. (2024). Continuous Wave Functional Near-Infrared Brain Spectroscopy Visualizing your Brain's Blood Flow in Real Time. BrainStorm 2.0 – NOON-3pm. March 24, 2024. *University of Nebraska Museum*.
303. Sanchez D, Hull T, Feuker F, Singh K, Harvey J, & Barlow SM. (2024). Continuous-Wave Near-Infrared Spectroscopy to Map Cerebral Hemodynamics During Cognition, Sensorimotor, and Somatosensory tasks in Neurotypical and MCA Stroke Adults. *Nebraska Speech-Language-Hearing Association*, Kearney NE, Sept 19, 2024, 10:30-11:30a.
304. A. K. Rains[1], C. P. Engsberg[3], A. Likens[4], Y. Wang[5], S. M. Barlow[6], M. Mukherjee[2]; (2024). [1]Biomechanics, [2]Dept. of Biomechanics, Univ. of Nebraska at Omaha, [3]Biomechanics, [4]Univ. of Nebraska at Omaha, Nonlinear Analysis Core, Omaha, NE; [5]Special Educ. and Communication Disorders, Univ. of Nebraska, Lincoln, Lincoln, NE; [6]SECD and Biol. Systems Engineering, Ctr. for Brain-Biology-Behavior, Univ. of Nebraska - Lincoln, Lincoln, NE. 10-7-24, 1:00 – 5:00 pm. *Society for Neuroscience* (Chicago, IL). Session PSTR219 - Plasticity and Reorganization in the Somatosensory System. PSTR219.10 / D46 - Machine learning tools for predicting gait-like plantar stimulation from BOLD activity of the brain.
305. *C. P. ENGSBERG[1], S. M. BARLOW[2], Y. WANG[3], M. MUKHERJEE[4]; (2024). [1]Biomechanics, Univ. of Nebraska at Omaha, Nonlinear Analysis Core, Omaha, NE; [2]SECD and Biol. Systems Engineering, Ctr. for Brain-Biology-Behavior, Univ. of Nebraska - Lincoln, Lincoln, NE; [3]Special Educ. and Communication Disorders, Univ. of Nebraska, Lincoln, Lincoln, NE; [4]Dept. of Biomechanics, Univ. of Nebraska at Omaha, Omaha, NE. *Society for Neuroscience* (Chicago, IL). Session PSTR219 - Plasticity and Reorganization in the Somatosensory System. PSTR219.11 / D47 - Plantar Tactile Stimulation of Gait Speeds: An fMRI Study.
306. Barlow SM. (2025). (Co-Chair, speaker). Emily Zimmerman (Co-Chair, speaker): *Neonatal Feeding Club: The Pathophysiological basis of Gastroesophageal Reflux Disease in Infants: Is it Reflux or Reflex or Both?* Invited keynote: Dr. Sudarshan Jadcherla, MD. *Pediatric Academic Society.* CME Compliance, Baylor College of Medicine. Session Time: Sunday April 27 12:25 to 1:50pm. Proposal ID 1925626. Honolulu, Hawaii USA. Our three speakers will address the tracking of sucking and feeding outcomes across preterm and full-term infants, with a focus on how Gastroesophageal reflux (GER) and GER disease (GERD) can impact feeding development. Dr. Steven Barlow, Founder and Co-Chair of the Neonatal Feeding Club, will introduce the session and highlight biomechanical machine learning data collected for an NIH trial. Dr. Emily Zimmerman, Club Co-Chair, will present data on the associations

between infant sucking and parent report of GER/GERD. Dr. Sudarshan Jadcherla, Invited Speaker, will discuss the developmental biology, physiology, and pathophysiology of GER/GERD. The risk factors for GER/GERD will be presented. Dr. Jadcherla will examine the economic burden and controversies surrounding GERD in neonatal intensive care unit. Lastly, recent advancements in individual assessment of GER/GERD in the NICU infant and clinical trials using objective definitions will be examined with an emphasis on evidence-based guidelines for implementation at the bedside.

307. Barlow SM. (2025). NFC paper: "Biomechanics and Machine Learning Features of NNS in Preterm Infants." *Pediatric Academic Society.* CME Compliance, Baylor College of Medicine. Submission ID. Session Time: Sunday April 27 12:25 to 12:40pm. Honolulu, Hawaii USA.
308. Slagle B, Wollesen M, Lee J, Park S, Wang Y, Harvey J, & Barlow SM. (2025). The Priming Effects of Repetitive Pneumotactile Stimulation on Real-Time Cerebral Oxymetry and Blood Vessel Dynamics during Cognitive, Language , and Sensorimotor Function in an Adult following Left Ischemic MCA Stroke: Clinical Research Case Study. *Nebraska Speech-Language-Hearing Association*, Omaha NE, Scott Conference Center, Oct 10 @ 10:15-10:45am. *Accepted platform paper*.
309. Barlow SM, Lee J, Hozan M, Greenwood J, Sandfort E. (2025). Wireless Sensing of Lower Lip and Thumb-index Finger 'Ramp-and-Hold' Isometric Force Dynamics Across the Lifespan. *10th Annual Human Movement Variability (HMV) Conference & 6th Annual Great Plains Biomechanics (GPB)* Conference. Accepted, Monday May 19, Abstract #4, poster #1, May 19,20 2025 UNO, Omaha, NE.
310. Hozan M, Greenwood J, Barlow SM. (2025). Robust fNIRS Quantification of Tactile-Evoked Cortical Hemodynamics with Comprehensive Auxiliary and Short-Separation Regressors. *Society for Neuroscience*, San Diego, CA Nov 14.
311. Wollesen M, Slagle B, Harvey J, Barlow SM. The Effect of Cerebral Somatosensory Network Priming on Language Function in Chronic L-MCA Ischemic Stroke: A Companion Case Study. *Nebraska Speech-Language-Hearing Association*, Omaha NE, Scott Conference Center, Oct 10. *Accepted poster paper*.

PUBLICATIONS

1. Hunker, C.J., Abbs, J.H., & Barlow, S.M. (1982). The relationship between parkinson rigidity and hypokinesia in the orofacial system: a quantitative analysis. *Neurology*, 32, 755-761. PMID: 7201112
2. Abbs, J.H., Hunker, C., & Barlow, S.M. (1983). Differential speech motor subsystem impairments in subjects with suprabulbar lesions: Neurological framework and supporting data. In W. Berry (Ed.), *Clinical Dysarthria*. College-Hill Press, 21-56.
3. Barlow, S.M., Cole, K.J., & Abbs, J.H. (1983). A new headmounted lip-jaw movement transduction system for the study of motor speech disorders. *J Speech Hearing Research*, 26 (2), 283-288. PMID: 6887815
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2. Cerebral oximetry and vessel dynamics during cognitive, sensorimotor, and pneumotactile stimulation in young neurotypical adults. Sanchez D, Harvey J, **Barlow SM**. (2025).
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6. Mukherjee M, Engsbert C, Wang Y, Greenwood J, **Barlow SM**. (2024). Dynamic Causal Modeling of fMRI BOLD Sensorimotor Networks elicited by Saltatory Pneumotactile Velocity Array Stimulation in Plantar Feet in MCA Stroke Survivors.

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2. Barlow SM, Kent R. (2020). Editorial. In Memoriam – Ronald W. Netsell (1938-2019). *Perspectives ASHA Special Interest Groups:* SIG 19 Speech Science, https://doi.org/10.1044/2019_PERSP-19-00150, pp 1-3.

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1. Barlow SM. (1999). **Handbook of Clinical Speech Physiology**. 380 pages. CD-ROM. Singular Publishing Group, Inc. San Diego, California. ISBN 1-56593-267-6.

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- https://youtu.be/PlNskvlV5Sk

- https://www.kxly.com/news/new-technology-at-multicare-deaconess-hospital-being-used-to-help-premature-babies-with-feeding/1069989092

  NTrainer System® (youtube.com)

- https://www.youtube.com/watch?v=W1vXBSBTmhA&feature=youtu.be
  - Dr. Steven Barlow receives the Callier Prize, University of Texas-Dallas, 2019

- **BTN** (BIG10 Network). Drs. Barlow & Bashford, pTACS and functional transcranial Doppler imaging to evoke collateral blood flow in MCA stroke. https://www.youtube.com/watch?v=qmfDgIgD-cQ Jan 2020 – present.

- https://www.youtube.com/watch?v=u1oEIx_P4GA&list=PLqtLSZO9d2iicqHCjvzE1Ky2i8OLQoJ0D
  - INNARA HEALTH – NTrainer video

- https://drive.google.com/file/d/1iHbmqx8aAj463QMgkisRpjy_htBg76x8/view?usp=sharing
  - DDK SLP video tool

- Greenwood_SM.mp4 Jake Greenwood PhD program and tech transfer projects

- https://www.3newsnow.com/lifestyle/health/omaha-radiologist-hopes-nfl-concussion-protocol-spotlights-neurological-issue-she-says-makes-her-look-drunk Dr. Barlow interviewed on cerebellar ataxia, 12-5-2022 @ 6pm broadcast. KMTV 3 *News Now Omaha*. Investigative reporter Mr. Aaron Hegarty

- Cardinal Health™ Kangaroo NTrainer™ System 2.0 Dr. Barlow's NT invention on world market, 2024-2025
  https://youtu.be/Xnu1ylHor8Y

-

- Barlow patents groundbreaking frontline stroke treatment | Nebraska Today 3/2025

EXTRACURRICULAR Activities

- Baseball (active through 1972-1983; American Legion, HT [Middleton, Cross Plains, Cottage Grove], *National Baseball Congress* finalists [USA midwest regional], [CG Hybrids] – Rock River League, State line semi-professional league)
- Baseball coach – Bloomington, Indiana (1995-1998)

- Soccer coach – Bloomington, Indiana (1998-1999)
- Softball coach/player – Lawrence, Kansas (2000-2013)
- Soccer player- Lawrence, Kansas (2010-2013)
- Capitol City Ford & Mustang Club member (2016-present)
    - Fundraiser for Lincoln's Women's Care Center, Lincoln Nebraska
    - Fundraiser for Lincoln Food Bank
    - Toys for Tots
    - Lincoln Center for People in Need
- Midwest Rollers Car Club
    - Show and fundraiser for Children's Hospital of Omaha (6-24-2023)