

STEVEN M. BARLOW, Ph.D.

Corwin Moore Professor
Dept Special Education and Communication Disorders
Associate Director: Center for Brain, Biology and Behavior
Professor (affiliate) Department of Biological Systems Engineering
University of Nebraska

Curriculum Vita (abbreviated) [September 2018](#)

Educational History:

<u>Institution</u>	<u>Major/Minor</u>	<u>Degree</u>	<u>Date</u>
University of Wisconsin	Speech Pathology	B.S.	1976
	Biology	Graduated with Honors	
University of Wisconsin	Speech-Hearing Sci	M.S.	1980
	Speech Pathology		
University of Wisconsin	Speech Physiology	Ph.D.	1984
	Neurobiology		

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 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 Caucus**, 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**. Callier Center, UT Dallas, Texas, April 14-16.

University of Nebraska

2014-present Corwin Moore Professor, Dept Special Education and Communication Disorders
 2014-present Professor (affiliate), Dept Biological Systems Engineering
 2015-present Associate Director: Center for Brain, Biology, and Behavior
 2014-present Director, Communication Neuroscience Laboratories
 2015-present Director, Functional Near Infrared Spectroscopy Laboratory at CB3

Faculty Search Committees at UNL

2015 Targeted recruitment, MEG-MRI Biomedical Engineer resulted in hiring Dr. Yingying Wang (SECD)
 Recruitment Speech Path-Voice-Swallowing, resulted in hiring Dr. Angela Dietsch (SECD)
 2015 CB3 Assistant Research Professor of Physics Medical Imaging (Dept Psychology/CB3)
 2015-present 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 Committee – tenure track MRI Analytics tenure-track faculty position (2/2018)
 2018 CB3: Round 2, Search Committee – tenure track MRI Analytics tenure-track faculty position (8/2018)

SECD Committees

- Chair Advisory Committee (2014-2016)
- 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)

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)

Memberships held in Professional Organizations:

- Soc 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

Administrative Services in the area of Speech-Language Pathology, Audiology, and Speech-Language-Hearing Sciences.

University of Nebraska

- Corwin Moore Endowed Professorship, SECD (Jan 2014-present)
- Associate Director: Center for Brain, Biology, and Behavior. (Oct 2015-present)
 - Rebuild CB3 policy and administrative and scientific infrastructure
- 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)
- Prog 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.

University Service:

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-present
- 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-present
- KU Interdisciplinary Bi-campus Team Builder, 2000-present
- KU Conflict of Interest Committee – KU Research & Graduate Studies, 2010-present
- KU Higuchi Bioscience Review Committee, 2010, 2011, 2012

University of Nebraska

Faculty mentor for Dr. Angela Dietsch (2015-present)

Faculty mentor for Dr. Yingying Wang (2016-present)

Faculty mentor for Dr. Marc Brennan (2017-present)

Faculty mentor for Dr. Amanda Rodriguez (2018-present)

SERVICE to ASHA

- Editorial Consultant: JSHR, JSLHR, JSJD (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.

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, 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 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

TEACHING

Lecturer. 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 Program 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-present

SLPA 853 – Neurological Bases of Communication Disorders (3 cr) – FALL 2014-2015

SLPA 453 – Neurological Bases of Communication Disorders (3 cr) – FALL 2016-present

SLPA 981 – Neuroprotection, Neuroimaging, & Transcranial Doppler Human Brain (2 cr) – SPRING 2015

SLPA 981 – fNIRS (2 cr) – SPRING 2017

SLPA 896 – Neonate neurobiology and neuroprotection – FALL 2016/SP 2017 (4-8 students)

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 – fNIRS, sensorimotor cortex mapping during functional tasks (3 cr) - Spring & Fall 2018

BSEN 896-008 – Somatosensory stimulus dynamics – Fall 2018

DOCTORAL 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	Dentist-Oral Surgeon, South Dakota
Kevin Spangler	Postdoc	1983-1985 Somatosensory neurophysiology	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 Scientist, Woburn, MA
Don Finan	PhD	1994-1999, speech physiology & neuroscience	Asst Professor, University of N. Colorado
Richard Andreatta	PhD	1995-2000, speech physiology & neuroscience	Assoc Professor, Dept Rehab Science University of Kentucky
Amitava Biswas	PhD	1994-2002, speech physiology, engineering	Asst Professor, U of Texas-EI Paso
Meredith Estep	PhD	2002-2009, fMRI & MEG, Neural control of speech/suck	Post-doc, Wash Univ Med School, Neonatology, fMRI/DTI preterm brain dev
Michael Hammer	PhD	2002-2009, Laryngeal sensory physiolog & vocalization in humans, NIH F31	Post-doc, Univ Wisconsin

			Scientist, Otolaryngology – Univ Wisconsin
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
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
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. Asst Professor, Malaysia National University
Marie Helen-Boudrais	PhD	2002-2007, Neuroscience, Encoding forelimb movements in SMA in primate. Committee member	Post-doc, Oxford, England Asst Professor, McGill University
Lalit Venkatesan	PhD	2006-2012, Bioengineering, Neurosci, MEG neural adaptation	Abbott Laboratories Director of Research and Development at Abbott Neuromodulation, Dallas TX
Blythe LaGasse	PhD	2006-2009	Coordinator of Music Therapy Associate Professor of Music Therapy, Colorado State University
Gustav VanAcker	MD-PhD	2007-2011, neuroscience, Monkey forelimb ICMS spatial maps	Cleveland Functional Electrical Stimulation Center
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)
Christine Kosirog	MA	2012-2013 neuro, autism	SLP Lawrence, KS
Rebecca Custead	MA, PhD	2010-2013 stroke/neuroplasticity, somatosensory physiology 2014-2016, stroke-plasticity, neuroimaging velocity encoding human face fMRI	grad student at KU grad student at UNL
	postdoc	August 2016-July 2018	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 Postdoc @ Baylor College of Medicine (Dec 2016 - present)
Cathryn 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	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	UG in elect engineering at UNL 2016, PhD student 2017-present	Barlow mentor- dissertation advisor, force dynamics, MEG neurophysiology, fNIRS, MRI, wireless sensor design
Chunxiao Liao	MS Computer Science	UG/MS engineering & computer science (China & UNL), MS student 2017-present. M.S. Graduation & thesis July 19, 2018.	summer 2017, Barlow mentor-research advisor, preterm neonate oromotor NNS dynamics and computational modeling. CS Engineer
Ben Hage	MS PhD-student	2016-present, Biomed Engineering. Transcranial Doppler MCA & Galileo Somatosensory velocity arrays Thesis defended 11-28-17. Jan 2018 enter Biomed PhD program	Grad student at UNL, Barlow mentor, thesis committee Nov 2017. Barlow mentor, doctoral committee
Mohsen Hozan	PhD student	2017-present, Biomed Engineering & Com Dis, DSP Force Dynamics	Grad student at UNL, Barlow dissertation mentor, Bashford co- advisor, Biomechanics, fNIRS, MRI
Max Twedt	PhD student	2017-present, Biomed Engineering. Doppler.	Grad student at UNL, Barlow, doctoral advisory committee member 2018- present.
Michaela Sullivan	MS-PhD student	Fall 2017-present, SLP	fNIRS, orofacial biomechanics Thesis Chair
Alejandra Marquez	MS student	Jan 2018-present, SLP	Thesis Chair
McKenzie Ochoa	MS student	Jan 2018-present, SLP	Thesis Chair
Elizabeth Hoffman	MS student	Fall 2018-present, SLP	Biomechanics, fNIRS Thesis Chair

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

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|-------------------------|---------------------------------|
| 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 |
| 1. Chelsey Krug | GRAD-SLP CNL Research Assistant |
| 2. Kelsey Sestak | GRAD-SLP CNL Research Assistant |
| 3. Austin Oder Rosner | GRAD Doctoral – Barkley Fellow |
| 4. Rebecca Custead | GRAD Doctoral – Barkley Fellow |
| 5. 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)

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)
3. Elizabeth Hoffman UG University Honors Thesis (Barlow – primary mentor 2017-2018)
SLP Grad Research – (primary mentor, Fall 2018-present, orofacial biomech)
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. Jake Greenwood UG Electrical Engineering/PhD Biomed Eng & ComDis (primary mentor)
8. Chunxiao Liao GRAD Computer Science & Biomed (NIH GRA) 2017-2018
9. Mohsen Hozan GRAD PhD Biomed (primary mentor)
10. Alaina Martens GRAD SLPA – NIH R01 Salivary Gene Expression
11. McKenzie Sesterhenn GRAD SLPA – NIH R01 Salivary Gene Expression 2018
 - i. SLPA Master's thesis student
12. Alejandra Marquez GRAD SLPA – NIH R01 Salivary Gene Expression 2018
 - ii. SLPA Master's thesis student
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

16. Amanda Evert

2018-present
GRAD MS SLPA**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 1, 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 for pilot research project. 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 Communication Neuroscience Laboratories, \$40,000 annually. 2005-2013.

- Principal Investigator, KC BioMedix: Endowment support to the Communication Neuroscience Laboratories, \$25,000. 2008.
- Core-Investigator, NIH R13 DC003383-11 (Sharon Moss – PI, Steven Barlow – Core Investigator). *ASHA Annual Research Conferences in Communication 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, 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, NIH R01 DC003311 (Barlow). *Sensorimotor Control and Development of the Human Orofacial System*. (\$2,969,509 total costs). 5-year competing renewal submitted March 05, 2014. 09/01/14 – 08/31/19. Not 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.
- 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, 2021**. 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
- Principal Investigator (SM Barlow) for a new 5-yr NIH R01 application on Acute Stroke RCT Neuroprotection. Drs. Greg Bashford (Co-PI), Y Wang, Ed Truemper from UNL, Drs. Jaehoon Lee and Kwanghee Jung from Texas Tech Univ, and Drs. Singh and Vinjay - CHI Health Neurologists. In preparation for Feb 2019.

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.

External University Reviews (invited)

- Boston University – tenure/promotion review September 2016 at the request of Christopher Moore, PhD, Dean of the Sargent College.
- Stanford University – faculty promotion review [DSong] request of Dept Pediatrics, Div Neonatology - 2016
- Stanford University – faculty promotion review [BGovindaswami] request of Dept Pediatrics, Div Neonatology – 2017
- University of Florida – faculty promotion & tenure review, Dept of Speech-Language-Pathology – 2017
- Kansas University Medical School – faculty promotion [PLee] to full professor, Dept Molecular & Integrative Physiology – 2017
- Northwestern University – faculty review/appt [BM-Harris] full professor dysphagia position – 2017.

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.

- 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) brainresearch laboratory at CB3, space remodel/reinstrument rm B74.

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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 acquisition 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 acquisition 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, Albuquerque, 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*.
30. Hartley L, Barlow SM., et al. (1991). Effects of Aging on orofacial force control. *Assoc Research Otolaryngology*.

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.
34. Miccio, A., Barlow, S.M. (1991) Systems analysis of trigemino-facial function unilateral microtia-atresia. *American Speech-Hearing-Language Association*. 105.
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36. Barlow, S.M., Finan, D., Bradford, P.T., & Andreatta, R. (1992). Mechanically evoked perioral reflexes in infants, children, and adults. *Soc Neurosci*. Anaheim, CA.
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
38. Stelmachowicz, P.G., Gorga, M.P., & Barlow, S.M. (1993). Recurrent reversible sudden hearing loss: A case study. *Assoc Research Otolaryngology*. Midwinter meeting. Clearwater Beach, FL.
39. Barlow, S.M., Finan, D.S., Bradford, P.T. & Andreatta, R.D. (1993). Probing the sensorimotor apparatus of the human face. *National Conference Speech Motor Control*. Saybrook Point, CT.
40. Andreatta, R.D., Barlow, S.M., & Finan, D.S. (1993). Modulation of the mechanically evoked perioral reflex during force dynamics. *Soc Neuroscience*. Wash, DC.
41. Finan, D.S., Barlow, S.M., & Andreatta, R.D. (1993). Modulation of the mechanically evoked perioral reflex during suck force dynamics in neonates and infants. *Soc Neuroscience*. Wash, DC.
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44. Barlow, S.M. (1994). Emergent perception-action mechanisms in the human orofacial system. Invited presentation. *Roger S. Williams Memorial Lectures: Multidisciplinary Perspectives on Motor Control and Motor Learning*. University of Missouri. Columbia, MO April 22-23.
45. Barlow SM, Finan DS, Andreatta RD & Biswas A. (1994). Probing the sensorimotor apparatus of the lower face. *Am Speech-Hearing-Language Association*.
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47. Umeda A, D'Antonio L, Barlow SM, Finan D & Petti G. (1994). Quantitative measures of perioral motor control in patients following lip-mandible split. *Assoc Research Otolaryng*, San Diego, CA
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49. Barlow, S.M., Andreatta, R.D., Finan, D.S. & Biswas, A. (1995). R1 modulation during static and dynamic force control in the perioral motor system. *Soc Neural Control Movement*. Key West, FL
50. Barlow, S.M. (1995). Invited:. Electrophysiologic Measures of the Human Communication Process. *5th Annual ASHA/NIH Research Conference*. Dec 5-6, Orlando, Florida.
51. Barlow SM, Finan DS, Andreatta R & Biswas A. (1996). Reflex modulation and entrainment of centrally patterned orofacial movements in humans. *8th Biennial Conf on Motor Speech Physiology*. Amelia Island, FL.
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55. Barlow, S.M. (1996). Invited Keynote: *3rd Intl Conference on Speech Motor Production*. Developments in Neurophysiologic Research and Neuromotor Models. Univ Nijmegen, Netherlands.
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58. Barlow, S.M. (1997). Information coding in perioral mechanoreceptive afferents in human and cat. Invited to *Institute for Sensory Research, Neuroscience and Bioengineering*. Syracuse University.
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85. Barlow, S.M. (2003). Physiological studies of the human vocal tract across the lifespan. 4th Annual Willard R. Zemplin 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 Biennial 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 Biennial 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 Biennial 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 Biennial 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 Biennial 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 Biennial National SPEECH MOTOR CONTROL Conference, Albuquerque, New Mexico, USA.
92. Hammer, M., & Barlow, S.M. (2004). Real-time biofeedback and speech aerodynamics: a preliminary study of laryngeal motor control. 13th Biennial National SPEECH MOTOR CONTROL Conference, 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, *Society for 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. *Society for 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, California.
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. *Society 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 Association*, Boston, MA. Session 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-Language-Hearing Assoc*. Overland Park, Kansas.
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, *American Speech-Language-Hearing Association*, 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 Academic 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. *Society for Neuroscience*, 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 Taalpathologie*, Vol. 17, Supplement, pp. i-ii, p30. Nijmegen 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. *American Speech-Language-Hearing Association*, #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, Gaithersburg, MD.
153. Plante E, Barlow SM. (2011). Mechanics of Grant Writing – NIH. *ASHA Lessons for Success*, April 27-29, Gaithersburg, 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, California. 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 Academic 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-Language-Hearing Association, funded by NIH. Rockville, MD. Feb 1-3.
176. Barlow SM. (2013). Chair: Neonatal Feeding Club. *Pediatric Academic Society*, 5/6/2013, Washington, 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-Language-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, Kosiog 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 somatosensory 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 Academic Society*, 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. *American Speech-Language-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 Session Chair. *Educational Neuroscience Conference*, 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. September 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, *American 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, *American 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, *Pediatric Academic Society*, San Francisco, CA. Session Date/Time: May 8, 2017 (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-Language-Hearing Association*, Session 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-Language-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. *Society for Neuroscience*, Session 671, abstract 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 for Brain, Biology, and Behavior: University of 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 Entrepreneur 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*. Submission ID: #4120, Oct 17-20, 2018 in Atlanta, Georgia.

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