

FACULTY RESEARCH ACTIVITY AND INTERESTS

Department of Communication Sciences and Disorders

East Carolina University

March 2006

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The following is a brief description of the research activity in the Department of Communication Sciences and Disorders at East Carolina University. This is an example of the faculty's research interests but by no means an exhaustive description.

Rose Allen, Ph.D.

Associate Professor

Research Interests:

Ethical issues; Supervision of graduate level students in Speech-Language Pathology and Audiology; Audiological diagnostics; Binaural Interference.

Selected Publications:

Allen, R. & Rastatter, M. (2005). *Student Judgments of Ethical/Unethical Scenarios*, ASHA Special Interest Division 11; Perspectives on Administration and Supervision, 15 (2), 12-14.

Cray, J., Allen, R., Stuart, A., Hudson, S., Layman, E., and Givens, G. (2004). *Telephone Usage Among Cochlear Implant Recipients*. American Journal of Audiology, 13(2), 200-212.

Allen, R., Stuart, A., Everett, D., and Elangovan, S. (2004). *Preschool hearing screening: Pass/Refer rates for preschool children*. American Journal of Audiology, 13 (1), 29 - 38.

- Smith, L., and Allen, R. (2004). *State of the States: What do they regulate?* ASHA Special Interest Division 11: Perspectives on Administration and Supervision, 13 (2), 3 - 4.
- Allen, R., Smith, L., and Rastatter, M. (2003). Teamwork Revisited: Are You Ready for Virtual Teams? ASHA Special Interest Division 11 Newsletter (13) 1.
- Allen, R. and Eubanks, C. (2003). Hearing aids: Reasonable expectations for parents. *Audiology Online* [On-line], Available: www.audiologyonline.com.
- Allen, R. (2002). Hearing aids: Reasonable expectations for the consumer. *Audiology Online* [On-line], Available: www.audiologyonline.com.
- Allen, R. and Culbertson, D. (2002). Students with hearing loss in audiology training programs: Academic and clinical considerations. ASHA Special Interest Division 11 Newsletter (12) 3.
- O'Rourke, C., Valente, M., Britten, F., Allen, R., Staab, M., and Schober-Peterson, D. (2002). Career paths for clinical faculty: Four university approaches. ASHA Special Interest Division 11 Newsletter (12) 1.
- Allen, R. (2000). CROS words of wisdom. *Advance for Audiologists*, pp. 42-43.
- Allen, R., Schwab, B., Cranford, J., and Carpenter, M. (2000). Investigation of binaural interference in normal hearing and hearing impaired adults. Journal of the American Academy of Audiology, (11), 494-500.
- Wynne, M., Kahn, J., Abel, D., and Allen, R. (2000). External and middle ear trauma resulting from ear impressions. Journal of the American Academy of Audiology, (11), 351-360.
- Stuart, A., Allen, R., Downs, C., and Carpenter, M. (1999). The effects of venting on in-the-ear, in-the-canal, and completely-in-the-canal hearing aid shell frequency responses: real-ear measures. Journal of Speech, Language, and Hearing Research, 42, 804-813.
- Allen, R., Cranford, J., Pay, N. (1996) Case study of central auditory processing in an adult with congenital absence of left temporal lobe, Journal of the American Academy of Audiology, August.

Kathleen Treole Cox, Ph.D.

Associate Professor

Research Interests:

Kathleen T. Cox's research interests include primarily voice and voice disorders; however, she has also mentored doctoral students and conducted research in studies of swallowing function and dysphagia. Her research is clinical in focus with specific interests in paradoxical vocal fold dysfunction and the impact of stroboscopy in the diagnosis and treatment of voice disorders. Her data is often gathered during clinical practice at the otolaryngological offices of Eastern Carolina Ear-Nose-Throat where she provides voice diagnostic and treatment services along with dysphagia services and laryngectomy care. She has close affiliations with the Vocal Music program in the ECU School of Music as well as the otolaryngologists in Greenville, North Carolina.

Selected Publications:

- Hiss, S.G., Hough, M., Treole, K., Stuart A. (2004). Effects of Age, Gender, Bolus Volume, Bolus Viscosity, and Gustation on Swallowing Apnea Onset Relative to Lingual Bolus Propulsion Onset in Normal Adults. Journal of Speech, Language and Hearing Research, 47(3):572-83.
- Hiss, S.G., Hough, M., Treole, K., Stuart, A. (2003). Swallowing Apnea as a Function of Airway Closure. Dysphagia, 18(4):293-300.
- Workman, J. R., Treole, K. (2002). Evaluation and Management of Adult Dysphagia and Aspiration. Current Opinion in Otolaryngology & Head and Neck Surgery 10(6), 478-484.
- Hiss, S., Treole, K, Stuart, A. (2001). Effects of Age, Gender, Bolus Volume, and Repeated Measures on Swallowing Apnea Duration and Swallow/Respiratory Phase Relationships in Normal Adults. Dysphagia, 16, 128-135.
- Hiss, S., Treole, K, Stuart, A. (2001) Effect of Age, Gender, and Repeated Measures on Intraoral Air Pressure in Normal Adults. The Journal of Voice, 15(2), 159-164.
- Powell, DM, Karanfilov, BI, Beechler, KB, Treole, K, Trudeau, MD, Forrest, LA. (2000). Paradoxical vocal cord dysfunction in juveniles. Archives of Otolaryngology Head and Neck Surgery, 126(1): 29-34.
- Lawrence, P., Treole, K., McCabe, R., Allen, R., Toppin, L. (2000). The Effects of Preventive Vocal Hygiene Education on the Vocal Hygiene Habits and Perceptual Vocal Characteristics of Training Singers. The Journal of Voice (14), 1: 1-13.
- Treole, K, Trudeau, M., Forrest, L.A. (1999) Endoscopic and Stroboscopic Description of Adults with Paradoxical Vocal Cord Dysfunction. The Journal of Voice (13), 1: 143-152.
- Treole, K, Trudeau, M. (1997) Changes in Sustained Production Tasks Among Women with Bilateral Vocal Nodules Before and After Voice Therapy. The Journal Of Voice, 11 (4): 362-369

Deborah Culbertson, Ph.D.

Clinical Associate Professor

Research Interests:

Clinical audiology procedures: reliability, validity, and modifications of clinical procedures.

Auditory processing: patterns of test results; relation of behavioral and objective test results.

Hearing aids, assistive devices and aural rehabilitation: verification measures (e.g., relation of programming to desired real ear gain), and benefit measures (i.e., self reports of real world function); relation of client care to on-going status of hearings aids (e.g., need for visits related to repair), conversational behaviors of seniors with hearing loss, effects of counseling.

Gregg D. Givens, Ph.D.

Professor

Research Interests:

Auditory processing and learning disabilities; Aging effects on auditory abilities; Infant and early developmental audition in humans; telemedicine applications to audiology.

Patent:

Givens, G., Balch, D., Murphy, T., Blanarovich, A., & Keller, P. Systems, methods and products for interactive diagnostic hearing assessments distributed via the use of a computer network, 2005.

Selected Refereed Publications:

- Stuart, A., Givens, G., Walker, L., Elangovan, S., (in press). Auditory Temporal Resolution In Normal Hearing Preschool Children Revealed by Word Recognition In Continuous And Interrupted Noise, *Journal of the Acoustical Society of America*.
- Walker, M., Givens, G., and Cranford, J. Holbert, D., Walker, L. (in press). Auditory Temporal Processing by Children with Reading Disorders, *Journal of Communication Disorders*.
- King, K, Hough, M, Vos, P, Walker, M and Givens, G. (in press). Word retrieval following mild TBI: implications for categorical deficits. *Aphasiology*.
- King, K.A., Hough, M.S., Vos, P., Walker, M., & Givens, G. (In Press) Word retrieval in mild TBI: Implications for categorical Deficits. *Aphasiology*.
- Hough, M.S. Givens, G.D., Cranford, J., & Downs, C.R. (In Press) Behavioral and electrophysiological measures of auditory attention in right hemisphere brain damage. *Aphasiology*.
- Givens, G. (2005). Editor, Audiology Telepractice, *Seminars in Hearing*, 26 (1).
- Cray, J., Allen, R., Stuart, A., Hudson, S., Layman, E. and Givens, G. (2004) An Investigation of Telephone Usage Among Cochlear Implant Recipients" *American Journal of Audiology*, 13 (2), 200-212.
- Barrow, I.M., Givens, G., Stuart, A., Kalinowski, J. & Rastatter, M. (2004). Influence of pause, duration and location on semantic perception of temporally ambiguous utterances in adults. *Perceptual and Motor Skills*, (100), 142-152.
- Hough, M.S. & Givens, G. (2004). Word fluency skills in dementia of the Alzheimer's type for common and goal-directed categories. *Aphasiology*. (12), 789-801.
- Givens, G. & Elangovan, S. (2003). Internet Application to Tele-audiology- "Nothin but Net". *American Journal of Audiology*, 12 (2), 59-65.
- Givens, G., Blanarovich, A., Murphy, T., Simmons, S., Balch, D., & Elangovan, S. (2003). Internet-based tele-audiometry System for the Assessment of Hearing: A Pilot Study. *Telemedicine Journal and e-Health*, 9 (4), 375-378.
- Givens, Blanarovich, Murphy, Simmons, Balch, Elangovan, (in press) Internet-based Tele-audiometry System for the Assessment of Hearing: A Pilot Study, *Journal of Telemedicine and E-Health*.

- Hough, Downs, Cranford & Givens, (2003) Measures of auditory processing in aphasia: behavioral and electrophysiological analysis, *Aphasiology*, 17(2), 159-172.
- Walker, Shinn, Cranford, Givens & Holbert, (2002) Auditory temporal processing performance of young adults with reading disorders, *JSLHR*, 45: 598-605.
- Givens et al., (1998) Auditory Processing Skills and Hearing aid Satisfaction in an Older Adult Population. *Perceptual and Motor Skills*, 86, 795-801.
- Givens, G.D. (1998) Editor, Science, Assessment and Management of Auditory Processing, *Seminars in Hearing*.

Monica Strauss Hough, Ph.D.

Professor

Research Interests:

Semantic categorization and word retrieval in aphasia and related neurogenic disorders; working memory and comprehension: influence on use of contextual information in brain-damaged populations, particularly stroke patients with aphasia and right hemisphere communication disorders; apraxia of speech; pragmatics and traumatic brain injury; behavioral and electrophysiological correlates of auditory processing and attention in neurogenic populations.

Selected Refereed Publications:

- Hough, M.S. (In Press) Adult Age Differences in Word Fluency for Common and Goal-Directed Categories. *Advances in Speech-Language Pathology*.
- Barrow, I., Rastatter, M. Hough, M.S. (In Press) The effect of mild TBI on confrontation naming. *Brain Injury*.
- King, K.A. Hough, M.S., Walker, M., Rastatter, M. & Holbert, D. (In Press) Mild Traumatic Brain Injury: Effects on Naming in Word Retrieval and Discourse. *Brain Injury*.
- King, K.A., Hough, M.S., Vos, P., Walker, M., & Givens, G. (In Press) Word retrieval in mild TBI: Implications for categorical Deficits. *Aphasiology*.
- Hough, M.S. Givens, G.D., Cranford, J., & Downs, C.R. (In Press) Behavioral and electrophysiological measures of auditory attention in right hemisphere brain damage. *Aphasiology*.
- Hough, M.S. (In Press) Word fluency strategies in aphasia for common and goal-directed categories. *Journal of Medical Speech-Language Pathology*.
- Hough, M.S. & Givens, G.D. (2004) Word fluency skills in dementia of the Alzheimer's type. *Aphasiology*, 18, 789-801.
- Hough, M. S. (In Press). Incidence of word finding deficits in normal aging. *Folia Phoniatrica*.
- Hough, M.S. (2004) Naming and category concept generation in older adults with and without dementia. *Aphasiology*, 18, 589-598.
- Hough, M.S. (2004). Effect of cognitive impairments associated with Parkinson's disease on generative naming and word retrieval. *Aphasiology*, 18, 581-588.
- Barrow, I.M., Hough, M., Rastatter, M.P., Walker, M., Holbert, D., & Rotundo, M.

- (2003). Can within category naming identify subtle cognitive deficits in mild traumatic brain injured patients? *Journal of TRAUMA, Injury, Infection, and Critical Care*, 54(5), 1-10.
- Hiss, S.G., Hough, M.S., Cox, K.T., & Stuart, A., Boutillier, S. (2004). Effects of age, gender, bolus volume, bolus viscosity, and gestation on swallowing apnea onset relative to lingual bolus propulsion onset in normal adults. *Journal of Speech-Language-Hearing Research*, 47, 572-583.
- Hiss, S.G., Hough, M., Treole, K., Stuart, A., & Boutillier, S. (2003). Swallowing apnea as a function of airway closure. *Dysphagia*, 18(4), 293-300.
- Strauss (Hough), M., Downs, R., Cranford, J., & Givens, G. (2003). Measures of Attention in Aphasia: Behavioral and Electrophysiological Analysis. *Aphasiology*, 17, 159-172.
- Strauss (Hough), M. & Barrow, I. (2003). Descriptive Discourse Abilities of Traumatically Brain-Injured Adults. *Aphasiology*, 17, 183-191.
- Strauss (Hough), M. & Klich, R.J. (2001). Word length effects on EMG/vowel duration relationships in apraxic speakers. *Folia Phoniatrica*, 53, 58-65.
- Strauss (Hough), M. (2000). Phonemic Retrieval: Anomic Aphasia Revisited. *Journal of Neurolinguistics*, 13, 1-13.
- Strauss (Hough), M. & Klich, R.J. (1999). Phrase context effects on lip EMG activity during vowel production in apraxia of speech. *Journal of Medical Speech-Language Pathology*, 7, 145-154.

Sherri M. Jones, Ph.D.

Associate Professor

Research Interests:

Vestibular and auditory physiology, Development of vestibular and balance function, Vestibular influences on physiological homeostasis, Electrophysiology

Presently, I am interested in normal development of vestibular function and the developmental process to achieve upright balance and posture. Factors that affect development including the gravitational environment, genetics and toxins are also being evaluated. I am also interested in the role(s) the vestibular system may play in physiological homeostasis, and how vestibular deficits may influence other systems such as the autonomic, motor and cardiovascular systems.

Selected Refereed Publications:

- Jones TA, Jones SM (2006) Vestibular evoked potentials. In: Burkard RF, Don M, Eggermont JJ (Eds.) *Auditory Evoked Potentials*. Lippincott Williams & Wilkins: Baltimore, MD. In press.
- Jones SM, Mock BE (2006) Responsible conduct of research in audiology. *Seminars in Hearing*, In press.
- Jones SM, Jones TA, Johnson KR, Yu H, Erway LC, Zheng QY (2006) A comparison of vestibular and auditory phenotypes in inbred mouse strains. *Brain Research*. In press.

- Stuart A, Jones SM, Walker L (2006) Insights into elevated distortion product otoacoustic emissions in sickle cell disease: Comparisons of hydroxurea treated and non-treated young children. *Hearing Research*, 212, 83-89.
- Jones SM, Johnson KR, Yu H, Erway LC, Alagramam KN, Pollak N, Jones TA (2005) A quantitative survey of gravity receptor function in mutant mouse strains. *Journal of the Association for Research in Otolaryngology*. In press.
- Alagramam KN, Stahl JS, Jones SM, Pawlowski KS, Wright CG (2005) Characterization of vestibular dysfunction in the mouse model for Usher syndrome 1F. *Journal of the Association for Research in Otolaryngology*, 6(2), 106-118.
- Fuller PM, Jones TA, Jones SM, Fuller CA (2004) Evidence for macular gravity receptor modulation of hypothalamic, limbic and autonomic nuclei. *Neuroscience*, 129, 461-471.
- Jones SM, Erway LC, Yu H, Johnson KR, Jones TA (2004) Gravity receptor function in mice with graded otoconial deficiencies. *Hearing Research*, 191, 34-40.
- Irons-Brown SR, Jones SM, Jones TA (2003) The simultaneous *in vivo* perilymphatic perfusion of avian auditory and vestibular end organs. *Journal of Neuroscience Methods*, 131 (1-2), 57-64.
- Zhang Z, Zhang X, Avniel W, Song Y, Jones SM, Jones TA, Fermin C, Chen Y (2003) Malleal processus brevis is dispensable for normal hearing in mice. *Developmental Dynamics*, 227, 69-77.
- Fuller PM, Jones TA, Jones SM, Fuller CA (2002) Neurovestibular modulation of circadian and homeostatic regulation: A vestibulo-hypothalamic connection? *Proceedings of the National Academy of Sciences*, 99(24), 15723-15728.
- Jones SM, Subramanian G, Avniel W, Guo Y, Burkard RF, Jones TA (2002) Stimulus and recording variables and their effects on mammalian vestibular evoked potentials. *Journal of Neuroscience Methods*, 118, 23-31.
- Jones TA, Jones SM, Paggett K. (2001) Primordial rhythmic bursting in embryonic cochlear ganglion cells. *Journal of Neuroscience*, 21, 8129-8135.
- Jones SM, Jones TA, Bell PL, Taylor MJ (2001) Compound gravity receptor polarization vectors evidenced by linear vestibular evoked potentials. *Hearing Research*, 154, 54-61.

Timothy A. Jones, Ph.D.

Professor

Research Interests:

Vestibular and auditory function in the developing avian embryo and neonatal mammal, the embryonic cochlear tonotopic map, factors influencing embryonic development, comparative studies on vestibular and auditory systems

I have broad interests in the evolution of sensory systems and in particular the role that gravity may have played in shaping gravity receptor systems across species. Ongoing research programs include the study of central and peripheral sensory processing in the vestibular and auditory systems. I investigate the ontogeny of function in these systems and factors that may alter or control development.

Selected Refereed Publications:

- Jones TA, Jones SM (2006) Vestibular evoked potentials. In: Burkard RF, Don M, Eggermont JJ (Eds.) *Auditory Evoked Potentials*. Lippincott Williams & Wilkins: Baltimore, MD. In press.
- Jones SM, Johnson KR, Yu H, Erway LC, Alagramam KN, Pollak N, Jones TA (2005) A quantitative survey of gravity receptor function in mutant mouse strains. *Journal of the Association for Research in Otolaryngology*. In press.
- Xue B, Skala K, Jones TA, Hay M (2004) Diminished baroreflex control of heart rate responses in otoconia deficient C57BL/6JEi head tilt (*het*) mice. *American Journal of Physiology: Heart and Circulatory Physiology*, 287(2):H741-747.
- Irons-Brown SR, Jones TA (2004) Effects of selected pharmacological agents on avian auditory and vestibular compound action potentials. *Hearing Research*. 195:54-66.
- Fuller PM, Jones TA, Jones SM, Fuller CA (2004) Evidence for macular gravity receptor modulation of hypothalamic, limbic and autonomic nuclei. *Neuroscience*. 129: 461-471
- Jones SM, Erway LC, Yu H, Johnson KR, Jones TA (2004) Gravity receptor function in mice with graded otoconial deficiencies. *Hearing Research*, 191, 34-40.
- Irons-Brown SR, Jones SM, Jones TA (2003) The simultaneous *in vivo* perilymphatic perfusion of avian auditory and vestibular end organs. *Journal of Neuroscience Methods*, 131 (1-2), 57-64.
- Zhang Z, Zhang X, Avniel W, Song Y, Jones SM, Jones TA, Fermin C, Chen Y (2003) Malleal processus brevis is dispensable for normal hearing in mice. *Developmental Dynamics*, 227, 69-77.
- Fuller PM, Jones TA, Jones SM, Fuller CA (2002) Neurovestibular modulation of circadian and homeostatic regulation: A vestibulo-hypothalamic connection? *Proceedings of the National Academy of Sciences*. 99(24), 15723-15728.
- Jones TA, Jones SM (2001) Primordial rhythmic bursting in embryonic cochlear ganglion cells. *Journal of Neuroscience*, 21(20):8129-8135.
- Jones SM, Jones TA, Bell PL, Taylor MJ (2001) Gravity receptor polarization vectors evidenced by linear vestibular evoked potentials. *Hearing Research*, 154: 54-61.

Joseph Kalinowski, Ph.D.

Associate Professor

Research Interests:

Fluency and speech science.

Dr. Kalinowski is working to develop a state-of-the-art acoustics and speech physiology laboratories to investigate normal and pathological speech production. Research interests include stuttering, normal speech physiology, the role of the auditory system in normal and disordered speech, and speech-related computer applications. Dr. Kalinowski and colleagues have established research relationships with Dr. Kathleen Jones of the State University of New York at Geneseo and Ms. Catherine Otto Montgomery of the Total

Immersion Fluency Program in New York City both of which allows access to hundreds of participants who stutter, as well as other populations.

Selected Refereed Publications:

- Kalinowski, J., Saltuklaroglu, T., Dayalu, V.N, & Guntupalli, V. (2005). Is it possible for speech therapy to improve upon natural recovery rates in children who stutter? *International Journal of Language and Communication Disorders*, 40, 349-358.
- Kalinowski, J., Guntupalli, V., Stuart, A., & Saltuklaroglu, T. (2004). Self-reported efficacy of an ear-level prosthetic device that delivers altered auditory feedback for the management of stuttering. *International Journal of Rehabilitation Research*, 27, 167-170.
- Kalinowski, J., & Saltuklaroglu, T. (2004). The road to efficient and effective stuttering management: information for physicians. *Current Medical Research & Opinion*, 20, 509-515.
- Kalinowski, J., Saltuklaroglu, T., Guntupalli, V., & Stuart, A. (2004). Gestural recovery and the role of forward and reversed syllabic repetitions as stuttering inhibitors in adults. *Neuroscience Letters*, 363, 144-149.
- Kalinowski, J. & Saltuklaroglu, T. (2003). Speaking with a mirror: Engagement of mirror neurons via choral speech and its derivatives induces stuttering inhibition. *Medical Hypotheses*, 60, 538-543.
- Kalinowski, J., & Saltuklaroglu, T. (2003). The inhibition of stuttering: A viable alternative to contemporary therapy. *Family Medicine*, 35, 7-8.
- Kalinowski, J. (2003). Self-reported efficacy of an all in-the-ear-canal prosthetic device to inhibit stuttering during one hundred hours of university teaching: a case study. *Disability and Rehabilitation*, 25, 107-111.
- Kalinowski, J. & Saltuklaroglu, T. (2003). Choral speech: The amelioration of stuttering via imitation and the mirror neuronal system. *Neuroscience and Biobehavioral Reviews*, 27, 339-347.
- Kalinowski, J., Dayalu, V. N., & Saltuklaroglu, T. (2002). Cautionary notes on interpreting the efficacy of treatment programs for children who stutter. *International Journal of Language and Communication Disorders*, 37, 359-61.
- Kalinowski, J. & Dayalu, V. (2002) A common element in the immediate inducement of effortless, natural-sounding, fluent speech in stutterers: "The second speech signal". *Medical Hypotheses*, 58, 61-66.
- Kalinowski, J., Dayalu, V. N., & Saltuklaroglu, T. (2001). Second Speech Signals versus Prolonged Speech techniques: A Reply to Onslow. *International Journal of Language and Communication Disorders*, 36, 527-529.
- Kalinowski, J., Dayalu, V. N., Stuart, A., Rastatter, M., & Rami, M. K. (2000). Stutter-free and stutter-filled speech signals and their role in stuttering amelioration. *Neuroscience Letters*, 293, 115-118.
- Kalinowski, J., Stuart, A., Rastatter, M.P, Snyder, G., & Dayalu, V. (2000). Inducement of fluent speech in persons who stutter via visual choral speech. *Neuroscience Letters*, 281, 198-200.

Michael P. Rastatter, Ph.D.

Professor

Research Interests:

Neurolinguistics, Fluency, and Speech Science.

Dr. Rastatter was the recipient of the “2004 East Carolina University Life Time Achievement Award for Research,” and has developed the Biosensory Research Laboratory in the department. Dr. Rastatter is involved in numerous research projects and welcomes student inquiry. The neurolinguistic line of research involves the study of hemispheric processing characteristics of clinical and normal populations. This line of research has led to the formulation of theoretical models of neurolinguistic organization underlying such disorders as stuttering and reading disabled children. The effects of delayed auditory feedback and frequency-altered feedback on the fluency characteristics of stuttering subjects are being investigated. The speech science line of research has focused on the developmental, acoustic parameters of the vocal tract in an attempt to propose inverse mapping models of articulatory aging processes, and to investigate various dialectal acoustic parameters.

Selected Refereed Publications:

- Rami, M.K., Kalinowski, J., Rastatter, M.P., Holbert, D., & Allen, M. (2005). Choral reading with filtered speech: Effect on stuttering. *Perception and Motor Skills, 100*, 421-431.
- Stuart, A., Kalinowski, J., Rastatter, M. P., Saltuklaroglu, T., & Dayalu, V. N. (2004). Investigations of the impact of altered auditory feedback in-the-ear devices on the speech of people who stutter: Initial fitting and four-month follow-up. *International Journal of Language & Communication Disorders, 39*, 93-113.
- Rami, M.K., Kalinowski, J., Stuart, A. & Rastatter, M.P. (2003). Self-perceptions of speech language pathologists-in-training before and after pseudostuttering experiences on the telephone. *Disability and Rehabilitation, 25*, 491-496.
- Stuart, A., Xia, S., Jiang, Y., Jiang, T., Kalinowski, J., & Rastatter, M.P. (2003). Self-contained in-the-ear device to deliver altered auditory feedback: Applications for stuttering. *Annals of Biomedical Engineering, 31*, 233-237.
- Dayalu, V. N., Kalinowski, J., Stuart, A., Holbert, D., & Rastatter, M. P. (2002). Stuttering frequency on content and function words in adults who stutter: A concept revisited. *Journal of Speech, Language, and Hearing Research, 45*, 858-870.
- Stuart, A., Kalinowski, J., Stuart, A., Rastatter, M., & Lynch, K. (2002). Effect of Delayed Auditory Feedback on Normal Speakers at Two Speech Rates. *Journal of the Acoustical Society of American, 111*, 2237-2241.
- Walker, M., Barrow, I., & Rastatter, M.P. (2001). The effects of dimension and vocabulary-age on picture naming functions. *Journal of Communication Disorders, 35*, 1-11.

- Dayalu, V. N., Saltuklaroglu, T., Kalinowski, J., Stuart, A., & Rastatter, M. P. (2001). Producing the Vowel /a/ Prior to Speaking Inhibits Stuttering in Adults. *Neuroscience Letters*, 306, 111-115
- Kalinowski, J., Dayalu, V.N., Stuart, A., Rastatter, M.P., & Rami, M.K. (2000) Stutter-free and Stutter-filled Speech Signals and Their Role In Stuttering Amelioration. *Neuroscience Letters*, 293, 115-118.
- Barrow, I, Holbert, D, & Rastatter, M.P. (2000). Effect of Color on Developmental Picture-Vocabulary Naming of 4, 6, and 8 year old Children. *American Journal of Speech-Language Pathology*, 9, 310-318.
- Kalinowski, J., Stuart, A., Rastatter, M. P, Dayalu, V. & Snyder, G. (2000). Inducement of Fluent Speech in Persons Who Stutter Via Visual Choral Speech. *Neuroscience Letters*, 281,198-200
- Rami, M., Kalinowski, J., Stuart, A., & Rastatter, M.P., (1999). Voice Onset Time and Burst Frequency of Velar Stop Consonants in Asian Indian Gujarati. *Journal of the Acoustical Society of America*, 106, 3736-3738.
- Kalinowski, J., Stuart, A., Wamsley, L., & Rastatter, M.P. (1999). Effect of monitoring condition and altered auditory feedback on stuttering frequency. *Journal of Speech, Language, and Hearing Research*, 42, 13447-1354.

Martha L. (Betty) Smith, Ph.D.

Clinical Professor

Research interests include the development and disorders of communication skills in infants, toddlers, and preschoolers. Of specific interest has been the diagnosis and treatment of childhood apraxia of speech and early literacy skills of young children with previous diagnoses of a speech and/or language disorders

Andrew Stuart, Ph.D.

Professor

Research Interests:

Early Infant Hearing Screening, Electrophysiology, Pediatric Audiology, Psychoacoustics, Altered Auditory Feedback and Stuttering.

Primary research and clinical interests are in the area of infant/child auditory assessment (both behavioral and electrophysiological) and auditory temporal processing. Along with other colleagues at East Carolina University, research of issues in fluency has been ongoing.

Selected Refereed Publications:

- Stuart, A., Jones, S.M., & Walker, L.J. (2006). Insights into elevated distortion product otoacoustic emissions in sickle cell disease: Comparisons of hydroxyurea-treated and non-treated young children. *Hearing Research*, 212, 83-89.

- Stuart, A. (2005). Development of auditory temporal resolution in school-age children revealed by word recognition in continuous and interrupted noise. *Ear and Hearing, 26*, 78-88.
- Stuart, A., & Kalinowski, J. (2004). The perception of speech naturalness of post-therapeutic and altered auditory feedback speech of adults with mild and severe stuttering. *Folia Phoniatica et Logopaedica, 56*, 347-357.
- Stuart, A. (2004). An investigation of list equivalency of the Northwestern University Auditory Test No. 6 in interrupted broadband noise. *American Journal of Audiology, 13*, 23-28.
- Stuart, A., Kalinowski, J., Rastatter, M. P., Saltuklaroglu, T., & Dayalu, V. N. (2004). Investigations of the impact of altered auditory feedback in-the-ear devices on the speech of people who stutter: Initial fitting and four-month follow-up. *International Journal of Language & Communication Disorders, 39*, 93-113.
- Stuart, A., Xia, S., Jiang, Y., Jiang, T., Kalinowski, J., & Rastatter, M.P. (2003). Self-contained in-the-ear device to deliver altered auditory feedback: Applications for stuttering. *Annals of Biomedical Engineering, 31*, 233-237.
- Stuart, A., Kalinowski, J., Rastatter, M., & Lynch, K. (2002). Effect of delayed auditory feedback on normal speakers at two speech rates. *Journal of the Acoustical Society of American, 111*, 2237-2241.
- Stuart, A., Kalinowski, J., Rastatter, M., & Lynch, K. (2002). Effect of delayed auditory feedback on normal speakers at two speech rates. *Journal of the Acoustical Society of American, 111*, 2237-2241.
- Stuart, A., & Yang, E.Y. (2001). Effect of gender on auditory brainstem response latencies and thresholds to air-and bone-conducted clicks in newborn infants. *Journal of Communication Disorders, 34*, 229-239.
- Stuart, A., Moretz, M., & Yang, E.Y. (2000). An investigation of maternal stress following neonatal hearing screening. *American Journal of Audiology, 9*, 135-141.

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Research Interests:

Reading Disorders, Neurolinguistics, Language Disorders in the Psychiatrically Disordered Population

Recent research has been conducted in the area of hemispheric processing patterns of lexical decisions in reading disordered adults. This neurolinguistic investigation examined processing strategies of college students with diagnosed reading disorders. The experimental paradigm is currently being applied to children with reading disorders.

Another line of research involves the investigation of types of language disorders in children with psychiatric disorders. The effects of widespread deficits in verbal reasoning, verbal expression, and discourse are being explored in relation to the overall system of care for these children, including mental health treatment. This research has

been a collaborative endeavor with a Child/Adolescent Psychiatrist and has resulted in successful grant funding.

Selected Publications:

- King, K., Hough, M., Vos, P., Walker, M., & Givens, G. (In Press)
Word Retrieval Following Mild TBI: Implications for
Categorical Deficits. Aphasiology.
- Walker, M. & Rastatter, M. (2003). The Influence of vocabulary age and spatial
dimension on rapid picture naming in children with reading disorders. Journal of
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- Barrow, I. M., Hough, M., Rastatter, M. P., Walker, M., Holbert, D., and Rotondo, M. F.
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adults. Journal of Trauma, Injury, Infection, and Critical Care, 54 (5), 1-10.
- Walker, M. (2002). Visual and lexical factors in naming speed by children with reading
disorders. Perceptual and Motor Skills, 95 1196-1198.
- Walker, M., Shinn, J., Cranford, J., Givens, G., & Holbert, D. (2002) Auditory
temporal processing performance of young adults with reading disorders. Journal
of Speech Language and Hearing Research, 45, 598-605.
- Walker, M., Barrow, I., & Rastatter, M. (2002). The effect of dimension and vocabulary
age on rapid picture naming in children. Journal of Communication Disorders, 35,
1-11.
- Walker, M. (2001). Transfer of lexical information in adults with reading disorders.
Perceptual and Motor Skills, 93, 257-267.
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for lexical decisions in adults with reading disorders. Perceptual and Motor Skills,
92, 273-287.
- Walker, M. (1999). Innovative Models of Phonological Awareness in University Program
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