

Curriculum Vitae

Ryan A. Stevenson

Multisensory Research Laboratory
Vanderbilt University Medical Center

Contact Information

7110 MRB III BioSci Bldg
465 21st Ave. South
Nashville, TN, 37232
615-936-7108
ryan.a.stevenson@vanderbilt.edu
<http://www.kc.vanderbilt.edu/multisensory/index.html>

Education

- 2005-2010 PhD in Psychology and Neural Sciences, Indiana University
Thesis title: "Multisensory integration of audition and vision in object recognition and speech perception"
Advisors: Prof. Thomas W. James
Committee: Profs. David Pisoni, Aina Puce, and James Townsend
- 1999-2003 Bachelor of Science, University of Michigan
Biopsychology & Cognitive Sciences
Advisor: Dr. Patricia Reuter-Lorenz

Awards and Honors

- 2009 Faculty of 1000 Poster Selection
2009 GPSO Travel Award
2009 U&GR Research Symposium Poster Award
2008 Society for Neuroscience ICAM Poster Award
2008 Indiana Neuroimaging Symposium Award for Excellence
2007 Human Brain Mapping Travel Award
2006, 2007 Graduate Student Commendation, Indiana University
2006 NSF Graduate Research Fellowship Honorable Mention

Research Interests

Multisensory Integration - Audiovisual Speech - Speech and Object Perception
Functional Neuroimaging - fMRI Methodology - Affective Processing

Research Experience

- 2010 - Multisensory Research Laboratory
Vanderbilt University Medical Center
Advisor: Dr. Mark Wallace
Position: Post Doctoral Researcher
- 2005-2010 Perception and Neuroimaging Laboratory
Indiana University Dept. of Psychological & Brain Sciences
Advisor: Dr. Thomas James
Position: Doctoral Trainee

- 2005-2006 Imaging Research Facility
Indiana University Dept. of Psychological & Brain Sciences
Advisors: Drs. Julie Stout & Hu Cheng
Position: Research Assistant
- 2002-2003 Flavin Enzymology Laboratory
University of Michigan Dept. of Biochemistry
Advisor: Dr. Bruce Palfey
Positions: Research Assistant
- 2002 Cognitive Neuroimaging Laboratory
University of Michigan Dept. of Psychology
Advisor: Drs. Jon Jonides & Tor Wager
Position: Research Assistant
- 2000-2002 Affective Neuroscience Laboratory
University of Michigan Dept. of Psychology
Advisor: Drs. Patricia Reuter-Lorenz & Joseph Mikels
Position: Research Assistant

Teaching Experience

Classes Instructed:

2007 P211: Methods in Psychology

Classes Assisted:

2010 P747: Semester in Cognitive Psychology: Multisensory Integration

2008 P650: Neuroimaging: Theories and Methods

2008 P433: Neuroimaging: Theories and Methods

2007 K300: Introduction to Statistics

2006, 2007 P151: Introduction to Psychology

Guest Lectures:

2009 The Perception of Speech

2009 The Mind-Body Connection

2008, 2009 Emotional Responses: The Brain, Hormones, and Evolution

2007, 2008 The Science of Stress

Grant Support & Funding

2008-2010 NIH # T32 DC00012, Training in Speech, Hearing, and Sensory Communication
PI: Dr. David Pisoni

2007, 2009 Aging and Speech Communication Student Scholarship

2007-2008 Friends of the Kinsey Institute Research Grant

2006 GPSO Research Grant

Professional Organizations and Memberships

2009-2010 Society for Neuroscience

2008-2009 Vision Sciences Society

2007-2008 Organization for Human Brain Mapping

Ad Hoc Referee for:

Behavior Research Methods, Brain and Cognition, Brain Topography, The Organization for Human Brain Mapping, Journal of Neuroscience

Service and Volunteer Organizations

2007-2008 American Psychological Society Campus Representative
2005-2008 Indiana Junior Academy of Science
2005-2007 Coordinator for the Indiana University Neuroimaging Group

Undergraduate Supervision

2008-2010 Ross VanDerKlok, BA
Awards: Excellence in Research Award, 2010
Indiana university MAPS Research Symposium Award, 2009
Society for Neuroscience ICAM Award, 2008
2007-2008 Sharada Subramanian, BA
2006-2007 Jennifer Willingham, BA, MA
2005-2006 Marisa Geoghegan, BA

Peer-reviewed Journal Articles & Book Chapters

- Stevenson, R. A.**, VanDerKlok, R. M., Pisoni, D. B., James, T. W. (Under Review). Discrete neural substrates underlie complementary audiovisual speech integration processes. *Neuron*.
- James, T. W., VanDerKlok, R. M., **Stevenson, R. A.**, & James, K. H. (Under Review). Multisensory perception of action in posterior temporal cortex. *Neuropsychologia*.
- Kim, S., **Stevenson, R. A.**, & James, T. W. (Under Review). Lateralization of visuo-haptic neuronal convergence demonstrated by inverse effectiveness. *Experimental Brain Research*.
- James, T. W. & **Stevenson, R. A.**, Kim, S. (In Press). Inverse effectiveness in multisensory processing. In *The New Handbook of Multisensory Processes*. Ed. Stein, B. MIT Press, Cambridge, MA.
- James, T. W. & **Stevenson, R. A.** (In Press). The use of fMRI to assess multisensory integration. In *Frontiers in the Neural Bases of Multisensory Processes*. Eds. Wallace, M. & Murray, M. Taylor & Francis Group, London.
- Stevenson, R. A.**, Stevenson, L. D., Rupp, H. A., Janssen, E., Kim, S., James, T. W. (In Press). Incorporating emotions specific to the sexual response into the basic and dimensional theories of emotion using the Indiana Sexual and Affective Word Set (ISAWS). *Archives of Sexual Behavior*.
- Stevenson, R. A.**, Altieri, N. A., Kim, S., James, T. W. (2010). Neural processing of asynchronous audiovisual speech perception. *NeuroImage*, 49: 3308-3318.
- Stevenson, R. A.**, Kim, S., James, T. W. (2009). An additive-factors design to disambiguate neuronal and areal convergence: Measuring multisensory interactions between audio, visual, and haptic sensory streams using fMRI. *Experimental Brain Research*, 198:183-194.

Stevenson, R. A., & James, T. W. (2009). Audiovisual integration in the human superior temporal sulcus: Inverse effectiveness and the neural processing of speech and object recognition. *NeuroImage*, 44:1210-1223.

Stevenson, R. A., & James, T. W., (2008). Affective auditory stimuli: Characterization of the International Affective Digitized Sounds (IADS) by discrete emotional categories. *Behavior Research Methods*, 40(1):315-321.

Stevenson, R. A., Geoghegan, M. L., & James, T. W. (2007). Superadditive BOLD activation in superior temporal sulcus with threshold non-speech objects. *Experimental Brain Research*, 179:85-95.

Stevenson, R. A., Mikels, J. A., & James, T. W. (2007). Characterization of Affective Norms for English Words by Discrete Emotional Categories. *Behavior Research Methods*, 39(4):1020-1024.

Manuscripts in Preparation

Stevenson, R. A., Bushmakin, M., Kim, S., Puce, A., James, T. W. (In Prep). Multisensory interactions and stimulus salience in evoked potentials with audiovisual speech. *Journal of Cognitive Neuroscience*.

Stevenson, R. A., VanDerKlok, R. M., Kim, S., James, T. W. (In Prep). Neural networks underlying temporal asynchrony and semantic incongruity effects in audiovisual speech processing. *NeuroImage*.

James, T. W., VanDerKlok, R. M., Kim, S., & **Stevenson, R. A. (In Prep).** Metamodal auditory shape processing in the occipito-temporal cortex. *Neuropsychologia*.

Oral Presentations

Stevenson, R. A. (2010). Multisensory interactions in BOLD fMRI. *Multisensory Research Laboratory*, Vanderbilt University, Nashville, TN.

James, T. W., **Stevenson, R. A.,** Kim, S. (2009). Assessing multisensory integration with additive factors and functional MRI. *2009 International Society for Psychophysics*. Galway, Ireland.

Kim, S., Eylath, D., **Stevenson, R. A.,** & James, T. W. (2009). Neuronal convergence of visual and somatosensory shape processing in both ventral and dorsal streams. *2009 Society for Neuroscience*. Chicago, IL, USA.

Stevenson, R. A. (2008) Asynchrony in audiovisual speech integration: fMRI studies of superior temporal sulcus. *Speech Research Lab*, Indiana University.

Competitive & Communicated Abstracts

Stevenson, R. A., VanDerKlok, R. M., Kim, S., & James, T. W. (2009). Different neural networks underlie temporal asynchrony and semantic incongruity effects in audiovisual speech. *2009 Society for Neuroscience*. Chicago, IL, USA.

- Stevenson, R. A.**, Altieri, N. A., Kim, S., Pisoni, D. B., & James, T. W. (2009). Different neural networks underlie temporal asynchrony and stimulus saliency effects with audiovisual speech. *3rd International and Interdisciplinary Research Conference on Aging and Speech Communication*. Bloomington, IN, USA.
- Stevenson, R. A.**, Kim, S., & James, T. W. (2009). Investigating viable criteria for assessing neuronal convergence with BOLD fMRI. *The Tenth International Multisensory Research Forum*. New York, NY, USA.
- Kim, S., **Stevenson, R. A.**, Eylath, D., & James, T. W. (2009). Inverse effectiveness in the left but not right lateral occipital complex during visuo-haptic object categorization. *The Tenth International Multisensory Research Forum*. New York, NY, USA.
- Stevenson, R. A.**, VanDerKlok, R. M., Kim, S., James, T. W. (2009). Perception-based responses in a sub-region of multisensory superior temporal sulcus: Distinct BOLD responses with perceived-synchronous and perceived-asynchronous audiovisual speech. *2009 9th Annual Meeting of the Vision Sciences Society*. Naples, FL, USA.
- Lee, S., Lang, A., Kim, S., **Stevenson, R. A.**, & James, T. W. (2009). Neural effects of exposure to emotional faces in media content: Type (human vs. animal), Form (cartoon vs. real), and emotion (positive, negative, and neutral). *2009 Annual Meeting of the International Communication Association*. Chicago, IL, USA.
- Stevenson, R. A.**, Altieri, N. A., Kim, S., James, T. W. (2008). Anatomically and functionally distinct regions within multisensory superior temporal sulcus differentially integrate temporally-asynchronous speech. *The Ninth International Multisensory Research Forum*. Hamburg, Germany.
- Kim, S., Eylath, D., **Stevenson, R. A.**, James, T. W. (2008). Evidence for ventral and dorsal neural pathways for visuo-haptic object recognition. *The Ninth International Multisensory Research Forum*. Hamburg, Germany.
- Stevenson, R. A.**, Stevenson, L. D., Rupp, H. A., Kim, S., James, T. W. (2008). Emotional responses to sexual words: Including sexual emotions in basic and dimensional frameworks of affect. *The 34th Annual Meeting of the International Academy of Sex Research*. Leuven, Belgium.
- Lee, S., Kim, S., **Stevenson, R. A.**, James, T. W., Lang, A. (2008) Neural effects of exposure to emotional faces: Human and animal cartoons vs. Human and animal photographs. *The 48th Annual Meeting of the Society for Psychophysiological Research*. Austin, TX, USA.
- Stevenson, R. A.**, Kim, S., & James, T. W. (2007). Degraded audio-visual speech and object stimuli increases multisensory enhancement in the BOLD fMRI signal. *2nd International and Interdisciplinary Research Conference on Aging and Speech Communication*. Bloomington, IN, USA.

Stevenson, R. A., Geoghegan, M. L., James, T. W. (2007). Degrading audio-visual stimuli inversely affects superadditive multisensory enhancement in the BOLD signal. *The Thirteenth Annual Meeting of the Organization for Human Brain Mapping*. Chicago, IL, USA.

**Winner of the OHBM Travel Award*

Conference Proceedings

James, T. W., **Stevenson, R. A.**, Kim, S. (2009). Assessing multisensory integration with additive factors and functional MRI. *Proceedings of the International Society for Psychophysics*. Galway, Ireland.

Lee, S., Lang, A., Kim, S., **Stevenson, R. A.**, & James, T. W. (2009). Neural effects of exposure to emotional faces in media content: Type (human vs. animal), Form (cartoon vs. real), and emotion (positive, negative, and neutral). *Proceedings of the International Communication Association*.