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## BIOGRAPHICAL SKETCH

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NAME Cascio, Carissa J.	POSITION TITLE Assistant Professor		
eRA COMMONS USER NAME CASCIOC			
EDUCATION/TRAINING (Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)			
INSTITUTION AND LOCATION	DEGREE (if applicable)	YEAR(s)	FIELD OF STUDY
Baylor University, Waco, TX	BA	1997	Neuroscience
Emory University, Atlanta, GA	PhD	2003	Neuroscience
University of North Carolina, Chapel Hill, NC	Post Doc	2003-2007	Neurodevelopmental Disorders

### A. Personal Statement

My research is focused on sensory and affective symptoms in autism spectrum disorders (ASD). My lab uses behavioral approaches to quantify sensation and perception, focusing on direct observational assessment and psychophysics. These approaches are combined with neuroimaging and neurophysiological approaches such as diffusion tensor imaging (DTI) and event-related potentials (ERP) that measure neural structure and function in brain systems relevant to sensory perception and emotion. The overarching goal of my work is to better understand how basic sensory and limbic neural systems contribute to the complex array of social and communication impairments in ASD with an eye toward using this knowledge to improve early identification and intervention approaches.

### B. Positions and Honors

#### Positions

2009-present Assistant Professor, Vanderbilt University, Department of Psychiatry  
2007-2009 Research Assistant Professor, Vanderbilt University, Department of Psychiatry

#### Honors

2001-2003 Individual Predoctoral National Research Service Award: NINDS 1F31NS042519-01  
1997 Outstanding Senior in Research, Baylor University Department of Psychology and Neuroscience  
1994-1997 Baylor University Dean's List  
1993-1997 Baylor University Presidential Scholarship (Fall 1993-Spring 1997)  
1993-1995 Robert C. Byrd Academic Scholarship (Fall 1993-Spring 1995)

### B. Selected peer-reviewed publications

- Cascio, C.J. Somatosensory processing in neurodevelopmental disorders. *J Neurodev Disord*, 2, 62-69, 2010.
- Foss-Feig, JH, Kwakye, L, Cascio, CJ, Burnette, CP, Kadivar, H, Stone, WL, Wallace, MT. An extended multisensory temporal binding window in autism spectrum disorders. *Exp Brain Res*, 203, 381-389, 2010.
- Cascio, C., McGlone, F., Folger, S., Tannan, V., Baranek, G., Pelphrey, K., & Essick, G. (2008). Tactile perception in adults with autism: a multidimensional psychophysical study. *Journal of Autism and Developmental Disorders* 38, 127-137.
- Tommerdahl, M., Tannan, V., Cascio, C.J., Baranek, G., & Whitsel, B. (2007). Vibrotactile adaptation fails to enhance spatial localization in adults with autism. *Brain Research* 1154, 116-123.
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- Cascio, C., Gerig G, & Piven, J.. (2007). Pediatric diffusion tensor imaging: Application to the study of the developing brain. *J. Am. Acad. Child Adolesc. Psychiatry* 46(2), 213-223.
- Cascio, C., Styner, M., Smith, R.G., Gerig, G., Hazlett, H.C., Jomier, M., Bammer, R., & Piven., J. (2006). Reduced relationship to cortical white matter volume revealed by tractography-based segmentation of the corpus callosum in young children with developmental delay. *Am J. Psychiatry* 163, 2157-2163.
- Styner, M. , Gimpel-Smith, R., Cascio, C., Oguz, I., and Jomier, M. (2005). Corpus callosum subdivision based on a probabilistic model of inter-hemispheric connectivity. *Medical Image Computing and Computer Assisted Interventions LNCS 3750*, 765-772.
- Cascio, C.J., and Sathian, K. (2001). Temporal cues contribute to tactile perception of roughness. *J. Neurosci.* 21, 5289-5296.
- Gingrich, B., Liu, Y., Cascio, C., Wang, Z., and Insel, T.R. (2000). Dopamine D2 receptors in the nucleus accumbens are important for social attachment in female prairie voles (*Microtus ochrogaster*). *Behavioral Neuroscience*, 114, 173-183.
- Wang, Z., Yu, G., Cascio, C., Gingrich, B., and Insel, T.R. (1999). Dopamine D2 receptor-mediated regulation of partner preference in female prairie voles (*Microtus ochrogaster*): A mechanism for pair bonding? *Behavioral Neuroscience* 113, 602-611.

## C. Research Support

### Ongoing Research Support

The Landreth Family Discovery Grant 9/01/2009 – 8/31/2011  
 Neuroimaging and genetics of sensory processing in autism spectrum disorders.  
 The goal of this project is to integrate serotonin genetics, sensory evaluation, and multimodal neuroimaging in the investigation of sensory processing issues in autism including multisensory integration and hyper/hypo-sensitivity to sensory stimuli.  
 Role: PI

### Completed Research Support

Basic and Clinical Research Award (PIs: Essick, GK and Cascio, CJ) 07/01/2007 – 6/31/2010  
 Autism Speaks  
 Unisensory and multisensory interactions in autism  
 The aim of this project is to investigate the neural basis of sensory processing differences in autism, from unimodal and multimodal sensory perspectives, using psychophysical measurement and fMRI.  
 Role: co-PI

The Carrell Family Discovery Grant 11/01/2008 – 10/31/2009  
 The Vanderbilt Kennedy Center Nicholas Hobbs Society  
 Thalamocortical pathways and sensory processing in autism  
 The goal of this project is to characterize the microstructure of fibers connecting thalamus and sensory cortical areas in autism, and to relate these neural data to behaviorally observed indices of sensory defensiveness.  
 Role: PI