

Timothy Raymond Brick, Ph.D.

Email: tbrick@virginia.edu **Web:** <http://people.virginia.edu/~trb6e> **Mobile:** 574.850.9240
Office: Department of Psychology, Gilmer Hall Room 102, University of Virginia, Charlottesville, VA 22904

Summary of Qualifications

- Skilled at research design and advanced data analytic techniques
- Expertise in language production/comprehension, human-robot interaction, and the dynamics of conversation
- Pioneer in the application of computational technologies to real-world problems
- Experienced developer both as project lead and team member

Education

UNIVERSITY OF VIRGINIA, DEPARTMENT OF PSYCHOLOGY

Ph.D. Cognitive and Quantitative Psychology

August 2011

Dissertation Title:

(Re)moving Parts: Towards a System for the Separation of Affective Movements in Facial Video

UNIVERSITY OF NOTRE DAME, DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

M.S. Computer Science and Engineering

August 2007

Thesis Topic: TIDE: A Timing-sensitive Incremental Discourse Engine

B.S. Computer Science as Engineering & B.A. Psychology

2001 & 2002

Relevant Work Experience

Visiting Fellow (2009) Lifespan Development Group, Max Planck Institute for Human Development, Berlin.

Adjunct Faculty (Fall 2008), Department of Psychology, University of Virginia.

Independent Contractor (2006–2007), contracted to MBA Business Solutions; web programming and instruction

Teacher and Americorps Grant Director (2002–2005), Red Cloud High School, Red Cloud Indian Schools, Inc.

Research Assistant (2000–2005), Depts of Psychology and Computer Science, University of Notre Dame

Independent Contractor (1997), contracted to Tivoli (an Independent Business Division of IBM)

Selected Software Projects and Patents

System, Computer Program Product and Method for Low Bandwidth Videoconferencing with Motion Parallax Patent submitted to U.S. Patent Office. A system for high-presence, full-frame-rate videoconferencing over a dial-up speed connection. With Steven M. Boker and Jeffrey R. Spies.

OpenMx: Multipurpose Software for Statistical Modeling Open-source software for statistical modeling, including Structural Equation Modeling. See <http://openmx.psyc.virginia.edu> for project details. Lead back-end developer, core development team member.

TIDE: A Timing-sensitive Incremental Discourse Engine An incremental discourse processing module allowing a robotic system to understand task-relevant utterances and provide real-time backchannel feedback (nods, eye-gazes, etc) before the utterance was complete. Also allowed verbal responses including speaker correction and interruption. Sole designer and developer.

Selected Papers

Brick, T. R., Hunter, M. D., & Cohn, J. (2009). Get the FACS Fast: Automated FACS face analysis benefits from the addition of velocity. *Proceedings of the 2009 International Conference on Affective Computing & Intelligent Interactions (ACII 2009)*.

Theobald, B., Matthews, I., Mangini, M., Spies, J., **Brick, T. R.,** Cohn, J. F. & Boker, S. (2009) Mapping and Manipulating Visual Prosody. *Journal of Language and Speech*, 52(2/3), 369–386.

Brick, T. R., Schermerhorn, P.W., and Scheutz, M. (2007). Speech and Action: Integration of Action and Language for Mobile Robots. *Proceedings of the 2007 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS 2007)*, 1423–1428.

Brick, T. R., and Scheutz, M. (2007). Incremental Natural Language Processing for HRI. *Proceedings of the Second ACM IEEE International Conference on Human-Robot Interaction (HRI 2007)*.

Selected Honors and Awards

LIFE Fellow Speaker (2008-2010) selected to represent the Virginia fellows at steering committee meetings of the international LIFE program on lifespan development.

Presidential Fellow (2007-present) from the University of Virginia.