Franklin P. Tamborello, II, Ph.D.

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Education
Ph.D. (2009) in Human-Computer Interaction with emphases in Computational Cognitive Modeling and Human Error, Rice University, Houston, Texas. Dissertation title: *A Computational Model of Routine Procedural Memory.* Advisor: Dr. Michael D. Byrne.

Objective
I desire to use advancements in cognitive theory to develop life-saving human error prediction, detection, and mitigation applications, including statistical models and artificially-intelligent agents, while also using those applications to drive development in cognitive theory as it pertains to Human Factors Psychology.

Expertise
- Human-Computer Interaction/Human Factors Psychology, specialist in Human Error
- Computational Cognitive Modeling
- Experimental Cognitive Psychology
- Project management, including management of human capital
- Software engineering of interactive data collection, simulation, & data parsing systems
- Oral and written technical communication

Skills
- Systems thinking & problem solving at a dynamic systems level
- Descriptive and inferential statistics
- Task analysis (GOMS family, KLM)
- Programming using Functional & Object-Oriented paradigms (Lisp, Scheme, ACT-R, SPSS, R, Java)

Experience
- W. M. Keck Postdoctoral Fellow (March 2009 – June 2011) School of Biomedical Informatics, University of Texas Health Science Center at Houston. Supervisor: Dr. Hongbin Wang. I managed a project to develop a theory of visuospatial representation, gather empirical and simulation data, and deliver findings and new theoretical insights by oral presentation and written document. I also participated in Gulf Coast Consortia for Quantitative Biomedical Sciences' lectures & conferences, networking with biomedical informatics professionals, finding common ground in biomedical procedures & information tools.
- Graduate Research Assistant (August 2003 – March 2009) Computer-Human Interaction Laboratory, Department of Psychology, Rice University. Supervisor: Dr. Michael D. Byrne.
  - I managed the lab's human error project, which synthesized a new theory of human performance in routine and near-routine task environments, emphasizing how human error can arise from features of the task environment and cognition. I designed experiments, gathered empirical data, supervised a team of research assistants, and assessed theory in a computational simulation. The delivered product was my dissertation, as well as data presented to the funding agency, the Office of Naval Research.
  - I co-managed another, inter-institutional collaborative project on the initiative of myself and a few fellow graduate students. This second project examined the role of peer learning in users' adoption of efficient software interaction methods. Delivered products include four refereed and archived conference papers and their presentations, and a journal article in revision.
- Co-Op (Summer, 2005), Lockheed-Martin, NASA Johnson Space Center. Supervisor: Jurine Adolf. I reviewed NASA's human factors design requirements documentation for the Constellation project. I documented prototype equipment trials for in-spacesuit Heads-Up Displays, hand tools, and a Lunar/Martian personnel vehicle. I co-planned, executed, and presented a usability study of food package labels.
- Lab Manager (June 1998 – August 2003) Brain and Language Laboratory, Department of Psychology, Rice University. Supervisor: Dr. Randi C. Martin. I assisted in design, construction, data collection and analyzation of experiments on undergraduate, brain injury patient, and age-matched control subject populations. I maintained lab equipment, supplies, and subject payment funds. I also supervised research assistants' data collection.