






**ECCENTRIC COG**

Trey Roady, PhD, AHFP

UX Researcher  
Human Factors Engineer  
College Station, TX

 [Trey@EccentricCog.net](mailto:Trey@EccentricCog.net)

 (on request)

 [www.EccentricCog.net](http://www.EccentricCog.net)

## Skills

UX / HCD:

Usability Testing  
Heuristic Walkthrough,  
Persona Analysis,  
Work / Task Analysis,  
Change Management,  
Axure Prototyping

Ethnography:

Survey Development,  
Qualtrics, mTurk,  
Industrial Evaluation  
Job Analysis  
Contextual Inquiry

Programming:

C/C++, Python, R,  
VBA, HTML, CSS

Systems Engineering:

Statistics, Optimization,  
Quality Control,  
Experimental Design,  
Engineering Management,  
Simulation,  
AutoCAD Inventor

Professional:

Public Speaking, Debate  
Technical Writing,  
Spanish (basic)

## Summary

Passionate advocate for human centered systems and translating user benefits into business goals. Blends qualitative research methods with strong quantitative background to define user pain points and drive lean and responsive experiences. Extremely comfortable combining insights from different fields. Notable experience with professional communication, mentorship, and group leadership. Believes strongly in bettering and empowering users by aligning incentives.

## Education



PhD: Interdisciplinary Engineering

**Focus:** Human Factors & Cognitive Systems

BS: Industrial & Systems Engineering

**Minor:** Psychology

## Career


- Research Assistant, HF&CS Lab May 2014 - Aug. 2015; May 2016 - Present
- Identified pilot demographic most likely to violate FAA standards. Created FAA technology standards to support cognitive workload
  - Developed systems-oriented mobile medical device design framework, SEIPS-m
- Teaching Assistant, College of Engineering Aug. 2012 - May 2014  
Aug. 2015 - May 2015  
Aug. 2018 - May 2018
- Mentored 26 Senior Design groups in industry consultation; clients included Fortune 500 companies, NASA, and major hospital systems (2 sem.)
  - Facilities Design & Material Handling (2 sem.), Statistical Quality Control (1 sem.), & Introduction to Engineering, Honors (2 sem.)
  - Promoted to Lead TA
- Student Tech. II, Human Factors & Cognitive Systems Lab Oct. 2011 - Aug. 2012
- Developed: a novel vibrotactile communication interface supporting stress & mental workload.
  - Designed, ran, analyzed, and presented 5 user subject studies
- Student Tech. II, College of Architecture July 2010 - May 2012
- Scripted controls 200 lab computers; Remote and in-person IT support & repair; Licensed Dell technician
- ## Honors
- |  |                       |
|--|-----------------------|
| Outstanding Student Member, Texas A&M HFES                     | Apr. 2017             |
| Winner & Best Presentation: UX Guerilla Design Challenge, HFES | Sept. 2016            |
| Student Observer: HFES Executive Council Meeting               | Apr. 2015             |
| Student Travel Award, Houston HFES                             | Oct. 2014             |
| * Best Student Paper: HFES Perception & Performance TG         | Oct. 2013             |
| Student Travel Honorarium: HFES Council of Technical Groups    | Oct. 2013             |
| Undergraduate Research Scholar                                 | May 2012              |
| Mayfield Engineering Scholarship                               | Aug. 2008 - May 2014  |
| <b>President's &amp; Class of '89 Endowed Scholarships</b>     | Aug. 2007 - Aug. 2008 |
| National Merit Scholar   |                       |





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## Organizations

Board Certification in Professional Ergonomics, Associate Human Factors Professional  
2016 - Present

Human Factors and Ergonomics Society, Student Member  
2011 - Present

Houston Chapter, Student Member  
2013 - Present

Texas A&M University Chapter, President  
2014 - 2016

- Founded chapter, which received Silver award status first two years; now gold

Institute of Industrial Engineers, Student Member  
2013 - Present

Cepheid Variable, Member  
2007 - Present

Head Security Officer, AggieCon 47  
Mar. 2016

- Recruited, trained, and supervised 15 security workers for 500 guest, 3 day convention
- Commended by attendees for professionalism and customer service of volunteer staff

Student Development Officer  
2011 - 2012

- Recruitment numbers broke fire code 4 meetings in a row
- Managed formal mentorship program for 30 students

Student Mentor  
2010 - 2016

## Publications

Theses

1. Roady, T. (2012) An analysis of static, dynamic, and apparent motion vibrotactile stimuli. Texas A&M University. (Optional undergraduate research thesis)

Journal Articles

1. Tippey, K., Roady, T., Rodriguez-Paras, C., Ferris, T.K., Brown, L., and Rantz, W. (In press). General Aviation Weather Alerting: The Effectiveness of Different Visual and Tactile Display Characteristics in Supporting Weather-Related Decision-Making. *International Journal of Aerospace Psychology*.

Peer-Reviewed Conference Proceedings

1. Dinakar, S., Tippey, K., Roady, T., Edery, J., and Ferris, T.K. (2016). Using modern social network techniques to expand link analysis in a nuclear reactor console redesign. *Proceedings of the Human Factors and Ergonomics Society 58th Annual Meeting*. Washington, DC. September.
2. Roady, T. and Ferris, T.K. (2014). Supporting speeded navigational communication via gesture-controlled vibrotactile displays. *Proceedings of the Human Factors and Ergonomics Society 58th Annual Meeting*. Chicago, IL. October.
3. Tippey, K. G., Sivaraj, E., Ardoin, W., Roady, T., and Ferris, T.K. (2014). Texting while driving using Google Glass: investigating the combined effects of heads-up display and hands-free input on driving safety and performance. *Proceedings of the Human Factors and Ergonomics Society 58th Annual Meeting*. Chicago, IL. October.
- \* 4. Roady, T. and Ferris, T.K. (2013). Supporting speeded navigational communication via gesture-controlled vibrotactile displays. *Proceedings of the Human Factors and Ergonomics Society 57th Annual Meeting*. San Diego, CA. October.
5. Roady, T., & Ferris, T. K. (2012). An Analysis of Static, Dynamic, and Saltatory Vibrotactile Stimuli to Inform the Design of Efficient Haptic Communication Systems. In *Proceedings of the Human Factors and Ergonomics Society Annual Meeting* (Vol. 56, No. 1, pp. 2075-2079). SAGE Publications.