

# William A. Hamilton - Curriculum Vitae

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**Education** *Ph.D., Computer Science*, Expected Graduation 2015  
Texas A&M University College Station, TX  
GPA: 4.0/4.0

*B.S., Computer Science*, May 2010  
Texas A&M University College Station, TX  
GPA: 3.97/4.0 Minor: *Mathematics*

## Employment

8/2010–present Graduate Research Assistant  
Interface Ecology Lab | Texas A&M University  
College Station, TX

8/2008–8/2010 Undergraduate Research Assistant  
Interface Ecology Lab | Texas A&M University  
College Station, TX

6/2007–8/2007 Undergraduate Intern  
6/2008–8/2008 Cisco Systems Inc.  
San Jose, CA

## Publications

### Archival Publications

- [1] MOELLER, J., HAMILTON, WILLIAM A., LUPFER, N., AND LIN, H. 2011. intangiblecanvas: Free-air finger painting on a projected canvas. In *CHI EA '11: Proceedings of the 29th international conference extended abstracts on Human factors in computing systems*. ACM, New York, NY, USA, In Press.
- [2] TOUPS, Z. O., KERNE, A., HAMILTON, W. A., AND SHAHZAD, N. 2011. Zero-fidelity simulation of fire emergency response: Improving team coordination learning. In *CHI EA '11: Proceedings of the 29th international conference extended abstracts on Human factors in computing systems*. In Press.
- [3] TOUPS, Z. O., KERNE, A., HAMILTON, W. A., AND BLEVINS, A. 2009. Emergent team coordination: from fire emergency response practice to a non-mimetic simulation game. In *GROUP '09: Proceedings of the ACM 2009 international conference on Supporting group work*. ACM, New York, NY, USA, 341–350.
- [4] TOUPS, Z. O., KERNE, A., AND HAMILTON, W. A. 2009. Game design principles for engaging cooperative play: core mechanics and interfaces for non-mimetic simulation of fire emergency response. In *Sandbox '09: Proceedings of the 2009 ACM SIGGRAPH Symposium on Video Games*. ACM, New York, NY, USA, 71–78.
- [5] HAMILTON, W. A., TOUPS, Z. O., AND KERNE, A. 2009. Synchronized communication and coordinated views: qualitative data discovery for team game user studies. In *CHI EA '09: Proceedings of the 27th international conference extended abstracts on Human factors in computing systems*. ACM, New York, NY, USA, 4573–4578.

### Publications In Review

- [6] HAMILTON, W. A., KERNE, A., AND TOUPS, Z. O. 2011. Embodying trans-surface interactions with culturally based design: Experiences from rummy. In *European Conference on Computer-Supported Cooperative Work*. In Review.
- [7] TOUPS, Z. O., SHAHZAD, N., HAMILTON, W. A., AND KERNE, A. 2011. OODSS: A S.IM.PL alternative to structuring web services. In *ICWE '11: Proceedings of the 11th International Conference on Web Engineering*. In Review.

## Research Experience

### Team Coordination Game

The *Team Coordination (TeC) Game* is a *zero-fidelity* simulation. Zero-fidelity simulations model the human-centered aspects of the simulated practice. In the case of TeC, we simulate the human-centered aspects of fire emergency response work practice. TeC is implemented as both a Desktop and Mixed-Reality application.

- Designing and conducting user studies run with fire emergency response students and professional emergency responders. Results in [2, 3, 4]
- Coordinated Log + Audio Playback System, used to analyze complex communication patterns between game participants [5].
- Mixed Reality Application: distributed software application, wearable computing system, and incorporation of GIS data.
- The Object-Oriented Distributed Semantics Services communication framework [7].
- Network-based radio simulation framework to augment communication during play.

### Multi-Surface Rummy: Informing Trans-Surface Interaction

Semester group project developed during my undergraduate senior capstone design course. iPhones serve as private hands of cards, and an iPad serves as the public table space.

- Design of interactions on and across the surfaces
- Bluetooth networking framework
- User study with local bridge players and college students
- Implications for design of trans-surface interaction [6]

### intangibleCanvas

Group project in Fall 2011. Free air drawing application developed with the Zero-Touch multi-touch system. intangibleCanvas allows artists to draw onto a projected surface using free hand gestures [1].

### Mentoring

- *SCRAP: Solitaire in Competitive Rapid Asynchronous Play*  
Multi-surface card game developed in senior capstone design course. Multi-Surface card game with a focus on rapid asynchronous play.

### Reviewing

- *ACM Conference on Human Factors in Computing Systems*
- *Joint Conference on Digital Libraries*

## Honors and Awards

*Computing Research Association  
Outstanding Undergraduate Researcher Award  
2010 Honorable Mention*

*Texas A&M University Department of Computer Science & Engineering  
Undergraduate Research Excellence Award  
Awarded in 2009 & 2010*

*ACM Collegiate Regional Programming Contest  
2007 5th place  
2006 6th place*

*President's Endowed Scholarship  
\$40,000 over 4 years*

*Eagle Scout  
Awarded in 2002*

## Industry Experience

### Cisco Systems

- Constructed broadband cable testbeds and utilities
- Developed service provisioning test suite on IOS XR

## Memberships

2008–present      Member, Association for Computing Machinery (ACM)

## Technical Skills

### Proficient

Java, C++/C, Objective-C (iOS)

### Familiar

C#, WPF, LaTeX, PHP, HTML, Javascript, PureData, Tcl/Tk, Verilog

March 13, 2011