

ADRIAN A. DE FREITAS

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RESEARCH

My research interests are currently divided between context-aware computing, software engineering, and game design. I am interested in experimenting with new and creative ways to use hardware and software to create intuitive and compelling computing experiences for the user. This includes analyzing existing solutions in order to derive effective design patterns and strategies, as well as developing new algorithms and intelligent systems that can learn from user feedback and automatically adjust themselves to create a more personalized and believable experience. I am especially interested in the field of context-aware computing, and am currently looking at ways for users to share context with each other using non-traditional approaches.

Interests: Software Engineering, Artificial Intelligence, Intelligent User Interfaces, Ubiquitous Computing, Game Design, Multiplayer Games

EDUCATION

PhD Student in Human Computer Interaction (2013 - Present)

Institution: Human Computer Interaction Institute, Carnegie Mellon University, Pittsburgh, PA
Research Area: Context-Aware Computing

Masters of Science in Computer Science (2007)

Institution: Air Force Institute of Technology, Wright-Patterson Air Force Base, OH
Concentration: Artificial Intelligence
Thesis Topic: Distributed Learning using Ant Colony Optimization
Additional Notes: Earned AFIT's 18 month degree under an accelerated 12 month program (with thesis)

Bachelors of Science in Computer Science (2006)

Institution: United States Air Force Academy, Colorado Springs, CO
Honors: Distinguished Graduate (top 10% of graduating class)

TEACHING EXPERIENCE

June 2011 to July 2012

Position: Assistant Professor, Department of Computer Science
Institution: Dean of the Faculty
United States Air Force Academy, CO
Description: Taught core and advanced undergraduate computer science courses to Air Force Officer Candidates.
Courses Taught: Computer Science 110 (Introduction to Computing – Core Class)
Computer Science 210 (Introduction to Programming)
Computer Science 467 (Computer Networks)

PROFESSIONAL (NON-TEACHING) EXPERIENCE

January 2010 to June 2011

Position: Web Development Branch Chief
Institution: LeMay Center for Doctrine Development and Education
Air University, Maxwell Air Force Base, AL
Description: Program manager and lead software architect for all turn-based and real-time wargaming front-end tools used by Air University as part of their professional military education program.

September 2007 to January 2010

Position: Web Integration Officer-in-Charge

School: Air Force Wargaming Institute
Air University
Maxwell Air Force Base, AL

Description: Lead programmer for the institute's premier, internally developed mapping tool. Led a three year initiative to convert the application from a static desktop application into a web-based, massively multiplayer collaboration tool.

PUBLISHED WORKS

de Freitas, A. A., & de Freitas, M. M. (2013). Classroom Live: a software-assisted gamification tool. *Computer Science Education*, 23(2), 186–206. doi:10.1080/08993408.2013.780449

Adrian de Freitas and Christopher Mayer, "The Effectiveness of Dynamic Ant Colony Tuning," poster display at the Genetic and Evolutionary Computing Conference, London, England, 2007.

Augeri, C., Neebel, D., Baird, L., and de Freitas, A., "UAV Communications: Integrating a Real-World Scenario with Computer Architecture," in the Proceedings of the 35th Frontiers in Education Conference (FIE), Indianapolis, IN, IEEE, 19-22 October 2005.

Neebel, D., Augeri, C., MacMillan, G., Baird, L., & de Freitas, A. (2005). Work in Progress-A Visual Cache Memory Simulator. In *Frontiers in Education, 2005. FIE'05. Proceedings 35th Annual Conference* (p. T4C–T4C).

UNPUBLISHED WORKS

de Freitas, Adrian A., "Parallelizing Ant Colony Optimization via Area of Expertise Learning," unpublished Master's thesis, Air Force Institute of Technology, 2007.

AWARDS

Outstanding Academy Educator Award (2012-2013)

- Rated #1 of 12 faculty members with 1-5 years of teaching experience

Distinguished New Faculty Award, United States Air Force Academy (2012)

- Rated #1 of all faculty members (300+) with 1-3 years of teaching experience

Outstanding Junior Faculty Member, Department of Computer Science (2011-2012)

- Rated #1 of 8 faculty members with 1-3 years of teaching experience
- Selection based on student feedback and peer evaluations

Outstanding Cadet in Computer Science (2006)

- Awarded for having the highest undergraduate grade point average amongst all graduating computer science majors.

PROFESSIONAL AFFILIATIONS

Tau Beta Pi Honors Society (Ohio Eta Chapter)

- Member since 2007