

Amy Ogan

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Human-Computer Interaction Institute
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Education

Ph.D. in Human-Computer Interaction, expected Spring 2010
Institute of Educational Sciences PIER Fellowship
Human-Computer Interaction Institute
Carnegie Mellon University, Pittsburgh, PA, USA
Committee: Vincent Aleven (co-chair), Christopher Jones (co-chair), Sara Kiesler, Randall Hill

Master of Science in Human-Computer Interaction, 2008
Carnegie Mellon University, Pittsburgh, PA, USA

Bachelor of Science in Computer Science, University Honors, 2003
Additional majors: Spanish, Human-Computer Interaction
Carnegie Mellon University, Pittsburgh, PA, USA

Research Interests

Educational games, cultural learning, social motivation, instruction in ill-defined domains, intelligent tutoring systems, cognitive modeling, learning sciences, human-computer interaction, virtual humans

Publications

Refereed Journal & Full Conference Papers

Ogan, A., Aleven, V., Kim, J., & Jones, C. (accepted). Learning intercultural negotiation from virtual humans: The effect of social goals on gameplay and learning. To appear in *Proceedings of Intelligent Tutoring Systems 2010*.

Aleven, V., Myers, E., Easterday, M., & **Ogan, A.** (accepted). Toward a framework for the analysis and design of educational games. Accepted to *Digitel 2010*.

Ogan, A., Aleven, V., Jones, C. (in press). Advancing development of intercultural competence through supporting predictions in narrative video. *International Journal of Artificial Intelligence in Education*. Amsterdam: IOS Press.

Ogan, A., Aleven, V., and Jones, C. (2008). Pause, predict, and ponder: use of narrative videos to improve cultural discussion and learning. In *Proceedings of the Twenty-Sixth Annual SIGCHI Conference on Human Factors in Computing Systems* (Florence, Italy, April 5-10, 2008). CHI '08. ACM, New York, NY, pp. 155-162.

Ogan, A., Jones, C., Aleven, V. (2005) Improving Intercultural Competence by Predicting in French Film. In Richards, G. (Ed.), *Proceedings of World Conference on E-Learning in Corporate, Government, Healthcare, and Higher Education 2005* (Vancouver, BC, October 24-28, 2005). Chesapeake, VA: ACE, pp. 3101-3106.

Aleven, V., **Ogan, A.**, Popescu, O., Torrey, C., & Koedinger, K. (2004). Evaluating the Effectiveness of a Tutorial Dialogue System for Self-Explanation. In J. C. Lester, R. M. Vicario, & F. Paraguaçu (Eds.), *Proceedings of Seventh International Conference on Intelligent Tutoring Systems, ITS 2004*. Berlin: Springer Verlag, pp. 443-454.

Aleven V., Popescu, O., **Ogan, A.** & Koedinger, K. R. (2003). A Formative Classroom Evaluation of a Tutorial Dialogue System that Supports Self-Explanation. In V. Aleven, U. Hoppe, J. Kay, R. Mizoguchi, H. Pain, F. Verdejo, & K. Yacef (Eds.), *Supplemental Proceedings of the 11th International Conference on Artificial Intelligence in Education, AIED2003*, Vol. VI. School of Information Technologies, University of Sydney, pp. 345-355.

Book Chapters

Blanchard, E. & **Ogan, A.** (in press). Culturally-Aware Tutoring Systems: ITS in a Globalized World. In R. Nkambou, R. Mizoguchi, and J. Bourdeau (Eds.), *Advances in Intelligent Tutoring Systems*. Berlin: Springer Verlag.

Ogan, A., & Lane, H. C. (in press). Virtual learning environments for culture and intercultural competence. In E. Blanchard & D. Allard (Eds.), *Handbook of Research on Culturally-Aware Information Technology: Perspectives and Models*. IGI Global, Hershey, PA.

Refereed Abstracts, Short and Workshop Papers

Ogan, A., Kim, J., Aleven, V. and Jones, C. (2009). Explicit Social Goals and Learning in a Game for Cross-cultural Negotiation, In *Proceedings of the Workshop on Intelligent Educational Games, 14th International Conference on Artificial Intelligence in Education*. Brighton, UK, July 2009.

Ogan, A., Aleven, V., and Jones, C. (2009). Investigating the Effects of Social Goals in a Negotiation Game with Virtual Humans. In *Proceedings of the 14th International Conference on Artificial Intelligence in Education*. Brighton, UK, July 2009. pp. 777-778.

Lane, H. C., & **Ogan, A.** (2009). Virtual Environments for Cultural Learning. In *Proceedings of the Workshop on Culturally-Aware Tutoring Systems, 14th International Conference on Artificial Intelligence in Education*. Brighton, UK, July 2009.

Ogan, A., Aleven, V., Kim, J., and Jones, C. (2009). Antecedents of Attributions in an Educational Game for Social Learning: Who's to Blame? In A. A. Ozok and P. Zaphiris (Eds.), *Proceedings of the 3rd International Conference on Online Communities and Social Computing: Held As Part of HCI International 2009* (San Diego, CA). Lecture Notes in Computer Science, vol. 5621. Springer-Verlag, Berlin, Heidelberg, 593-602.

Ogan, A., Walker, E., Alevén, V., & Jones, C. (2008). Toward Supporting Collaborative Discussion in an Ill-Defined Domain. In E. Aimeur, & B. Woolf (Eds.) *Proceedings of the 9th International Conference on Intelligent Tutoring Systems (ITS 2008)*. Berlin: Springer Verlag, pp. 825-827.

Walker, E., **Ogan, A.,** Alevén, V., & Jones, C. (2008). Two Approaches for Providing Adaptive Support for Discussion in an Ill-Defined Domain. In V. Alevén, K. Ashley, C. Lynch, & N. Pinkwart (Eds.), *Proceedings of the Workshop on Intelligent Tutoring Systems for Ill-Defined Domains at the 9th International Conference on Intelligent Tutoring Systems (ITS 2008)*. Berlin: Springer Verlag.

Ogan, A., Jones, C., & Alevén V. (2007). Intelligent Tutoring in a Cultural Discussion Forum. Presented, *European Computer Assisted Language Learning (EuroCALL 2007)*. Ulster, Northern Ireland, September 2007.

Walker, E., & **Ogan, A.** (2007) Peer Moderation in Cultural Discussion Forums. Presented, *European Computer Assisted Language Learning (EuroCALL 2007)*. Ulster, Northern Ireland, September 2007.

Walker, E., **Ogan, A.,** & Wylie, R. (2006). A Tense Situation: Applying Cognitive Tutor Methodology to Ill-Defined Domains. Presented, *European Computer Assisted Language Learning (EuroCALL 2006)*. Granada, Spain, September 2006.

Ogan, A., Jones, C., & Alevén, V. (2006). Focusing attention on critical moments: evaluation of a system for teaching intercultural competence. Presented, *European Computer Assisted Language Learning (EuroCALL 2006)*. Granada, Spain, September 2006.

Ogan, A., Wylie, R., & Walker, E. (2006). Defining the ill-defined: Modeling student behavior in making aspectual distinctions. *Student Track Paper at the 8th International Conference on Intelligent Tutoring Systems (ITS 2006)*, Jhongli (Taiwan), National Central University.

Ogan, A., Alevén, V., & Jones, C. (2006). Culture in the classroom: challenges for assessment in ill-defined domains. In V. Alevén, K. Ashley, C. Lynch, & N. Pinkwart (Eds.), *Proceedings of the Workshop on Intelligent Tutoring Systems for Ill-Defined Domains at the 8th International Conference on Intelligent Tutoring Systems* (pp. 92-100). Jhongli (Taiwan), National Central University.

Ogan, A., Wylie, R., & Walker, E. (2006). The challenges in adapting traditional techniques for modeling student behaviors in ill-defined domains. In V. Alevén, K. Ashley, C. Lynch, & N. Pinkwart (Eds.), *Proceedings of the Workshop on Intelligent Tutoring Systems for Ill-Defined Domains at the 8th International Conference on Intelligent Tutoring Systems* (pp. 92-100). Jhongli (Taiwan), National Central University.

Research Experience

Social Motivation and Learning from Virtual Humans, 2008-Present
Human-Computer Interaction Institute and Institute for Creative Technologies
Collaborators: Vincent Alevén, Chris Jones, and Julia Kim
Evaluation of learning in BiLAT, an educational game for negotiation with cultural awareness, and design of interventions to increase social motivation and learning

Attributions Towards Virtual Humans in an Educational Game, 2007-2008

Institute for Creative Technologies, University of Southern California

Collaborator: H. Chad Lane

Conducted think-alouds on students' attributions towards characters in BiLAT and investigated their relation to learning and gameplay

Scaffolding Video Viewing for French Culture, 2004-2007

Human-Computer Interaction Institute, Carnegie Mellon University

Collaborators: Vincent Aleven and Chris Jones

Augmented a model of intercultural learning in an online tutoring system and analyzed students' collaborative discussion

Adding Game Elements to the French Aspect Tutor, 2007-2009

Human-Computer Interaction Institute, Carnegie Mellon University

Collaborators: Erin Walker, Ruth Wylie, and Nicole Hallinen

Investigated the role of game elements and narrative in learning language from a tutoring system

Assessing Everyday Math Games, 2007

Department of Psychology, Carnegie Mellon University

Collaborators: Marsha Lovett and Elida Laski

Assessed Everyday Math games with respect to Gee's principles of learning from games

Geometry Natural Language Explanation Tutor, 2002-2004

Pittsburgh Advanced Cognitive Tutor Center, Carnegie Mellon University

Collaborators: Vincent Aleven and Octav Popescu

Developed the tutor by analyzing natural language dialogues and improving tutor feedback messages in response to student explanations

**Teaching
Experience**

Teaching Assistant, Programming Usable Interfaces, Professor Jason Hong, 2008

Course Development and Teaching Assistant, Educational Game Design, Professor Vincent Aleven and Eben Myers, 2007

Teaching Assistant, Cognitive Modeling and Intelligent Tutoring Systems, Professor Vincent Aleven, 2006

Mentor, Pittsburgh Science of Learning Summer School, 2005, 2006, 2009

Mentor, Nicole Hallinen, Adding game elements to the French Aspect Tutor project

Resident Director, Pennsylvania Governor's School for Sciences, 2003, 2004

Oversaw daily operations of the Governor's School for 90 students and 18 TAs

Teaching Assistant, Pennsylvania Governor's School for Sciences, 2001, 2002

CS, machine learning, parallel programming, graphic design

Mentored research projects in neural networks and biometric authentication

Lectures given

“Introduction to Human-Computer Interaction” – *Technology in the developing world*
“Games and Girls” – *Design of educational games*
“Motivation” – *Design of educational games*
“User Data Collection” – *Design of educational games*
“Virtual Agents for Cultural Instruction” – *Design of educational games*
“Difficulty Factors Assessment” – *Cognitive modeling and intelligent tutoring systems*
“Educational Games” – *Cognitive modeling and intelligent tutoring systems*

Grants & Contracts Social interactions with virtual humans in BiLAT
University of Southern California
\$100,000; PI with Vincent Alevan

Improving French cultural learning through prediction
Pittsburgh Science of Learning Center
\$94,000; PI with Vincent Alevan and Christopher Jones

Adding game elements to the French Aspect Tutor
Research Assistance for Graduate Students award
\$1000; Co-PI with Ruth Wylie and Erin Walker

Graduate Student Small Project Help (GUSH)
Carnegie Mellon University
\$500 award

Honors & Awards Program in Interdisciplinary Educational Research Fellowship, *Institute of Education Sciences*
Doctoral Consortium Fellowship, *2009 AIED Conference, Brighton, England*
Phi Beta Kappa Honor Society
Phi Sigma Iota International Foreign Language Honor Society
María Purificación Aguilar Award, *Top Honors in the Modern Languages Dept.*
Excellence in Service Award, *Pennsylvania Governor’s School for the Sciences*

Organized Workshops & Symposia Culturally-Aware Tutoring Systems, ITS 2010
Co-organized with Emmanuel Blanchard (McGill), Daniele Allard (Dalhousie), and Lewis Johnson (Alelo)

Virtual Environments for Cultural Learning, CERCLL 2010
Co-organized with H. Chad Lane (USC) and Julie Sykes (U. New Mexico)

Intelligent Educational Games, AIED 2009
Co-organized with Valerie Shute (FSU) and H. Chad Lane (USC)

Cognitive Tutor Authoring Tools, iSLC 2009
Co-organized with Ruth Wylie (CMU), Erin Walker (CMU), and Ido Roll (UBC)

Academic Service PhD Admissions Committee, *Human Computer Interaction Institute*, 2010
Co-chair of Student Volunteers, *Intelligent Tutoring Systems conference, ITS 2010*
Program Committee, *Florida Artificial Intelligence Research Society, FLAIRS-23*
Student Volunteer, *Human-Computer Interaction International, HCII 2009*
Program Committee, *Culturally-Aware Tutoring Systems Workshop, AIED 2009*
Student Volunteer, *Internat'l Workshop on Intercultural Collaboration, IWIC 2009*
EdBag Seminar Coordinator, *CMU Psychology Dept. Seminar Series, 2008/09*
Program Committee, *Culturally-Aware Tutoring Systems Workshop, ITS 2008*
Organizing Committee, *Speech & Language Technologies in Education, SLaTE 2007*
Student Volunteer, *Artificial Intelligence in Education, AIED 2009*
Executive Committee Student Rep., *Pittsburgh Science of Learning Center, 2007*
Graduate Student Leadership Team, *Pittsburgh Science of Learning Center, 2006/07*
Reviewer, *Computer-Human Interaction, Artificial Intelligence in Education, International Journal of Learning Technology, Intelligent Tutoring Systems, Handbook of Culturally-Aware Tutoring Systems, Florida Artificial Intelligence Research Society*

Outreach I work with groups like Women@SCS, techGYRLS, and Creative TechNights, traveling to local schools to encourage girls to consider careers in computer science. With the Pittsburgh Science of Learning Center, I have spoken at Historically Black Colleges and Universities (HBCU) to encourage minorities to participate in graduate work in the learning sciences.