

# Alok Baikadi, Ph.D

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## Research Interests

Educational Technologies, including Student Modeling, Serious Games, and Intelligent Tutoring Systems

Artificial Intelligence, including Probabilistic Graphical Models, Natural Language, and Machine Learning.

Computational Models of Narrative, Narrative Visualization and Interactive Narrative Experiences.

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## Education

2007–2014 **Ph.D Computer Science**, *North Carolina State University*, Raleigh, NC, 4.0/4.0.

2003–2007 **B.S. Computer Science**, *University of Illinois at Urbana-Champaign*, Urbana, IL, 3.83/4.0.

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## Work Experience

2015–Present **Post-Doctoral Research Associate**, *Learning Research and Development Center and Center for Instructional Development and Distance Education, University of Pittsburgh*, Pittsburgh, PA.

Analyze student and discussion forum data from PITT Online courses and Coursera courses.

2014–2015 **Post-Doctoral Research Associate**, *Learning Research and Development Center, University of Pittsburgh*, Pittsburgh, PA.

Developed and Evaluated a revision support tool for peer-reviewed writing instruction, in collaboration with Dr. Christian Schunn and Dr. Kevin Ashley.

2009–2013 **Research Assistant**, *Department of Computer Science, NC State University*, Raleigh, NC.

Research Assistant in the Intellimedia Group, under the direction of Dr. James Lester.

2007–2009 **Teaching Assistant**, *Department of Computer Science, NC State University*, Raleigh, NC.

Grader and Teaching Assistant for several graduate level classes.

Summer 2007 **Summer Intern**, *Grammatech Corp.*, Ithaca, NY.

Intern Software Developer on the Codesurfer/Codesonar product.

Fall 2006 **Grader**, *Department of Computer Science, University of Illinois*, Urbana, IL.

Grader for CS 440 - Introduction to Artificial Intelligence.

Summer 2005 **Automation Intern**, *Intel Corp.*, Hillsboro, OR.

Intern Software Developer for the Automation group.

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## Theses

- 2013 **Ph.D Dissertation**, *Discovery-Based Goal Recognition in Interactive Narrative Environments*, Department of Computer Science, NC State University.  
Advisor: Dr. James Lester
- 2007 **Senior Thesis**, *Partial Recognition and Reasoning about Actions*, Department of Computer Science, University of Illinois.  
Advisor: Dr. Eyal Amir

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## Research Projects

- Spring 2014 – **Revision Planning in SWORD.**  
Fall 2015 A revision planning intervention that allows students to consider how to respond to the feedback received and lessons learned from their reviewing tasks.
- Spring 2012 – **Java Tutor.**  
Fall 2013 A system for selecting dialogue utterances based on features of the problem progress and task for an intelligent tutorial dialogue system for introductory Java concepts.
- Fall 2009 – **Goal Recognition in Crystal Island.**  
Fall 2013 Modeling student problem solving processes within an intelligent game-based learning environment for middle-grade science education
- Fall 2009 – **Narrative Theatre.**  
Fall 2011 An intelligent creativity-enhancement environment for 6<sup>th</sup> grade writing education. Students are guided through the process of planning and writing a fable, which is then visualized in a storyboard to aid in the creative revision process
- Fall 2006 – **Action Representation.**  
Summer 2007 An executable, hierarchical representation of actions, which are completely represented within Description Logic

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## Refereed Conference Papers

**Alok Baikadi**, Christian Schunn and Kevin Ashley. Understanding Revision Planning in Peer-Reviewed Writing. In *Proceedings of the Eight International Conference on Educational Data Mining*, Madrid, Spain. pp. 544 – 548. 2015

**Alok Baikadi**, Jonathan Rowe, Bradford Mott and James Lester. Generalizability of Goal Recognition Models in Narrative-Centered Learning Environments. In *Proceedings of the Twenty First International Conference on User Modeling, Adaptation and Personalization*, Aalborg, Denmark. pp. 278 – 289. 2014

Eun Young Ha, **Alok Baikadi**, Carlyle J. Licata, Bradford W. Mott and James C. Lester. Exploring the Effectiveness of Lexical Ontologies for Modeling Temporal Relations with Markov Logic. In *Proceedings of the Eleventh Annual SIGDIAL Meeting on Discourse and Dialogue*, Tokyo, Japan. pp. 75–79. 2010

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## Conference Presentations

Loretto, A., Godley, A. & **Baikadi, A.** (2015, December). A think-aloud study of adolescent writers' peer review and revision strategies. Paper presented at the 2015 Literacy Research Association Annual Conference, Carlsbad, CA.

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## Refereed Symposium and Workshop Papers

**Alok Baikadi**, Jonathan P. Rowe, Bradford W. Mott, and James C. Lester. Improving Goal Recognition in Interactive Narratives with Models of Narrative Discovery Events. In *Proceedings of the Sixth Workshop on Intelligent Narrative Technologies*, Boston, MA, pp. 2-8, 2013

**Alok Baikadi**, Jonathan P. Rowe, Bradford W. Mott, and James C. Lester. Toward Narrative Schema-Based Goal Recognition Models for Interactive Narrative Environments. In *Proceedings of the Fifth Workshop on Intelligent Narrative Technologies*, Stanford, CA, pp. 2-7, 2012.

**Alok Baikadi** and Rogelio E. Cardona-Rivera. Towards finding the fundamental unit of narrative: A Proposal for the Narreme. In *Proceedings of the 2012 Workshop on Computational Models of Narrative*, Istanbul, Turkey, pp. 44-46, 2012.

**Alok Baikadi**, Julius Goth, Christopher M. Mitchel, Eun Young Ha, Bradford W. Mott, and James C. Lester. Towards a Computational Model of Narrative Visualization. In *Proceedings of the Fourth Workshop on Intelligent Narrative Technologies*, Stanford, California, pp. 2-9, 2011.

Eun Young Ha, **Alok Baikadi**, Carlyle Licata, and James C. Lester. NCSU: Modeling Temporal Relations with Markov Logic and Lexical Ontology. In *Proceedings of the Fifth International Workshop on Semantic Evaluation*, Uppsala, Sweden, pp. 341-344. 2010.

Julius Goth, **Alok Baikadi**, Eun Young Ha, Jonathan Rowe, Bradford Mott, and James Lester. Exploring Individual Differences in Student Writing with a Narrative Composition Support Environment. In *Proceedings of the First NAACL HLT Workshop on Computational Linguistics & Writing (CL&W)*, Los Angeles, California, pp. 56-64, 2010.

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