

Tamara L. Clegg
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Georgia Institute of Technology
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Education

Ph.D. Candidate (expected graduation date May 2009)
School of Interactive Computing
College of Computing, Georgia Institute of Technology
Dissertation: Kitchen Science Investigators: Building Identity as Scientific Reasoners and Thinkers
Advised by Dr. Janet Kolodner

Bachelor of Science. Computer Science (2002)
North Carolina State University
Summa Cum Laude

Publications

Journals

Clegg, T. L., & Kolodner, J. L. (2007). Bricoleurs and Planners Engaging in Scientific Reasoning: A Tale of Two Groups in One Learning Community. *Learning Communities Special Issue of Research and Practice in Technology Enhanced Learning*, 2(3), 239-265.

Conferences

Clegg, T., Gardner, C., & Kolodner, J. (Accepted). *Playing with Food: Turning Play into Scientifically Meaningful Experiences*. The International Conference of the Learning Sciences, Chicago IL.

Clegg, T. L., & Kolodner, J. L. (Accepted). *Making Science Social: A Closer Look at How Social Interactions Impact Scientific Participation*. Paper presentation at the American Educational Research Association, Denver, CO.

Clegg, T., Gardner, C., Williams, O., & Kolodner, J. (2006). *Promoting Deep Learning in Informal Environments*. The International Conference of the Learning Sciences, Bloomington IN.

Presentations

Clegg, T. (2008). *Kitchen Science Investigators: Building Identity as Scientific Reasoners and Thinkers*. Presented at the International Conference of the Learning Sciences Doctoral Consortium, Utrecht, The Netherlands.

Workshops

Gardner, C., & Clegg, T. (2009). Kitchen Science Investigators (KSI): Kicking up the Science a Notch in your After-school program, *National Afterschool Association Workshop*. New Orleans, LA.

Posters

Gardner, C. M., Clegg, T. L., Williams, O. L., & Kolodner, J. L. (2006). Messy Learning Environments: Busy Hands and Less Engaged Minds. In S. Barab, K. Hay, & D. Hickey (Eds.), *Proceedings of the seventh International Conference of the Learning Sciences* (pp. 926-927), Bloomington, IN.

References in the Popular Press

Lagorio, C. (2008, January 4, 2009). Kitchen Chemistry for Middle Schoolers. *The New York Times*.

Get The Gray Matter Cooking. (2008). *The Next Big Thing*. U.S.: CNN

<http://www.cc.gatech.edu/news/multimedia/video/kitchen-science-investigators>

Research Experience

2007 – Present **Graduate Teaching Assistant** – College of Computing
Georgia Institute of Technology

Fall 2009 **Graduate Research Assistant** – Vertically Integrated Projects (VIP) Program
School of Public Policy, Georgia Institute of Technology

Ran a qualitative and quantitative assessment of the VIP Program, where undergraduate students work on long term, large scale research teams with faculty members and graduate students. Created a focus group interview protocol and survey for the initial round of data collection. Conducted focus groups with each VIP team and analyzed the results of the focus group. Included this initial analysis in a conference paper detailing the program and initial results.

Summer 2009 **Graduate Research Assistant** – C-PATH Initiative
College of Computing, Georgia Institute of Technology

Conducted a qualitative study of the THREADS undergraduate program and the Mentoring program within the College of Computing at Georgia Tech by interviewing undergraduate student mentors participating in the THREADS program.

2004 – 2007 **Graduate Research Assistant** – Kitchen Science Investigators (KSI)
Research Group, Georgia Institute of Technology

Creating and implementing an after school program in which elementary and middle school students learn science through cooking. Responsibilities on this project include: software design and implementation, curriculum design, data analysis, writing for grant proposals, and project management.

2007-2008 **Kitchen Science Investigators Dissertation Study**
Designed and implemented a yearlong research study with the KSI research team. Conducted a series of semi-structured interviews with five focal students, their science teachers, and their parents. Served as a lead facilitator in the learning environment, as well as a lead graduate student on the research team. Held weekly meetings to revise and enhance the design of the learning environment.

2007 **Kitchen Science Investigators Summer Camps**
Designed, implemented, and facilitated three weeklong summer camps held in conjunction with the KSI research team and Georgia Tech's Center for Education Integrating Science, Mathematics, and Computing (CEISMC). Developed and refined software support for the learning environment and activity sequencing. Conducted initial data analysis for identity development to design dissertation study analysis.

- 2006** **Kitchen Science Investigators Teacher Training and Summer Camp**
 Conducted teacher-training sessions to train local public school teachers to run a weeklong implementation of the Kitchen Science Investigators Program. Refined software and activity design based on analysis of the weeklong implementation of the program.
- 2005, 2006** **Kitchen Science Investigators After-School Studies**
 Conducted ten-week after-school studies during Spring of 2005 and Spring of 2006. Analyzed data from these studies to look at learners' development of science understanding and scientific participation of learners with different planning styles and interests. Developed design guidelines and needs based on analyses of these studies for software, activities, and activity sequencing.
- 2002** **Undergraduate Research** - North Carolina State University
 Undergraduate Affairs Dept.
- Constructed detailed criteria for the effective use of technology in grade schools. Put together an extensive survey for the evaluation of technology in public schools. Composed and presented an analysis report of the findings.
- 2001** **Summer Undergraduate Program in Engineering Research at Berkeley (SUPERB)**
 University of California at Berkeley
 Electrical Engineering and Computer Science Dept.
- Conducted database research project entitled, Using Telegraph To Analyze Data on the Deep Web. Wrote software to search the deep web (World Wide Web content that is indexed by search engines). Applied the concept of hubs and authorities to the data found with the software to analyze the data on the deep web. Composed and presented an analysis report of the findings.

Research Community Participation

- 2008** **The International Conference of The Learning Sciences**
 Reviewed full papers submitted to the conference.
- 2008** **NSF LIFE Center Workshop**
Diversity as a Construct in Research: Conceptual and Methodological Challenges and Opportunities
 Invited participant in the workshop focusing on issues surrounding diversity in learning. Participated in small group and community-level discussions on ideas, opportunities, and challenges in research on diversity in learning.
- 2007** **The International Conference on Computer Supported Collaborative Learning**
 Reviewed full and short papers submitted to the conference.
- 2007** **Journal of the Learning Sciences**
 Reviewed a journal article submitted to the journal.

Professional Experience

- 2004** **Software Developer** at AT&T Research Laboratory
- Developed and implemented data visualization software for automated speech recognition data analysis research. This software is currently being used to analyze the effectiveness of the company's speech recognition technology.

1998 – 2003 International Business Machines
Research Triangle Park, NC

Enhanced and carried out test cases with the Websphere Eclipse testing team. Completed version release product testing for IBM's premier Web Analyzer software. Performed tests on VisualAge product for double byte character languages. Designed and implemented a departmental intranet web page. Developed process refinement techniques by verifying problem tracking reports. Constructed a database for IBM VisualAge customers.

Teaching Experience

2009/2010 User-Interface Design – College of Computing
Georgia Institute of Technology
Teaching Assistant

Responsibilities: Guest Lectures, assistance with course planning, grading coursework, and mentoring project teams for the undergraduate User-Interface Design course.

2008 Educational Technology – College of Computing
Georgia Institute of Technology
Teaching Assistant

Responsibilities: Guest Lectures, grading coursework, and course maintenance for the undergraduate Educational Technology course. In previous semesters also served as guest lecturer for both undergraduate and graduate Educational Technology courses.

2008 Empirical Methods in HCI – College of Computing
Georgia Institute of Technology
Teaching Assistant

Graduate and undergraduate course concerning qualitative methods in Human Computer Interaction. Responsibilities include grading coursework, advising students, and serving as guest lecturer.

2007 Introduction to Graduate Studies – College of Computing
Georgia Institute of Technology
Teaching Assistant

Introductory course for first year PhD Students in Computer Science. Responsibilities include organizing and participating in graduate panels and grading coursework and presentations.

2003 Introduction to Constructing Proofs – Georgia Institute of Technology
Teaching Assistant

Undergraduate level course for beginning level CS majors. Responsibilities include grading coursework and serving as guest lecturer.

1999 – 2002 Lecture Assistant – Mathematics Department
North Carolina State University

Instructor for weekly lab sections of undergraduate Accounting Mathematics, Introductory Calculus

Mentoring

2008 Intel-SAIC Undergraduate Research Mentor

Led a team of two Computer Science undergraduate students whose project involved software and video data analysis for the Kitchen Science Investigators research project.

Awards and Recognition

2004 – 2007 AT&T Laboratories Fellowship Award

Fellowship Recipient

Selected to receive the fellowship covering all educational expenses. The fellowship is awarded to outstanding under-represented minority and women students who are pursuing Ph.D. studies in computer and communications-related fields.

2008 College of Computing Best Undergraduate Teaching Assistant

Award recipient for guest lecturing, advising students, and assisting in grading responsibilities for an undergraduate course.

2003 – Facilitating Academic Careers in Engineering

Present Fellowship Recipient

Georgia Institute of Technology

Fellowship provides a stipend and monthly enrichment workshops to African-Americans attaining doctorates in engineering and science. Workshops are aimed to encourage and facilitate recipients to pursue academic careers.