

Curriculum Vitae Sharoda A. Paul

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RESEARCH INTERESTS

I am interested in understanding collaborative information behavior and developing tools to enable people to collaboratively find, share, and make sense of information. For my dissertation, I have studied collaborative information seeking and sensemaking among healthcare providers in the emergency department. I have also studied search and sensemaking behavior in collaborative Web search. My research interests broadly lie in the fields of computer-supported cooperative work, human-computer interaction, collaborative and social Web search, and healthcare informatics.

EDUCATION

Ph.D. in Information Sciences and Technology
College of Information Sciences and Technology,
The Pennsylvania State University, University Park.
Advisor: Madhu Reddy, Ph.D.
Current CGPA: 3.95/4.0

Expected Dec 2009

Bachelor of Engineering in Computer Science and Engineering
Birla Institute of Technology, India
CGPA: 8.15/10 (Graduated First Class with Distinction)

May 2004

PEER-REVIEWED PUBLICATIONS (Copies can be accessed at <http://www.personal.psu.edu/sap246>)

Journals

[J.3] **Paul, S.A.** and Morris, M.R. (Submitted). Sensemaking in Collaborative Web Search. Submitted to *Human Computer Interaction* special issue on Sensemaking. Special Issue Eds. Daniel Russell and Peter Pirolli. (Impact factor 2.4)

[J.2] **Paul, S.A.**, Reddy, M., and deFlicht, C.J. (Submitted). A Systematic Review of Simulation Research Investigating Emergency Department Overcrowding. Submitted to *Simulation: Transactions on the Society for Modeling and Simulation International* Special Issue on *Modeling and Simulation in Healthcare*. (Impact factor 0.78)

[J.1] Reddy, M., **Paul, S.A.**, Abraham, J., McNeese, M.D., deFlicht, C.J., and Yen, J. (2009). Challenges to Effective Crisis Management: Using Information and Communication Tools to Coordinate Emergency Medical Services and Emergency Department Teams. *Te International Journal of Medical Informatics*, 78(4), 259-269. (Impact factor 1.5)

Conference Full and Short Papers

[C.5] **Paul, S.A.** and Reddy, M. (Accepted). Understanding Together: Sensemaking in Collaborative Information Seeking. To appear in Proceedings of the *ACM Conference on Computer Supported Cooperative Work (CSCW 2010)*. (Acceptance rate 20%). **Best paper nominee.**

[C.4] **Paul, S.A.**, and Morris, M.R. (2009). CoSense: Enhancing Sensemaking for Collaborative Web Search. To appear in Proceedings of the *Conference on Human Factors in Computing Systems (CHI '09)*, Boston, MA. (Acceptance rate 24.5%) **Best paper nominee.**

[C.3] **Paul, S.A.**, Reddy, M. and deFlicht, C.J. (2008). The Usefulness of Information and Communication Tools in Crisis Response. Proceedings of the *Fall Symposium of the American Medical Informatics Association (AMIA '08)*, Washington, D.C. (Acceptance rate 20%)

[C.2] **Paul, S.A.**, Reddy, M., and deFlicht, C.J. (2008). Information and Communication Tools as Aids to Collaborative Sensemaking. In *Extended Abstracts of the ACM SIGCHI Conference on Human Factors in Computing Systems (CHI '08)*. (Acceptance rate 38%)

[C.1] Zhu, S., Abraham, J., **Paul, S.A.**, Reddy, M., Yen, J., Pfaff, M., and deFlicht, C.J. (2007). RCAST-MED: Applying Intelligent Agents to Support Emergency Medical Decision Making Teams. *Proceedings of the 11th Artificial Intelligence in Medicine Conference (AIME '07)*, Amsterdam, the Netherlands. (Acceptance rate 20%)

Workshops, Posters, Videos

[W.8] **Paul, S.A.**, Reddy, M., Jansen, B.J., and Foster, J. (2009). Workshop proposal for the Collaborative Information Behavior Workshop at the *ACM Conference on Supporting Group Work (GROUP '09)*, Sanibel Island, FL.

[W.7] Bernstein, M, André, P., Luther, K., Solovey, E.T., Poole, E.S., **Paul, S.A.**, and Kane, S. (2009). CHistory. To appear in Video Showcase at the *Conference on Human Factors in Computing Systems (CHI '09)*, Boston, MA. **Winner of the Golden Mouse Award for the Best Entertaining Video**

[W.6] **Paul, S.A.** and Morris, M.R. (2009). Understanding and Supporting Sensemaking in Collaborative Web Search. Position paper to be presented at the *Sensemaking* workshop at the *Conference on Human Factors in Computing Systems (CHI '09)*, Boston, MA. (Acceptance rate 66%)

[W.5] **Paul, S.A.**, Reddy, M., and deFlicht, C.J. (2008). Collaborative Sensemaking: A Field-Study in the Emergency Department. Position paper at the *Sensemaking* workshop at the *Conference on Human Factors in Computing Systems (CHI '08)*, Florence, Italy. (Acceptance rate 50%)

[W.4] **Paul, S.A.**, Reddy, M., deFlicht, C.J. (2008). Supporting Collaborative Sensemaking in the Emergency Department. Poster presented at the *Third Annual iConference*, Los Angeles, CA.

[W.3] **Paul, S.A.**, Reddy, M., Abraham, J. (2007). Collaborative Sensemaking during Emergency Crisis Response: How do ICTs Help? Poster presented at the *ACM SIGGROUP Conference on Supporting Group Work (GROUP '07)*, Sanibel Island, FL.

[W.2] Puro, S., **Paul, S.A.**, and Smith, S. (2007). Understanding Enterprise Integration Project Risks: A Focus Group Study. Workshop paper presented at the *18th International Conference on Databases and Expert Systems Applications (DEXA '07)*, Regensburg, Germany.

[W.1] Zhu, S., Abraham, J., **Paul, S.A.**, Reddy, M., Yen, J., Pfaff, M., and deFlicht, C.J. (2007). RCAST-MED: Applying Intelligent Agents to Support Emergency Medical Decision Making Teams. Poster presented at the *2nd North East Student Colloquium on Artificial Intelligence (NESCAI '07)*, Ithaca, NY

Book Chapters

[B.1] Umapathy, K., Paul, S.A., Purao, S., Bagby, J.W. and Mitra, P. (Forthcoming). "Avatars of Participants in Anticipatory Standardization Processes." To appear in *Standards Edge: Unifier or Divider*, The Bolin Group.

NON-PEER-REVIEWED PUBLICATIONS

[N.4] Paul, S.A., Reddy, M., and deFlicht, C. (2009). Understanding Together: Collaborative Sensemaking in Emergency Care. In Proceedings of the 4th Annual IST Graduate Symposium, University Park, PA.

[N.3] Paul, S.A. (2007) The ER Monologues: Automated Discovery of Patient Flows from Emergency Department Data. In Proceedings of the 2nd Annual IST Graduate Student Symposium: Communities Managing Knowledge, University Park, PA.

[N.2] Paul, S.A. (2007). Emergency Response Information Systems: Emerging Trends and Technologies. *American Medical Informatics Association Student Working Group News*, 4(3), 4-6.

[N.1] Mitra, P., Purao, S., Bagby, J.W., Umapathy, K., and Paul, S.A. (2005). An Empirical Analysis of Development Processes for Anticipatory Standards, NET Institute Working Paper No. 05-18. Available online at: <http://ssrn.com/abstract=850524>

PRESENTATIONS

2009

- CoSense: Enhancing Sensemaking for Collaborative Web Search. Presented at CHI 2009, Boston, MA.
- Understanding and Supporting Sensemaking for Collaborative Web Search. Presented at the Sensemaking workshop at CHI 2009, Boston, MA.
- Being Social on the Internet. Presented in IST 440 course on *IST Integration* taught by Shaun Knight, College of IST, Penn State University, University Park, PA.
- Understanding Together: Collaborative Sensemaking in Emergency Care. Presented at the 4th Annual IST Graduate Symposium, Penn State University, University Park, PA.

2008

- The Usefulness of Information and Communication Technologies in Crisis Response. Presented at the *Fall Symposium of the American Medical Informatics Association (AMIA '08)*, Washington, D.C.
- The Usefulness of Information and Communication Technologies in Crisis Response. Invited talk for IST 501 course on *IST Integration* taught by C. Lee Giles. College of IST, Penn State University, University Park, PA.
- CoSense: Collaborative Sensemaking Using SearchTogether. Presented at the *HCI Intern Lunch Talks series*, Microsoft Research, Redmond, WA.
- Collaborative Sensemaking: A Field Study in an Emergency Department. Presented at the *Sensemaking* workshop at CHI 2008, Florence, Italy.
- Supporting Collaborative Sensemaking in an Emergency Department. Presented at the Doctoral Colloquium of the Third Annual i-conference, Los Angeles, CA.

2007

- Collaborative Sensemaking: A Field Study in an Emergency Department. Presented in IST 525 course on *Computer Supported Cooperative Work* taught by Mary Beth Rosson. College of IST, Penn State University, University Park, PA.
- The Role of Information and Communication Technologies in Alleviating Emergency Department Overcrowding. Presented at *Connections 2007 Doctoral Consortium*, Philadelphia, PA.

RESEARCH EXPERIENCE

Research Assistant, the College of IST, Penn State University, UP

Fall 2005, Spring 2008

Research Projects

Penn State Partnership to Transform Hospital Emergency Care
College of IST, Penn State University, UP.

Jan – Dec 2007

In this collaborative project between the Department of Industrial Engineering, the College of IST and the Hershey Medical Center, I conducted observations, interviews and surveys to examine how systems theories and information and communication tools can improve quality of care in the emergency department.

Using R-CAST to Support Emergency Medical Decision-Making Teams
College of IST, Penn State University, UP.

May – Dec 2006

I conducted focus groups with emergency medical services and emergency department staff at the Hershey Medical Center to examine the role of technology in disaster response.

An Empirical Analysis of Development Processes for Anticipatory Standards
College of IST, Penn State University, UP.

Jun 2005 – Jan 2006

I performed content analysis of Web Services standards developed by the World Wide Web Consortium to gain an understanding of the process of development of anticipatory standards.

ICT in Real Estate: Industry Change in Local Markets
College of IST, Penn State University, UP.

Sep – Dec 2005

I conducted telephone interviews of real estate professionals to understand how adoption and use of information and communication technologies has impacted local real estate markets.

Identifying Risks and Resolution Strategies for Systems Integration Projects
College of IST, Penn State University, UP.

May – Dec 2005

I conducted focus groups at a local organization in State College, PA to examine perception of risks and risk resolution strategies for large-scale information systems implementation projects.

TEACHING EXPERIENCE

Instructor, WISE Camp 2007: Information Technology as a Gateway to the World
Women in Sciences and Engineering Institute, Penn State University, UP.

June 2007

I conducted a cross-cultural project involving high school girls from the US and India. We introduced the students to technology careers and opportunities and helped them share their experiences by collaborating using wikis and blogs. The project wiki is at <http://wise2007.pbwiki.com/>

Teaching assistant, the College of IST, Penn State University, UP.

IST 301: Information and Organizations – Fall 2007 and Fall 2008

IST 331: Organization and Design of Information Systems – User and System Principles, Spring 2007

IST 440W: IST Integration – Fall 2006, Spring 2009

IST 311: Object Oriented Design and Software Applications – Spring 2006

IST 240: Introduction to Computer Languages – Fall 2004 and Spring 2005

INDUSTRY EXPERIENCE

Research Intern

Jun – Aug 2008

Microsoft Research, Redmond, WA.

Working with Merrie Morris in the Adaptive Systems and Interaction group, I designed, implemented, and evaluated a collaborative sensemaking tool called CoSense, which is integrated with the collaborative Web search tool, SearchTogether.

Software Developer Intern

May – Jul 2002

Information Technology Department, Tata Steel, Jamshedpur, India
I evaluated and recommended security tools for company Intranet.

AWARDS

Best paper nominee, CSCW 2010, Savannah, GA.

Best paper nominee, CHI 2009, Boston, MA

Golden Mouse Award for the Best Entertaining Video, CHI 2009, Boston, MA.

Doctoral Consortium, Third Annual iConference 2008, ULCA, Los Angeles, CA.

Doctoral Colloquium, The Fall Symposium of the American Medical Informatics Association (AMIA) 2008 (declined, could not participate due to conflict with CSCW 2008)

Travel grant from the College of IST to attend the Third Annual i-conference 2008 in Los Angeles, CA.

Travel grant from the College of IST to attend CHI 2008.

Women in Sciences and Engineering Institute grant (\$3400) for teaching summer camp 2007.

PROFESSIONAL SERVICE

Affiliations

Student member of the Association for Computing Machinery (ACM).

Student member of The American Medical Informatics Association (AMIA).

Reviewer

Information Processing and Management special issue on Collaborative Information Seeking

IEEE Computer Graphics and Applications special issue on Collaborative Information Visualization

ACM SIGCHI Conference on Human Factors in Computing Systems (CHI)

ACM International Conference on Supporting Group Work (GROUP)

ACM Conference on Computer Supported Cooperative Work (CSCW)

International Conference of Information Systems (ICIS)

Annual i-Conference of the i-Schools

Student Volunteer

CHI 2008, CSCW 2008

CHI 2009, GROUP 2009

Others

Co-organizer GROUP 2009 workshop on Collaborative Information Behavior

Session chair for session on “hospitals” at CHI 2009

Member, Diversity Committee, College of IST, Penn State University, Fall 2006 - present.

Member, Graduate Website Development Committee, Graduate Students in IST (GIST), May–Aug 2005.

Reviewer, Diana Forsythe Award for Qualitative Methods in Medical Informatics, 2006 and 2007.

TECHNICAL SKILLS

Programming: C, C++, C#, Java, LISP, PROLOG, SQL, ASP.NET

Operating systems: Windows, Unix/Linux.

Qualitative analysis packages: ATLAS, NVivo

Others: EndNote, MATLAB, Minitab, Microsoft SQL Server, Visual Studio.

REFERENCES

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