Anna Wu

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HIGHLIGHTS

- Strong background in both technical development and user experience research (qualitative/ quantitative)
- Industrial experiences in top IT companies and research labs: IBM and Palo Alto Research Center
- Excellent oral and written English communication and presentation skills

EDUCATION

2007.08 - 2012.05 (expected)
Ph.D. in Information Sciences and Technology (Minor: Statistics)
College of IST, Penn State University, University Park, PA, USA
Dissertation: Information Fusion in Supporting Spatial Sensemaking on Mobile Devices
Committee: Luke Zhang (Chair), John M. Carroll, John Yen, Aleksandra Slavković
GPA: 3.9/4.0

2005.09 - 2007.07
M.E. in Management Science and Engineering
Department of Industrial Engineering, Tsinghua University, Beijing, China
Thesis: A Study on Wayfinding Aids in Virtual Reality
GPA: 87.3/100

2001.09 - 2005.07
B.E. in Mechanical Engineering and Automation
Department of Mechanical Engineering, Tsinghua University, Beijing, China
GPA: 88.3/100 (Top3 of 71 students)

INDUSTRIAL EXPERIENCE

2010.08 - present
Palo Alto Research Center (PARC), Visiting Research Scientist
Host: Eric Bier (Principle scientist at Knowledge, Language and Interaction)
Skill Highlights: Large-scale online evaluation and experimental design
- Design online evaluations for a geo-disambiguation algorithm, Sense Places Out of Text (SPOT).
- Design and implementation of a web-based experimental platform to allow human annotators to geo-tag documentations.
- Evaluate the algorithm with ~200 human annotators of >1000 travel blogs reveals great precision (90.3%)/recall (73.8%) of the algorithm.

2011.05 - 2011.08
IBM Research – Almaden Research Center, Research Intern
Mentor: Jeff Pierce (Manager of Mobile Computing Group)
Skill Highlights: Interview, online survey, lab-study (heuristic evaluation, think- aloud protocol)
- Design user studies of a business mobile application integrating multiple information resources.
- Conduct phone interviews with customers of different business products, large scale online surveys, lab studies, and post-study interviews.
- Evaluation results are collected and incorporated into the next round of the design.

2010.05 - 2010.08
Palo Alto Research Center (PARC), Research Intern
Mentor: Eric Bier (Principle scientist at Knowledge, Language and Interaction)
Skill Highlights: Algorithm development and implementation
- Develop and implementation of a geo-disambiguation algorithm in document interaction, called Sense Places Out of Text (SPOT).
- Design a user interface for visualizing and searching document collections based on location.
- The algorithm was filed for a US Patent.

2009.05 - 2009.08
IBM Research – Watson Research Center, Research Intern
Mentor: Joan M. Dimicco (Research Scientist & Manager of Visual Communication Lab)
Skill Highlights: Data analysis, metrics extraction, and statistical modeling
- Develop a statistical model to predict people's personal and professional relationship closeness within IBM based on people's profiles and behaviors on social network sites.
- Extract parameters from 1 year interaction logs and databases in a website with 60,000 users.
- Design an online game that generated more than 4000 subject-friends pairs' responses.
- Result of the study was accepted as a full paper and presented at CHI 2010.

RESEARCH EXPERIENCE

2007.09-present **Pennsylvania State University, Graduate Research Assistant**

College of Information Science and Technology

Research Interest: mobile application design, spatial information acquisition and representation

- Design, implement, and evaluate an Android application for place sensemaking
- Design, implement, and evaluate an online visualization for collaborative sensemaking in emergency management
- Conduct fundamental research in human spatial cognition and wayfinding behavior

2005.08-2007.07 **Tsinghua University, Graduate Research Assistant**

Lab of Virtual Reality& Human Interface Technology, Dept. of Industrial Engineering

Research Interest: virtual reality, wayfinding support

- Evaluation of different user interactive methods in wayfinding in a virtual city
- 3D model building and interaction design of a virtual city
- Study of driving behavior with virtual simulator (Liberty Mutual Group)

2006.07-2006.08 **University of Missouri-Rolla, Visiting Research Assistant**

Intelligent System Center, Dept of Mechanical Engineering

Research Interest: virtual reality, engineering design

- Interactive structural engineering design in virtual reality

PATENT

2012 System and Method for Mapping Text Phrases to Geographical Locations. PARC File No. 20101692-US-NP, Ref. No. 022.1114.US.UTL

HONERS & AWARDS

2010 Travel Grant for Doctoral Colloquium at the *International Conference on Spatial Cognition 2010*
2009 Travel Grant for Doctoral consortium at *International Conference on Supporting Group Work 2009*
2007 College of Information Sciences and Technology Fellowship
2002-2006 Annual Tsinghua Excellence scholarships (based on annual evaluation of academia performance)
2002 The third prize in 19th physics competition for non-physics major college students

SKILLS

Programming Skills: Proficient: Java (Android), PHP, Flex, SQL (SQL Server, MySQL, Postgresql)
Working knowledge: JavaScript
User Studies: Design of experiment, Online evaluation, Interviews, Focus group, Cognitive walkthrough, Heuristic evaluation, Think-aloud protocol
Data Analysis: SPSS, SAS, R, Matlab, Origin
Prototype: Photoshop, Visio, CSS/HTML
Languages: Fluent in English, Knowledge in German (College Level 4) and French (College Level 4)

CONFERENCE PRESENTATIONS

Ubicomp'11, Beijing, China
Spatial Cognition'10, Mt. Hood, OR, USA
ACM CHI'10, Atlanta, GA, USA
iConference'10, Urbana-Champaign, IL, USA
HCIC'09, Colorado, USA
Group'09, Sanibel Island, FL, USA
HCII'09, San Diego, CA, USA
Cyberworld 2008, Hangzhou, China
HCII'07, Beijing, China

TEACHING EXPEREIENCE

2011 Spring IST220 Network and Telecommunication (**Co-designer/lecturer**)
2010 Fall IST402 Emerging Issues and Technologies -Visual Support System (**Teaching Assistant**)
2006 Fall Product Development Technology and Management (**Teaching Assistant**)
2006 Fall Fundamentals of Human Factors (**Teaching Assistant)**

MENTORSHIP

David Zhang, Master student, Stevens Institute of Technology
Wenting Zhang, IST senior student, Penn State

PUBLICATIONS

Journal Papers

[J1] Wu, A., Zhang, X., Convertino, G., Ganoe, C., Carroll, J. M. Supporting Collaborative Sensemaking in Emergency Management through Geo-Visualization. *International Journal of Human-Computer Studies*. (Under 2nd-Round Review)

[J2] Wu, A., Zhang, W., Zhang, X. (2009). Evaluation of Wayfinding Aids in Virtual Environment. *International Journal of Human Computer Interaction*, *25*(1), 1-21.

[J3] Wu, A., Wang, Y., Zhang, W. (2007). Mobile Phone Influence on Driving Performance in Driving Simulation. *Chinese Journal of Ergonomics. 13* (3), 44-46.

Conference Papers

[C1] Wu, A., Yan, X., Zhang, X. (2011). Geo-tagged Mobile Photo Sharing in Collaborative Emergency Management. Proc. of *VINCI'11*, 1-8.

[C2] Wu, A., Zhang, X., Cai, G. (2010). An Interactive Sensemaking Framework for Mobile Visual Analytics. Proc. of *VINCI '10*, 133-141.

[C3] Wu, A. DiMicco, J.M., Millen, D. R. (2010). Detecting Professional versus Personal Closeness Using an Enterprise Social Network Site. Proc. of *CHI'10,* 1955-1964.

[C4] Wu, A., Zhang, X., Convertino, G., Ganoe, C., Carroll, J. M. (2009). CIVIL: Support Geocollaboration with Information Visualization. Proc. of *Group'09,* 273-276.

[C5] Wu, A., Zhang, X. (2009). Identifying Proper Scales on Digital Maps for In-vehicle Navigation Systems. Proc. of *HCII'09 in LNCS (vol.5616)*, 262 - 270.

[C6] Wu, A., Zhang, X., Zhang, W. (2008). GPS---Secure Against Getting Lost, or More Danger?, Proc. of *International Conference of Cyberworlds 2008,* 501-505.

[C7] Wu, A., Hu, B., Zhang, W. Evaluation of Wayfinding Aids Interface in Virtual Environment. Proc. of *HCII'07 in LNCS (vol. 4551)*, 700-709.

Workshop Papers/Posters

[P1] Wu, A., Zhang, X. (2011). Location-based Information Fusion for Mobile Navigation. Poster at *Ubicomp'11*. p. 593-594.

[P2] Wu, A., Zhang, X. (2011).Temporal Sensitivity for Location Disclosure through Mobile Photo-sharing .Proc. of *MLBS'11*, 63-66.

[P3] Wu, A., Zhang, X. (2010). A Framework of Spatial Sensemaking for Human Navigation. In S. C. Hirtle, A. Klippel & F. Schmid (Eds.), *You-Are-Here 2: 2nd Workshop on Spatial Awareness and Geographic Knowledge Acquisition with Small Mobile Devices at the International Conference Spatial Cognition 2010*, 29-41.

[P4] Wu, A., Zhang, X., Convertino, G., Carroll, J. M. (2009). Supporting Synchronous Sensemaking in Geo-Collaboration. *Sensemaking workshop at ACM CHI'09.*

[P5] Wu, A., Zhang, X., Convertino, G., Ganoe, C., Carroll, J. M., Klippel, A. (2010). Sensemaking in the Space: An Alternative Design Perspective for Mobile Navigation Systems. Proc. of *iConference 2010*, p.579-580.

[P6] Convertino, G., Zhang, X., Wu, A., Hoffman, B., Ganoe, C.H., Carroll, J.M. (2008). Using Visualization Techniques to Enhance Emergency Management and Decision-Making in Geo-Collaboration, in *China-US Workshop on GeoCollaborative Crisis Management* 2008.

[P7] Klippel, A., Li, R., Wu, A., Zhang, X. (2008). Interactive, Multiscale You-Are-Here Maps. In A. Klippel & S. C. Hirtle (Eds.), *You-Are-Here Maps: Creating a Sense of Place through Map-like Representations Workshop at International Conference Spatial Cognition 2008*, 11-21.

[P8] Convertino, G., Wu, A., Zhang, X., Hoffman, B., Ganoe, C.H., Carroll, J.M.(2008) Designing Group Annotations and Process Visualizations for Role-Based Collaboration, in Proc of *the Workshop on Social Computing, Behavioral Modeling, and Prediction*, 197-206.

Work In Progress

[W1] Wu, A., Li, R., Klippel, A., Zhang, X. Effect of Map Scale and Environmental Feature on Landmark Choices. *Personal and Ubiquitous Computing*. (In Submission)

[W2] Wu, A. Bier, E., Lu, X., Dent, K. SPOT: Making Sense of the Places in Documents Using Automatic Geocoding. (WIP)