

Education

Rice University, Houston, TX

Ph.D., Cognitive Psychology & Human-Computer Interaction, expected Spring 2006
Human error, interface design, skill transfer, ethnography, and cognitive modeling.

M.A., Cognitive Psychology & Human-Computer Interaction, awarded Spring 2004

University of Connecticut, Storrs, CT

B.A., Computer-mediated Communication, awarded Spring 2001

Human Factors minor; coursework in design, business, computer science, and writing.

University of Paris IV/VIII, Paris, France

Coursework in French language, history, and art, Spring 2001

Art Center College of Design, Pasadena, CA

Coursework in typography and communication design, Summer 2000

Rhode Island School of Design, Providence, RI

Coursework in industrial and graphic design, Summer 1998, Fall 2000

Experience

Baylor College of Medicine, Family Medicine Clinic, Houston, TX

Outside researcher, Fall 2005-present

Designed and conducted a study to evaluate third-party electronic medical record system forms and generate usability guidelines for the IT group; conducted ethnographic interviews and a focus group with nurses, developed questionnaires for physicians, analyzed patient records, conducted an on-site usability study, designed a new form, ran tests for comparison, and presented evidence to the IT group that patient safety was improved.

Rice University, Psychology Department, Houston, TX

Graduate research assistant (Computer-Human Interaction Lab), Fall 2001-present

Teaching assistant (Intro to Cognitive Psychology, Methods), Spring 2002-present

Lockheed Martin Space Operations, Johnson Space Center, Houston, TX

Graduate intern, Fall 2003-Spring 2005

Led a study to determine human factors requirements for crew wireless headsets; conducted video analysis for habitat and equipment studies leading to design concepts; evaluated payload software interfaces per NASA usability standards; revised and developed NASA human factors requirements; researched future computer applications; designed an interface for a web-based ISO document and developed and conducted usability tests with representative users at NASA.

University of Texas, School of Health Information Sciences, Houston, TX

Graduate research assistant, Summer 2002-Fall 2003

Developed task analysis methods for medical devices; conducted heuristic evaluation, literature reviews, and user tests with nurses.

ETRAC (Educational Technology), Rice University, Houston, TX

Usability engineer, Fall 2001-Fall 2002

Designed and performed user tests and cognitive walkthroughs for a web-based educational technology research repository; generated templates (.css & .html).

Contact Information

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Skills

Human Factors

user testing, task analysis, heuristic evaluation, ACT-R, GOMS, cognitive walkthrough, structured interviews, observational analysis, focus groups, card sorting, web-based experiments

Graphics

Photoshop, Illustrator, Indesign, Quark, Dreamweaver, Flash

Software and Programming

MS Office, Access, SPSS, HTML, Javascript, Java (basic)

Languages

English (primary), Korean (proficient), French (proficient)

Honors and Awards

Rice University

Maurin research grant, 2005

Graduate fellowship, 2001-present

American Medical Informatics

Student paper competition finalist, 2003

University of Connecticut

New England Scholar, 2000

Deans List, 1999-2001

Affiliations

American Medical Informatics Association
Human Factors and Ergonomics Society

Publications

Refereed Journal

Chung, P. H., Byrne, M. D. (in press). Cue effectiveness in mitigating postcompletion errors in a routine procedural task. *International Journal of Human-Computer Studies*.

Book Chapter

Zhang, J., Patel, V. L., Johnson, T. R., Chung, P. H., Turley, J. P. (2005). Evaluating and predicting patient safety for medical devices with integral information technology. In Henriksen, Battles, Marks, & Lewin, (Eds.). *Advances in Patient Safety: From Research to Implementation*.

Refereed Conference Proceedings

Chung, P. H., Norris, L., Holden, K., Whitmore, M. (2005). Determining human factors requirements for wireless headsets in space. *Proceedings of HCI International 2005*. Las Vegas, NV. Mira Digital Publishing. CD-ROM.

Peres, C. P., Tamborello, F. P., Fleetwood, M. D., Chung, P. H., & Paige-Smith, D. L. (2004). Keyboard shortcut usage: the roles of social factors and computer experience. *Proceedings of the Human Factors and Ergonomics Society 48th Annual Meeting*. New Orleans, LA: Human Factors and Ergonomics Society.

Byrne, M. D., Maurier, D., Fick, C. S., Chung, P. H. (2004). Routine procedural isomorphs and cognitive control structures. In C. D. Schunn, M. C. Lovett, C. Lebiere & P. Munro (Eds.), *Proceedings of the 6th Annual International Conference on Cognitive Modeling* (pp. 52-57). Pittsburg, PA: Carnegie Mellon University, University of Pittsburg.

Chung, P. H., Byrne, M. D. (2004). Visual cues to reduce errors in a routine procedural task. *Proceedings of the 26th Annual Meeting of the Cognitive Science Society*, Chicago, IL: Cognitive Science Society.

Chung, P. H., Zhang, J., Johnson, T. R., & Turley, J. P. (2004). A comparative study of patient safety using infusion pumps. *Proceedings of International Medical Informatics Association (MEDINFO) Congress*, San Francisco, CA: Philadelphia: Hanley & Belfus.

Chung, P. H., Zhang, J., Johnson, T. R., & Patel, V. L. (2003). An extended hierarchical task analysis for error prediction in medical devices. *Proceedings of the American Medical Informatics Association (AMIA) Annual Symposium*, Washington DC: Wiley.

Chung, P. H., Zhang, J., & Johnson, T. R. (2003). An action-based hierarchical task analysis for evaluating medical device safety. *Proceedings of the 25th Annual Meeting of the Cognitive Science Society*, Boston, MA: Cognitive Science Society.

References

Mike Byrne (Ph.D. advisor), byrne (at) rice.edu

Tina Holden (NASA-JSC lab manager), kritina.l.holden1 (at) jsc.nasa.gov