

PHILLIP J. AYOUNG

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University Park, PA 16802

EDUCATION

- Ph.D. Candidate** Information Sciences and Technology (expected May 2010)
College of Information Sciences and Technology, Pennsylvania State University, University Park
- M.S.** Industrial & Manufacturing Engineering, option in Human Factors and Ergonomics (2005)
The Harold and Inge Marcus Department of Industrial and Manufacturing Engineering, College of Engineering, Pennsylvania State University, University Park
Thesis title: "Cognitive Work Analysis: Identification of Problem Solving Tasks and Work Constraints of Intelligence Analysts"
Committee Advisors: Irene Petrick, Ph.D., Michael McNeese, Ph.D., and Leah Newman, Ph.D.
- B.S.** Psychology (2002)
University of Wisconsin, Madison
Thesis title: "Madison Patient Safety Collaborative: A Macroergonomics Evaluation Assessing the Structures, Processes, and Outcomes of a Collaborative-Based Community Healthcare Network"
Advisors: Keith Kluender, Ph.D. and Pascale Carayon, Ph.D.
Men's Intercollegiate Varsity Soccer Team (Letters Earned: 1999, 2000, 2001)
- Areas of Interests** Creativity and innovation, Knowledge management, Computer-supported cooperative work, Organizational design and management, Team design, Complex sociotechnical systems, Distributed cognition, Activity theory and human intelligence, Work system design (work, workers and the workplace)
- Relevant Coursework** Engineering of Sociotechnical Systems, Human-Computer Interactions, Computer-supported cooperative work, Organizational Informatics, Psychology of Perception, Safety Systems, Engineering of Human Work, Human Performance and Accident Causation, Design of Experiments, Qualitative Methods, Regression Analysis
- Tools** Macromedia, Flash, Dreamweaver, html/CSS, Minitab, SPSS, Microsoft Office, Nvivo (qualitative coding), CHILDS (video and transcription coding), IHMC Cmap Tools (concept mapping software), Java (working knowledge), Freemind (knowledge mapping software)

WORK EXPERIENCE

- Design Research Intern**, WorkSpace Futures (May 2008 – present)
Steelcase, Inc. Grand Rapids, MI
Tasks: Develop and implement a mixed method design research study on the younger generation worker and how they will influence work practices and the design of the workplace.
Supervisor: Joyce Bromberg, Director WSF
- Research Assistant**, Enterprise Informatics and Integration Center (June 2007 – present)
College of Information Sciences and Technology, Pennsylvania State University.
Tasks: Develop and support research projects and overall Center programs, including administrative and project management tasks, data collection/analysis, development of research proposals and publications.
Director: Irene Petrick, Ph.D.

Rock Climbing Supervisor/Trip Leader, Adventure Recreation Program (Sept 2006 – present)

Pennsylvania State University

Tasks: Develop and plan rock climbing program, lead student and community rock climbing trips, and provide both technical and leadership training for rock climbing staff.

Program Coordinator: Jeff Chismar

Student Engineer, Payloads Concept Center (Nov 2005 – February 2007)

The Boeing Company, Seattle, WA

Tasks: Support and lead multidisciplinary teams in the research, design, advanced prototyping, and strategic roadmapping of concepts for future commercial aircraft payloads (aircraft interiors). Includes development of research agendas for concept center, design & implementation of research studies, development of collaborative research & design projects with academic, industry, & airline partners, and analysis & development of future concept designs and advanced prototypes.

Manager: Peter Guard

Research Consultant, Converging Perspectives on Data (CPoD) Consortium (June 2005 – Sept 2005)

Cognitive Systems Engineering Laboratory/Institute for Ergonomics, Ohio State University, Columbus, OH

Tasks: Team leader for summer institute on data overload in information analysis & comprehension. Led interdisciplinary collaborative group pursuing innovative solutions to data overload problems in information analysis and comprehension tasks. Project goal was to develop conceptual prototype of an analysis and decision support tool that may be used to meet the demands of the intelligence community.

Consortium Directors: David Woods, Ph.D. and Emily Patterson, Ph.D.

Graduate Research Assistant, GeoVista Center (Mar 2005 – May 2005)

School of Information Sciences and Technology, Pennsylvania State University

Project Title: GeoCollaborative Crisis Management (GCCM) project

Tasks: Conducted observation and analysis of U.S. Department of Homeland Security's Top Officials Three Exercise (TOPOFF 3). Project goal was the evaluation and analysis of multi-agency collaborative group work that used geospatial information and technology in the context of crisis management. Funding supported by National Science Foundation (NSF).

Project Directors: Michael McNeese, Ph.D. and Alan MacEachran, Ph.D.

Graduate Research Assistant, School of Information Sciences and Technology (Jan 2004 – Jun 2004)

Pennsylvania State University

Project Title: "Impact of Supply Chain Decisions on Small to Mid-Size Firms"

Tasks: Collaborated with multidisciplinary project team to evaluate supply chain decisions made by larger industry players on domestic small and mid-size manufacturers. Analysis consisted of diagnosis of medical equipment and devices & supplies manufacturing industry focusing on the impact of supply chain dynamics and decision making as related to innovation, competitive advantage, and information networks. Funding supported by National Institute of Standards and Technology (NIST), U.S. Department of Commerce.

Project Supervisor: Irene Petrick, Ph.D.

Graduate Research Assistant, Macroergonomics and Technology Laboratory (Sept 2003 – May 2005)

Department of Industrial and Manufacturing Engineering, Pennsylvania State University

Tasks: Collaborated in research evaluating sociotechnical, organizational and technology issues in educational systems with the intent to reduce hazardous stressors and increase student and faculty performance, retention and work satisfaction. Involved in all aspects of projects: examination of educational system environments, literature reviews, focus groups, interviews, and surveys, along with developing potential teams and affiliates, and analysis of data (Nvivo, SPSS, and Excel).

Lab Directo: Leah Newman, Ph.D.

Research Intern, Center for Quality and Productivity Improvement (Jan 2002 – July 2003)

Department of Industrial Engineering, University of Wisconsin, Madison

Tasks: Collaborated with team of engineers and healthcare professionals to design, implement, and evaluate a work system intervention to improve workflow/processes and patient safety in ambulatory surgery units. Involved in

development and implementation of intervention, including conferences with participating hospital representatives and research team, development of database, and data analysis, as well as design of data collection instruments (quantitative and qualitative). Funding supported by Agency for Healthcare Research and Quality (AHRQ), Department of Health and Human Services.
Center Director: Pascale Carayon, Ph.D.

Team Manager, Men's Intercollegiate Varsity Soccer Team (Aug 2002 – July 2003)
Athletic Department, University of Wisconsin, Madison
Tasks: Assisted in the management and coaching of UW's Division I intercollegiate men's soccer athletic program.
Head Coach: Jeff Rohrman, M.S.

Laboratory Assistant, Wisconsin Speech Perception Laboratory (Jan 2002 – May 2002)
Department of Psychology, University of Wisconsin, Madison
Tasks: Assisted in the conduction of experiments and data collection for research testing audible interferences in human and chinchilla auditory perception and development.
Lab Director: Keith Kluender, Ph.D.

Research Assistant, Early Head Start Research Partnerships (Jun 1999 – Aug 1999; June 2000 – Aug 2000)
Graduate School of Education, Harvard University, Cambridge
Tasks: Assisted in video transcription (CHILDS), development of databases and date entry (Excel).
Supervisors: Barbara Pan, Ph.D., Catherine Snow, Ph.D.

TEACHING EXPERIENCE

Teaching Fellow / Course Instructor, IST 302, Information Technology Project Management (Fall 2008)
School of Information Sciences and Technology, Pennsylvania State University
Task: Course development, class instruction, grading

Graduate Teaching Assistant, IST 301, Organizations and Information (Spring 2007)
School of Information Sciences and Technology, Pennsylvania State University
Tasks: Course development, class instruction, grading.
Course Instructor: Irene Petrick, Ph.D.

Graduate Teaching Assistant, IST 302, Information Systems Project Management (Fall 2006)
School of Information Sciences and Technology, Pennsylvania State University
Tasks: Class instruction and grading of student materials.
Course Instructor: Irene Petrick, Ph.D.

HONORS AND AWARDS

- National Scholars Honor Society
- Glenn E. Singley Memorial Graduate Fellowship in Engineering, Pennsylvania State University
- Apha Pi Mu member (National Honors Society for Industrial Engineers), Pennsylvania State University
- 2001 University of Wisconsin W Club Scholar-Athlete, University of Wisconsin
- Three Time Academic All-Big Ten (1999, 2000, 2001), University of Wisconsin

SOCIETIES AND ACTIVITIES

National Honors Society Member

Committee Organizer and Co-Chair

- 2008 IST Graduate Symposium

Human Factors and Ergonomics Society

- National Chapter Member (2003 – Present)
- President, Pennsylvania State University Student Chapter (2004, 2005, 2007)
- Pennsylvania State University Student Chapter Member (2003, 2004, 2005, 2006, 2007)

Industrial Health & Safety Society (IHSS)

- Pennsylvania State University Student Chapter Member (2004, 2005)

Head Coach, Pennsylvania State University Men's Club Soccer Team University Park, PA (Fall 2004)

Private Pilot's License and Member of Aircraft Owners and Pilots Association (AOPA) (2004 – present)

PUBLICATIONS

- Ayoub, P.J. & Petrick, I.J. (2008). From Industrial to Knowledge Work: Five Challenges in Strategic Fit for Supporting Creativity and Innovation at the Fuzzy Front End. In *Proceedings of the Organization Design and Management XI Annual Meeting*, March 19-21, Guarujá, Brazil.
- Ayoub, P.J., Petrick, I.J. & McNeese, M.D. (2007). Weather systems: A new metaphor for intelligence analysis. In *Proceedings of the Human Factors and Ergonomics Society 51st Annual Meeting*, Oct. 1-5, Baltimore, MD: HFES.
- Ayoub, P.J. (2005). *Cognitive work analysis: Identification of problem solving tasks and work constraints of intelligence analysts*. Unpublished master's thesis, The Pennsylvania State University, University Park.
- Carayon, P., Hundt, A.S., Alvarado, C.J., Springman, S.R., and Ayoub, P. (2006). Patient safety in outpatient surgery: The viewpoint of the healthcare providers. *Ergonomics*, 49(5-6), 470-485.
- Carayon, P., Gurses, A., Hundt, A., Ayoub, P., and Alvarado, C. (2005) Performance obstacles and facilitators of healthcare providers. In J. M. Peiro & W. Schaufeli (Series Eds.) and Korunka, C. & Hoffmann, P. (Vol. Eds.), *Change and Quality in Human Service Work: Vol. 4. Organizational Psychology and Health Care*. Munich: Hampp Publishers.
- Petrick, I.J., Purdam, S., Young, R.R., Atreya, S., Ayoub, P.J., Mathew, N. (2004). Impact of Supply Chain Decisions on Small to Mid-Size Manufacturers. Final report to National Institutes of Standards and Technologies (NIST), June 2004.
- Carayon, P., Borgsdorf, A., Ayoub, P., Hundt, A., and Alvarado, C. (2003). Making a community safer for patients: The development of the Madison patient safety collaborative. In *Proceedings of the 15th Triennial Congress of the International Ergonomics Association*.
- Hundt, A., Carayon, P., Ayoub, P., & Alvarado, C. (2003). Collecting Worker's Perceptions of Performance Obstacles in Outpatient Surgery. In *Proceedings of the Human Factors and Ergonomics Society 47th Annual Meeting*. Santa Monica, CA: HFES.

PRESENTATIONS AND WORKSHOPS

- Ayoub, P.J. (2008, Oct 17) "Generations@Work." *World Workplace 2008*, Oct 15th-17th. Dallas, TX.
- Ayoub, P.J. (2008, Oct 2) "Workshop: Building and Managing an Effective Team." Pennsylvania State University, Oct. 2nd. University Park, PA.
- Ayoub, P.J (2008, Sept 17) "How to Organize and Manage Creative Work, Workers and the Workplace in the Knowledge and Open Innovation Environment." Conference for Collaboration & Innovation 2008. Purdue University, West Lafayette, IN. Sept 14th-17th.

Ayoub, P.J., Daughtry, J.M., Peters, M.R. (2007). Navigating design research: A pragmatic approach. Presented at *Connections 2007*, May 18-20, Drexel University, Philadelphia, PA.

Ayoub, P.J. (2007). Supporting innovation and creativity in organizations: Identifying common ground between organizational theorists and CSCW researchers. Poster presented at *The 22nd Annual Graduate Exhibition*, March 23-25, Pennsylvania State University, University Park, PA.

Ayoub, P.J. (2007) Creativity and innovation: New metaphors for conceptualizing a community. Panel presentation at *Second Interdisciplinary Graduate Symposium: Communities Managing Knowledge*, February 23, Pennsylvania State University, University Park, PA.

PATENTS

[Kneller, H.J., Lin, D.C., Lamoree, B.L., Tylee, J.L., and Ayoub, P.J. \(2006\). US Patent No. 20080071398. Washington, DC: U.S. Patent and Trademark Office.](#)

[Lamoree, B. L., Lin; D.C., Kneller, H.J., Ayoub, P.J., Dowdell, R.M., Simms, R.K. \(2006\). US Patent No. D/265,175. Washington, DC: U.S. Patent and Trademark Office.](#)

[Lamoree, B. L., Lin; D.C., Kneller, H.J., Fletcher; H.V., Prince, B.J., Ayoub, P.J. \(2006\). US Patent No. 20080055836. Washington, DC: U.S. Patent and Trademark Office.](#)