

PHILLIP J. AYOUB

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EDUCATION

PhD, College of Information Sciences and Technology (Expected August 2011)
Pennsylvania State University, University Park
Dissertation: “The Dynamics of Sociomateriality and Complexity at the Front-End of Innovation”
Advisers: Irene Petrick, Jack Carroll, Raghu Garud, Timothy Simpson and Samuel Hunter

MS, Industrial & Manufacturing Engineering, College of Engineering (2005)
Pennsylvania State University, University Park
MS Thesis: “Cognitive Work Analysis: Identification of Problem Solving Tasks and Work Constraints of Intelligence Analysts”
Advisors: Irene Petrick, Michael McNeese, and Leah Newman

BS, Psychology (2002)
University of Wisconsin, Madison
Undergraduate Thesis: “Madison Patient Safety Collaborative: A Macroergonomics Evaluation Assessing the Structures, Processes, and Outcomes of a Collaborative-Based Community Healthcare Network”
Advisors: Pascale Carayon and Keith Kluender
Men’s Intercollegiate Varsity Soccer Team (Letters Earned: 1999, 2000, 2001)

EXPERIENCE

Graduate Intern Technical (Feb 2010 – Present)
Intel Corporation

Senior Consultant (May 2009 – Present)
Perigean Technologies
Chief Technology Officer: Brian Moon

Design Research Intern (May 2008 – Oct 2008)

WorkSpace Futures, Steelcase Inc.

Director: Joyce Bromberg

Research Assistant (2007- 2009)

Enterprise Informatics and Integration Center

College of Information Sciences and Technology, Pennsylvania State University.

Director: Dr. Irene Petrick

Program Adviser and Rock Climbing Supervisor (2006-2009)

Adventure Recreation Program, Pennsylvania State University

Program Coordinator: Jeff Chismar

Human Factors Engineering Intern (2005-2007)

Payloads Concept Center, The Boeing Company

Manager: Peter Guard

Research Consultant (Summer 2005)

The Converging Perspectives on Data (CPoD) Consortium

Cognitive Systems Engineering Laboratory, Ohio State University

Consortium Directors: Dr. David Woods and Dr. Emily Patterson

Graduate Research Assistant (Spring 2005)

GeoVista Center

School of Information Sciences and Technology, Pennsylvania State University

Project Directors: Dr. Michael McNeese and Dr. Alan MacEachran

Graduate Research Assistant (2004)

NIST Study on impact of supply chain decisions on small to mid-size firms

School of Information Sciences and Technology, Pennsylvania State University

Project Director: Dr. Irene Petrick

Graduate Research Assistant (2003-2005)

Macroergonomics and Technology Laboratory

Industrial & Manufacturing Engineering, Pennsylvania State University

Lab Director: Dr. Leah Newman

Research Intern (Jan 2002 – July 2003)

Center for Quality and Productivity Improvement (CQPI)

Department of Industrial Engineering, University of Wisconsin

Center Director: Dr. Pascale Carayon

Team Manager, Men's Intercollegiate Varsity Soccer Team (Aug 2002 – July 2003)

Athletic Department, University of Wisconsin

Head Coach: Jeff Rohrman

Laboratory Assistant (Jan 2002 – May 2002)

Wisconsin Speech Perception Laboratory

Department of Psychology, University of Wisconsin, Madison

Lab Director: Dr. Keith Kluender

Research Assistant (Jun 1999 – Aug 1999; June 2000 – Aug 2000)
Early Head Start Research Partnerships
Graduate School of Education, Harvard University
Supervisors: Barbara Pan and Catherine Snow

TEACHING

Teaching Fellow (Course Instructor)
College of Information Sciences and Technology, Pennsylvania State University
IST 302, IT Project Management, Spring 2009
IST 302, IT Project Management, Fall 2008

Graduate Teaching Assistant (Course Assistant)
College of Information Sciences and Technology, Pennsylvania State University
IST 301, Organizations and Information, Spring 2007
IST 302, Information Systems Project Management, Fall 2006

HONORS & AWARDS

2010 Technology and Innovation Management Doctoral Consortium, Academy of Management
2010 Young Investigators Summer Institute of the Consortium for the Science of SocioTechnical Systems
The Front End of Innovation 2010 (FEI2010) Doctoral Travel Scholarship (\$5000)
Glenn E. Singley Memorial Graduate Fellowship in Engineering, Pennsylvania State University (2003)
2001 University of Wisconsin W Club Scholar-Athlete, University of Wisconsin
Three Time Academic All-Big Ten, University of Wisconsin (1999, 2000, 2001)
Alha Pi Mu member (National Honors Society for Industrial Engineers)
National Scholars Honor Society

MEMBERSHIPS AND SERVICES

Associations

Academy of Management (2007 - present)
Human Factors and Ergonomics Society (2003 – Present)
President, Human Factors and Ergonomics Society Student Chapter at Pennsylvania State University
(2004, 2005, 2007)
Human Factors and Ergonomics Society, Student Chapter Member at Pennsylvania State University
(2003, 2004, 2005, 2006, 2007)
Industrial Health & Safety Society (IHSS), Student Chapter Member at Pennsylvania State University
(2004, 2005)
National Honors Society Member
Aircraft Owners and Pilots Association (AOPA) (2004 – present)
American Mountain Guide Association (2007 – present)

Pennsylvania State University Triathlon Club (2008 – present)

Reviewer Services

Academy of Management (AOM) Annual Meeting
Journal on Electronic Commerce Research and Applications (ECRA)
International Conference on Information Systems (ICIS)
Human Factors and Ergonomics Society (HFES)

Professional Services

Chair and Committee Organizer, *2008 IST Graduate Research Symposium*
College of Information Sciences & Technology, Pennsylvania State University: Jan 31 – Feb 1,
University Park, PA.
Head Coach, Pennsylvania State University Men's Club Soccer Team (2004 - 2005)

PUBLICATIONS

Peer-Reviewed and Refereed Journal Articles

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.

Peer-Reviewed and Refereed Conference Proceedings

Ayoub, P.J. & Blodgett, B.M.W. (2010). More savvy than we can hope to be: A generational lense on ICTs in the changing workplace. In Proceedings of the American Society for Information Science & Technology (ASIST) Annual Meeting, Oct 24-27, Pittsburgh, PA.

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.

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.

Book Chapters

McNeese, M.D. and **Ayoub, P.J.** (in press). Concept Mapping in the analysis and design of cognitive systems: A historical review. In B. Moon, R. Hoffman, J. Novak, and A. Canas (Eds.), *Applied Concept Mapping: Theory, Techniques, and Case Studies in the Business Applications of Novakian Concept Mapping*. Productivity Press.

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.

News Publications, Technical Reports and Theses

Petrick, I.J. and **Ayoub, P.J.** (2009, Oct). From follower to leader: How digital natives will change the way we communicate, use technology, and conceptualize military logistics. Military Logistics Forum, KMI Media Group

Ayoub, P.J. and Petrick, I.J. (2009, June/July). Collaborative Innovation: Influences of ICTs & the Digital Native. InKNOWvations eNewsletter, Sopheon.

Petrick, I.J., Maitland, C., Pogrebnyakov, N. and **Ayoub, P.J.** (2008, February). Pennsylvania Plastics Manufacturing Industry — Profile and Supply Chain Coordination Practices: Final Report to Pennsylvania Workforce Development. Prepared for Employment and Training Administration, US Department of Labor.

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.

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.

Invited Talks, Presentations and Workshops

Ayoub, P.J. (2010, May 10). Generational differences and technology opportunities. For NAND Memory Group, Intel Corporation, Folsom, CA [Internal Invited Talk]

Petrick, I.J. and **Ayoub, P.J.** (2010, Jan 15). Innovation, Creativity and Collaboration: Developing an innovation culture. At Outreach TED Talk Series. University Park, PA [Invited Talk]

Ayoub, P.J. (2009, Oct 8). Understanding Generational Differences: How My Generation is Different. At IST 110 Information, People, and Technology, Pennsylvania State University. University Park, PA. [Invited Talk]

Ayoub, P.J. (2009, Oct 5). Generations@Work: Implications on Cultural, Technology, and Organization in the U.S. Workplace. At IST 590 Colloquium, Pennsylvania State University. University Park, PA. [Invited Talk]

Petrick, I.J. and **Ayoub P.J.** (2009, June 8). Digital Natives and 4th Generation Warfare: Innovating the Logistics Supply Chain in the Digital Age. At Military Logistics Summit 2009, Tysons Corner, Vienna, VA.

Ayoub, P.J. (2009, Mar 3). GEN@WORK. At International Facility Management Association - Academic Facilities Council. Web Seminar [Invited Talk]

Ayoub, P.J. (2008, Oct 21). Metaphors for Intelligence Analysis. At IST 501 Integrative Theories and Methods of the Information Sciences and Technology, Pennsylvania State University. University Park, PA. [Invited Talk]

Ayoub, P.J. (2008, Oct 17) "Generations@Work." At World Workplace 2008, Oct 15th-17th. Dallas, TX. [Invited Talk]

Ayoub, P.J. (2008, Oct 2). Building and Managing an Effective Team. At IE 480W Capstone Design Project, Pennsylvania State University, Oct. 2nd. University Park, PA. [Invited Talk]

Ayoub, P.J. (2008, Sept 17). How to Organize and Manage Creative Work, Workers and the Workplace in the Knowledge and Open Innovation Environment. At Conference for Collaboration & Innovation 2008. Purdue University, West Lafayette, IN. Sept 14th-17th. [Invited Talk]

Ayoub, P.J. and Petrick, I.J. (2008, Mar. 20). From Industrial to Knowledge Work: Five Challenges in Strategic Fit for Supporting Creativity and Innovation at the Fuzzy Front End. At Organization Design and Management XI Annual Meeting, Guarujá, Brazil.

Ayoub, P.J., Petrick, I.J. & McNeese, M.D. (2007, Oct. 4). Weather systems: A new metaphor for intelligence analysis. At Human Factors and Ergonomics Society 51st Annual Meeting, Baltimore, MD.

Ayoub, P.J. (2007, Nov 15). Cognitive Tasks and Domain Constraints in Intelligence Analysis. At IST 501 Integrative Theories and Methods of the Information Sciences and Technology, Pennsylvania State University. University Park, PA. [Invited Talk]

Ayoub, P.J., Daughtry, J.M., and Peters, M.R. (2007, May 19). Navigating design research: A pragmatic approach. Presented at Connections 2007, Drexel University, Philadelphia, PA.

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

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

Ayoub, P.J. (2005, July) Cognitive demands of intelligence analysts. At Colloquium Seminar, University of Dayton, Dayton, OH. [Invited Talk]

Ayoub, P.J. (2005, July) Intelligence Analysis: An overview of cognitive demands. Present at Converging Perspectives on Data (CPoD) Consortium, Cognitive Systems Engineering Laboratory/Institute for Ergonomics, Ohio State University, Columbus, OH. [Invited Talk]

Patents

Lamoree, B. L., Lin, D.C., Kneller, H.J., **Ayoub, P.J.**, Dowdell, R.M., Simms, R.K. (2008). *Electronic Interactive Switch*. [U.S. Patent No. D562,779](#). Washington, DC: U.S. Patent and Trademark Office.

Lin, D.C., Lamoree, B.L., Kneller, H.J., Fletcher, H.V., Prince, B.J., and **Ayoub, P.J.** (2009, Filed). *System and method for compartment control*. Invention Disclosure No. 06-0352A. Washington, D.C.: U.S. Patent and Trademark Office.

Lamoree, B.L., Lin, D.C., Kneller, H.J., Fletcher, H.V., Prince, B.J., and **Ayoub, P.J.** (2006, Filed). *System and method for compartment control*. [US Patent Application No. 20080055836](#). Washington, D.C.: U.S. Patent and Trademark Office.

Kneller, H.J., Lin, D.C., Lamoree, B.L., Tylee, J.L., and **Ayoub, P.J.** (2006, Filed). *System and Method for Compartment Control*. [U.S. Patent Application No. 20080071398](#). Washington, D.C.: U.S. Patent and Trademark Office.