

April Savoy, PhD

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Education

PURDUE UNIVERSITY –West Lafayette, IN
Doctorate of Philosophy, Industrial Engineering, 2008
Human Computer Interaction Research Program

PURDUE UNIVERSITY – West Lafayette, IN
Masters of Science, Computer Science, 2004

XAVIER UNIVERSITY OF LOUISIANA – New Orleans, LA
Bachelors of Science, Computer Science, 2002

Research Interests

Health Information Systems' User-centered Design and Evaluation

- Assessing Health Information Technology's Impact on Physician Communication During Care Coordination
 - Assessing the Impact of Mobile Technology-Integrated Clinical Workflows
 - Usability Evaluation of Health Information Technology: Emphasizing Cognitive Requirements for Decision Making
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Work Experience

Assistant Professor of Computer Information Technology

2018 – Present, Indiana University Purdue University Indianapolis
School of Engineering and Technology

Director of Human Computer Interaction and Simulation Lab

2014 – Present, Richard L. Roudebush Veterans Affairs Medical Center
Center for Health Information and Communication

Assistant Professor and Director of Informatics

2012 – 2018, Indiana University East
School of Business and Economics

Program Manager- Research Associate

2008-2012, SA Technologies, Inc.
Company specializing in Situation Awareness research , design, training, modeling, and measuring.

Adjunct Professor

2010-2012, American InterContinental University
Department of Information Technology

Graduate Research Assistant

2003 – 2004, Purdue University,
Department of Computer Science

Internships & Co-Op

Co-op Pre-Professional Engineer

2004 – 2005, International Business Machines

Co-op Pre-Professional Engineer

Summer 2002, IBM T.J. Watson Research Center

Co-Op Pre-Professional Engineer

Summer 2001, IBM T.J. Watson Research Center

**Research
Grants
Awarded**

Early Career Investigator Award

2019-Present, Principal Investigator

Solicitation: Indiana Clinical and Translational Sciences Institute

Research & Technical Area: Health Services and Human Factors Engineering

Care Coordination and Outcomes in the VA Expanded Choice Program

2018- Present, Co-Investigator

Solicitation: VA Quality Enhancement Research Initiative

Research & Technical Area: Health Services and Informatics

**Improving Patient Care and Physician Resilience through Effective
Veteran-Centered Communication and Documentation Practices**

2018-Present, Co-Investigator

Solicitation: VA Health Services Research and Development

Research & Technical Area: Health Services and Informatics

**Human Factors Investigation of HIE: Tools to Support Providers'
Coordination of Medications Team Meeting**

2018-Present, Co-Investigator

Solicitation: VA Health Services Research and Development

Research & Technical Area: Health Services and Informatics

iPad Functionality Leveraged to Optimize Workflows (iFLOW)

2017, Principal Investigator

Solicitation: VA Health Services Research and Development

Research & Technical Area: Health Services and Informatics

Young Investigator Award: Mobile Computing in Primary Care

2016, Principal Investigator

Solicitation: Indiana Institute of Medical Research

Research & Technical Area: Health Informatics

**Improving Consultation Management between Primary Care and Sub-
Specialty Clinics (CONSULTS)**

2014, Co-Investigator

Solicitation: VA Health Services Research and Development

Research & Technical Area: Health Services and Informatics

Center for Health Information and Communication

2014, Co- Investigator

Solicitation: VA Health Services Research and Development

Research & Technical Area: Health Services and Informatics

IU Online 3.0

2013, Principal Investigator

Solicitation: Indiana University

Research & Technical Area: Usability of Course Management Systems

**Cyber Security High Abstraction Contextual Visualization and Decision
Support System**

2012, Co-Principal Investigator

Solicitation: Department of Defense Small Business Innovation Research

	<p><i>Research & Technical Area:</i> Information Systems</p> <p>Enhancing Decision Making through Adaptive Trustworthiness Cues 2012, Co-Principal Investigator <i>Solicitation:</i> Department of Defense Small Business Innovation Research <i>Research & Technical Area:</i> Information Systems</p>
Quality Improvement Grants Awarded	<p>Electronic Capture of Patient-Centered Data to Improve Quality of Care 2017, Co-Principal Investigator <i>Solicitation:</i> Richard L. Roudebush Veteran Medical Center <i>Research & Technical Area:</i> Health Services and Informatics</p> <p>Measuring Efficiency of Key Clinical Tasks 2016, Principal Investigator <i>Solicitation:</i> VA Office of Informatics and Analytics <i>Research & Technical Area:</i> Health Services and Informatics</p> <p>Information Visualization Insights for Developers 2016, Principal Investigator <i>Solicitation:</i> VA Office of Informatics and Analytics <i>Research & Technical Area:</i> Health Services and Informatics</p> <p>Veteran Affairs Video Access (VA²) 2015, Principal Investigator <i>Solicitation:</i> VA Health Services Research and Development <i>Research & Technical Area:</i> Health Services and Informatics</p>
Fellowships & Scholarships Awarded	<p>Enhanced Mentoring Program with Opportunities for Ways to Excel in Research 2019, Principal Investigator <i>Solicitation:</i> Indiana University-Purdue University Indianapolis <i>Research & Technical Area:</i> Human Factors Engineering</p> <p>Sony Electronics Faculty Scholar 2014, Principal Investigator <i>Solicitation:</i> Sony Corporation in America <i>Research & Technical Area:</i> Informatics</p> <p>American Association for the Advancement of Science Fellow (AAAS) 2007-2008, Principal Investigator <i>Solicitation:</i> AAAS <i>Research & Technical Area:</i> Computer Science</p> <p>Alliance for Graduate Education and the Professoriate (AGEP) Fellow 2006-2008, Principal Investigator <i>Solicitation:</i> Purdue University <i>Research & Technical Area:</i> Computer Science</p> <p>Purdue Doctoral Fellowship 2005-2008, Principal Investigator <i>Solicitation:</i> Purdue University <i>Research & Technical Area:</i> Computer Science</p> <p>David and Lucille Hewlett Packard Fellowship 2002-2008, Principal Investigator <i>Solicitation:</i> David and Lucille Packard Foundation <i>Research & Technical Area:</i> Computer Science</p>

Publications

Books and Book Chapters

- Holden, R., Volda, S., **Savoy, A.**, Jones, J. & Kulanthaivel, A. (2016). Human Factors Engineering and Human–Computer Interaction: Supporting User Performance and Experience. In *Clinical Informatics Study Guide*: Springer International Publishing.
- Onal, E., **Savoy, A.**, and McDonald, S. (2012, July). Augmented navigation: A cognitive approach. In K. M. Stanney & K. S. Hale (Eds.), *Advances in Cognitive Engineering and Neuroergonomics* (13-22). Boca Raton, FL: CRC Press.
- Liao, H., Guo, Y., **Savoy, A.**, and Salvendy, G. (2009). *Content preparation guidelines for the web and information appliances: Cross-cultural comparisons*. Boca Raton, FL: CRC Press.

Journal Articles (Peer-Reviewed)

- Savoy, A.**, Militello, L., Diiulio, J., Midboe, A. M., Weiner, M., Abbaszadegan, H., & Herout, J. (2019). Cognitive requirements for primary care providers during the referral process: Information needed from and interactions with an electronic health record system. *International Journal of Medical Informatics*.
- Savoy, A.**, Militello, L., Patel, H., Diiulio, J., Flanagan, M., Daggy, J., Russ, A., Weiner, M., and Saleem, J. (2018). A cognitive systems engineering approach to improve the usability of electronic order forms for medical consultations. *Journal of Biomedical Informatics*.
- Militello, L., **Savoy, A.**, Patel, H., Diiulio, J., Flanagan, M., Daggy, J., Russ, A. and Weiner, M. (2018). Hidden complexities in information flow between primary and specialty care clinics. *Cognition, Technology, and Work*, 1-10.
- Savoy, A.**, Patel, H., Flanagan, M., Daggy, J., Russ, A. and Weiner, M. (2018). Comparative usability evaluation of consultation order templates in a simulated primary care environment. *Applied Ergonomics*, 73, 22-32.
- Saleem, J. J., **Savoy, A.**, Etherton, G., and Herout, J. (2018). Investigating the need for clinicians to use tablet computers with a newly envisioned electronic health record. *International Journal of Medical Informatics*, 110(2), 25-30.
- Savoy, A.**, Patel, H., Flanagan, M., Weiner, M., and Russ, A. (2017). Systematic heuristic evaluation of computerized consultation order templates: Clinicians' and Human Factors Engineers' Perspectives. *Journal of Medical Systems*.
- Savoy, A.** and Salvendy, G. (2016). Factors for Customer Information Satisfaction: User Approved and Customer Validated. *International Journal of Human-Computer Interaction*.
- McLeod, A. & **Savoy, A.** (2015). The building blocks for enhanced technological literacy. *The Career and Technical Education Journal*.
- Guo, Y., **Savoy, A.**, and Byrd, K. (2009) Development and validation of an instrument to evaluate the content effectiveness of video games: A pilot study. *Theoretical Issues in Ergonomics Science*, 10(2), 107-133.

- Savoy, A.**, Proctor, R. W., & Salvendy, G. (2009). Information retention from PowerPoint™ and traditional lectures. *Computers and Education*, 52(4), 858-867.
- Savoy, A.** and Salvendy, G. (2008). Foundations of content preparation for the web. *Theoretical Issues in Ergonomics Science*, 9(6), 501-521.[Based on Dissertation]
- Savoy, A.**, Guo, Y., and Salvendy, G. (2008). Effects of detectability and importance of usability problems on sample size requirements. *International Journal of Human-Computer Interaction*, 25(5), 430-440.
- Conference Proceedings (Peer-Reviewed)**
- Militello, L. **Savoy, A.**, Flanagan, M., Wu, J., Adams, J., Rehman, S., Abbaszadegan, H., and Weiner, M. (2017). Exploring Information Flow: Consultations between Primary and Specialty Care Clinics. *International Conference on Naturalistic Decision Making*.
- Moayed, F. A., **Savoy, A.**, and Turpen, C. (2017). Study of Suitability of Computer Workstations Design for Nurses' Work Content. In G. V. Duffy & N. Lightner (Eds.), *Advances in Human Factors and Ergonomics in Healthcare: Proceedings of the AHFE 2016 International Conference on Human Factors and Ergonomics in Healthcare, July 27-31, 2016, Walt Disney World®, Florida, USA* (pp. 89-101). Cham: Springer International Publishing.
- Savoy, A.**, and McLeod, A. (2014, June). The Value of User Centered Design in Product Marketing: A Simulated Manufacturing Company Product Offering Market Strategy. In F.-H. Nah (Ed.), *HCI in Business* (Vol. 8527, pp. 575-582): Springer International Publishing.
- Savoy, A.** (2013, March). Investigating the Usability of Conceptual Models: User's Perspective. *Association for Industry, Engineering, and Management Systems Conference*, Cocoa Beach, FL
- Savoy, A.**, and McLeod, A. (2013). A Precursory Look at Potential Interaction Objectives Affecting Flexible Robotic Cell Safety. In S. Yamamoto (Ed.), *Human Interface and the Management of Information. Information and Interaction for Health, Safety, Mobility and Complex Environments* (Vol. 8017, pp. 198-206): Springer Berlin Heidelberg.
- Robinson, J., **Savoy, A.**, Strater, L., Endsley, M., and Hyatt, J. (2011, October). The networked patrol leader: The need for technologies with a user focus. Paper presented at the *IEEE 6th Annual Network Science Workshop*, West Point, NY.
- McLeod, A., and **Savoy, A.** (2009, June). Problem-based learning in an introductory level lean manufacturing systems course. Paper presented at the *American Society of Engineering Education Annual Conference & Exposition*, Austin, TX. [Best Paper Nominated]
- Savoy, A.**, and Salvendy, G. (2007, July). Effectiveness of content preparation in information technology operations: Synopsis of a working paper. In

Jacko, J (Ed.), *Human Computer Interaction: Interaction Design and Usability*, Lecture Notes in Computer Science, 4550, 624-631. Heidelberg, Germany: Springer.

Savoy, A. (2000, April). A single strategy for multiple threads. Paper presented at the *National Conference on Undergraduate Research*, Missoula, Montana.

Conference Presentations and Extended Abstracts (Peer-Reviewed)

Savoy, A. (2019). Closing the cross-institutional referral loop: Applying human factor to improve consultations. *Indiana Clinical Translational Sciences Institute Annual Meeting*. Indianapolis, IN.

Williams, L., Patel, H., Martin, H., Rattray, N., Miech, E., **Savoy, A.**, Graham, G., Martini, S., Anderson, J., and Damush, T. (2019). Effective communication and engagement increases satisfaction among virtual telestroke providers. *Stroke* (50).

Savoy, A. (2019). Varying perspectives and data challenges that impact usability. *Indiana University-Purdue University Indianapolis Data Summit*. Indianapolis, IN.

Savoy, A., Patel, H., Flanagan, M., and Weiner, M. (2019). Cognitive requirements for referring primary care providers. *Veterans Health Administration's Health Services Research and Development National Meeting*. Washington, DC.

Savoy, A., (2019). Interacting with clinical information: Pilot time and motion study of hospitalists. Healthcare Systems Process Improvement. *Society of Healthcare Systems Annual Meeting*.

Savoy, A., Patel, H., Flanagan, M., Daggy, J., Barker, B., Slaven, J. Russ, A. and Weiner, M. (2017). Comparison of Two Electronic Order Forms for Medical Consultation: Think-Aloud Usability Assessment With Referring Clinicians. *Human Factors and Ergonomics Annual Meeting*.

Savoy, A., Patel, H., Flanagan, M., Weiner, M., and Russ, A. (2017). Usability Evaluation of VA Consultation Order Templates: Identifying Problems to Prioritize Redesign Efforts. *Veterans Health Administration's Health Services Research and Development National Meeting*. Washington, DC.

Savoy, A. (2017). Practitioners' and User-centered Design Specialists' Varying Perspectives on the Impact of Usability Priorities and Design. *The Patient, The Practitioner, and The Computer: Holding on to the Core of Our Healing Professions in a Time of Technological Change*. Warren Alpert Medical School Conference. Brown University.

Militello, L., Diiulio, J., Russ, A., **Savoy, A.**, Flanagan, M., Patel, H., and Weiner, M. (2016). Design Concepts to Support Management of Outpatient Consultations in the Veterans Health Administration. *Human Factors and Ergonomics Annual Meeting*.

Savoy, A., Patel, H., Flanagan, M., Russ, A., Weiner, M. (2016). Templates for Ordering Specialty Care Consultations Lack Minimalism and Error

Prevention: Results of a Heuristic Evaluation. *American Medical Informatics Association*. Chicago, IL.

Wu, J., Militello, L., Flanagan, M., Barker, B., Rehman, S., Porter, B., Adams, J., **Savoy, A.**, Russ, A., Weiner, M. (2016). Barriers and Facilitators to Using Electronic Health Records for Referrals between Primary and Specialty Care Clinics. *American Medical Informatics Association*. Chicago, IL.

Savoy, A. (2016). Error Message Design. *Applied Human Factors and Ergonomics International Conference*. Orlando, Florida.

Weiner M, Barker B, Midboe A, Porter B, Adams J, Wu J, Flanagan M, **Savoy A**, Rehman S, Abbaszadegan H, Russ A, Thurmond C, Haggstrom D, Frankel R, Militello L. (2016). Cognitive challenges, technological factors, and communication of medical referrals and consultations. *International Symposium on Human Factors and Ergonomics in Health Care: Shaping the Future*, San Diego, CA.

Savoy, A. (2013) Providing Useful Information on Websites: Understanding the Impact of Demographics on Customer Information Satisfaction. *19th Academy of Business Research Fall International Conference*, Montego Bay, Jamaica. [Best Paper Award]

Savoy, A. (2013). Investigating the Usability of Conceptual Models: Users' Perspective. *19th International Annual Industry Engineering and Management Systems Conference*, Cocoa Beach, FL.

Media Articles

Patel, H., **Savoy, A.**, & Weiner, M. (2017). Applying usability heuristics to improve outpatient consultation orders. *The Human Factors Quarterly*. (18).

Savoy, A. (2016). At the Intersection of Human Computer Interaction, Human Factors, and Informatics: An Interview with April Savoy, PhD. *The Human Factors Quarterly*. (14).

Invited Talks

Savoy, A. (2016). At the Intersection of Human Computer Interaction, Human Factors, and Informatics: An Interview with April Savoy, PhD. *The Human Factors Quarterly*. (14).

Savoy, A. (2014, January). *Usability: The other set of vital signs*. Richard L. Roudebush Veterans Affairs Medical Center, Indianapolis, IN.

Savoy, A. (2013, November). *Research Insights in Human Computer Interaction and Informatics*. Purdue University Human Factors and Ergonomics Society, West Lafayette, IN.

Savoy, A. (2006, July). *2nd generation usability evaluation for gaming: What gamers want and how gamers want it*. David and Lucile Packard Foundation Graduate Scholars Conference, Washington, D.C.

- Savoy, A.** (2005, July). *Electronic medical record: Human factors improvements for the front-end*. David and Lucile Packard Foundation Graduate Scholars Conference, Monterey, California.
- Savoy, A.** (2004, July). *Key management for mobile wireless sensor networks*. David and Lucile Packard Foundation Graduate Scholars Conference, Washington, D.C.
- Savoy, A.** (2002, October). *User interfaces: Utilizing the small screen*. Model Institutions for Excellence Annual Conference, New Orleans, Louisiana.
- Savoy, A.** (2001, July). *B2B platforms for e-business*. Leadership Alliance Symposium. Stone Mountain, Georgia.

Awards & Honors

Early Investigator Award

2019, Indiana Clinical Translational Sciences Institute

Forty Under 40 Nominee

2018, Indianapolis Business Journal

Regenstrief Scientist

2017, Regenstrief Institute

Young Investigator Award

2016, Indiana Institute for Medical Research

Purdue Alumni Excellence Award

2015, Purdue Black Graduate Student Association

Sony Scholar Award

2014, Sony Corporation in America

Honorary Member

2014, Delta Mu Delta

Best Presentation Award

2013, Academy Business Research International Conference

Boeing Award Nomination

2010, Boeing Performance Award

Best Paper Nomination

2009, American Society of Engineering Education (ASEE)

Outstanding Graduate Student – Purdue University

2008, School of Industrial Engineering

NASA Systems Engineering Design Champion

2007, NASA Systems Engineering Design Competition

A member of the first place team in NASA's Exploration Systems Mission Directorate Space Grant Systems Engineering Paper Competition.

Science Update (online): Spotlight on African American Scientists

2006, American Association for the Advancement of Science (AAAS)

My research was featured on the show and was featured as one of the top African American Scientists.

Alpha Pi Mu Honor Society

2005- Present, Xavier University of Louisiana

Course Taught & Curriculum Development	<hr/> <p>Undergraduate Courses</p> <p>2018-Present, Indiana University-Purdue University Indianapolis (3 cr) CIT-373 Visual Design for Software CIT-374 Systems and Database Analysis</p> <p>2012-2018, Indiana University East INFO-I101 Introduction to Informatics (4 cr) INFO-I202 Social Informatics (3 cr) INFO-I300 Human Computer Interaction/ Interface Design (3 cr) INFO-I400 Informatics Special Topics (3 cr) INFO-I491 Capstone Project/Internship (3 cr) INFO-I492 Senior Thesis (3 cr) IIM-I300 Foundations and Principles of Integrated Information Management (3 cr)</p> <p>2010-2012, American InterContinental University Unix Security Human/Computer Interface Interactions Intrusion Detection and Prevention for Windows Security Topics in Security Management Defense in Depth</p> <p>Graduate Course(s) 2010-2012, American InterContinental University Introduction to Information Security</p> <hr/>
Professional Development	<hr/> <p>National Science Foundation Career Development Grant Workshop 2018, Indiana University</p> <p>Quality Matters Certificate 2015, Indiana University</p> <p>Scientific Writing from the Reader's Perspective with Dr. Gopen 2015, Indiana University School of Medicine</p> <p>Certificate in Online Teaching 2013, Indiana University East</p> <p>Statewide Information Technology Conference 2013, Indiana University</p> <p>Academic Careers Workshop 2013, National Science Foundation</p> <p>Faculty Online Teaching Workshop Series 2013, Indiana University East</p> <p>Operational Security (OPSEC) Awareness 2011, Center for Development of Security Excellence Training for Military Members, DoD Employees and Contractors*</p> <p>Project Management: How to Do it Right 2010, National Society of Professional Engineers</p> <p>Graduate Teaching Certificate - Purdue University 2008, Center for Instructional Excellence</p> <p>Compact for Faculty Diversity</p>

2007, Institute on Teaching and Mentoring Southern Regional Education Board

College Teaching Workshop Series

2006, Purdue University Center for Instructional Excellence

Preparing Future Faculty

2006, Purdue University

Expediting Usability Testing

2005, 11th International Conference on Human-Computer Interaction

The Disappearing Computer: Designing Interaction for Smart Artifacts

HCI Themes: Social Creativity, Meta-Design, and End-User Development

2005, 11th International Conference on Human-Computer Interaction

**Professional
Affiliations**

American Medical Informatics Association

2015-Present

Healthcare Information and Management Systems Society

2015-Present

Association for Computing Machinery

Special Interest Group Computer Human Interaction (SIGCHI)

2011 - Present

Human Factors and Ergonomics Society

2005- Present

Women in Engineering Program

2005- Present

National Society of Black Engineers

1999- Present, Member

2001-2002, Vice President and Academic Excellence Chair

Computer Science Women's Network

2002- 2004, Member

Alpha Pi Mu

2005- Present, Member

**Academic
Service**

Engineering Technology Search Committee

2019, Indiana University-Purdue University Indianapolis

Learning Information Technologies Steering Committee

2016-2018, Indiana University East

Chair of Informatics Committee

2015-2017, Indiana University East

Campus Informatics Lead for Single Articulation Pathways

2014-Present, Indiana University –System Wide

Campus Informatics Lead for Joint Informatics Online Degree

2014-Present, Indiana University –System Wide

Innovative Classroom Committee Member

2013, Indiana University East

Career Exploration Faculty Panelist

2013, Purdue University Pre-Professional Seminar

Campus Informatics Lead for Blueprint

2012-2014, Indiana University

Informatics Program Director

2012- 2017, Indiana University East

First Lego League Regional Judge

2011, Aiken Technical College

Industrial Engineering Graduate Student Advisory Board

2006- 2008, Purdue University

Industrial Engineering Department Fundraiser

2006, Purdue University

Graduate Student Recruiter

2006, Purdue University

Engineering Advisory Council

2005- 2008, Purdue University

**Professional
Service**

Ergonomics Journal Reviewer

2019 – Present, Ergonomics Journal

Advisory Board Member

2014 - Present, Human-Computer Interaction in Business International Conference

Advisory Board Member

2013 - Present, Applied Human Factors & Ergonomics International Conference

Conference Judge and Mentor

2013- Present, Emerging Researchers National Conference in STEM

Conference Session Chair

2013, Academy Business Research International Conference

Computers and Education Journal Reviewer

2010- Present

Electronic Commerce Research and Applications Journal Reviewer

2010- Present

Human Factors and Ergonomics Society

2009-Present, Publication Reviewer

2007-2008, President

**Community
Service
Organizations**

Delta Sigma Theta Sorority, Inc

Private, non-profit organization whose members provide voluntary services and programs to diverse communities to promote human welfare.