Curriculum Vitae

David Eargle

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RESEARCH INTERESTS

1. Behavioral Information Systems Security
2. Human-Computer Interaction
3. Neuroscience applications to HCI and information security

TEACHING INTERESTS

1. Data mining and business intelligence; business statistics
2. Information security
3. Databases, business systems development, PaaS, web and mobile development, server administration, etc.

EDUCATION

PhD in Information Systems and Technology Management Graduation Expected 2017

Katz Graduate School of Business, University of Pittsburgh, Pittsburgh, Pennsylvania, USA

- NSF Graduate Research Fellow (competitive)
- GAR Foundation Fellow
- Dissertation: “Stopping Security Breaches at the Source – Informing Security Message Design with Theories of Evolution and Motivation”
    - Proposal defense scheduled for August 2016
    - Dissertation proposal submitted to ICIS 2016 doctoral consortium
- Committee: Dennis Galletta, Laurie Kirsch, Narayan Rammasubbu, Scott Fraundorf, Anthony Vance

Master of Information Systems Management, Marriott School August 2013
Bachelor of Science, Information Systems, Marriott School August 2013

Marriott School of Management, Brigham Young University, Provo, Utah, USA

- Magna Cum Laude with University Honors
- PhD Preparation Track

SCHOLARSHIP METRICS

- 86 citations per Google Scholar
- 5 H-index

REFEREED JOURNAL PUBLICATIONS

6. Anderson, B.B., Jenkins, J., Vance, A., Kirwan, C.B. and **Eargle, D.** "Your memory is working against you: How eye tracking and memory explain habituation to security warnings." ***Decision Support Systems***, conditionally accepted.

5. Anderson, B.B., Vance, A., Kirwan, C.B., Jenkins, J. and **Eargle, D.** "From warnings to wallpaper: Why the brain habituates to security warnings and what can be done about it." ***Journal of Management Information Systems***, forthcoming.

4. Jenkins, J., Anderson, B., Vance, A., Kirwan, B. and **Eargle, D.** "More harm than good? How security messages that interrupt make us vulnerable." ***Information Systems Research***, forthcoming.

3. Anderson, B., Vance, A., Kirwan, B., **Eargle, D.** and Jenkins, J. "How users perceive and respond to security messages: A NeuroIS research agenda and empirical study." ***European Journal of Information Systems***, 25, 4 (2016), 364-390.

2. Anderson, B., Kirwan, B., **Eargle, D.**, Jensen, S. and Vance, A. "Neural correlates of gender differences and color in distinguishing security warnings and legitimate websites: A neurosecurity study." ***Journal of Cybersecurity***, 1, 1 (2015), 109-120.

1. Vance, A., Anderson, B.B., Kirwan, C.B. and **Eargle, D.** "Using measures of risk perception to predict information security behavior: Insights from electroencephalography (EEG)." ***Journal of the Association for Information Systems***, 15, 10 (2014), 679-722.

Works in progress

- "Integrating Facial Cues of Threat into Security Warnings – An fMRI and Field Study" (with Dennis Galletta, C. Brock Kirwan, Anthony Vance, and Jeffrey L. Jenkins)
- "How much is your security worth? Quantifying the value of security using a field experiment" (with Dennis Galletta)
- "The impact of uncertainty on risk-benefit tradeoffs in an information security context" (with Dennis Galletta and Narayan Rammasubbu)
- "tl;dr – Encouraging users to read security messages using theories of persuasion" (with Dennis Galletta and Lorrie Cranor)
- "Your website stinks: Neural correlates of information scent" (with Dennis Galletta)
- "Integrating social and economic models of responding to privacy messages in mobile computing: A field study" (with Galletta, D., Shadi, J., Kunev, D. and Singh, S.)

CONFERENCE PAPERS

16. Galletta, D., **Eargle, D.**, Shadi, J., Kunev, D. and Singh, S. "Integrating social and economic models of responding to privacy messages in mobile computing: A research agenda." In *Workshop on Information Security & Privacy*, Fort Worth, Texas: AIS SIGSEC and IFIP TC11.1 (2015).

15. **Eargle, D.**, Godfrey, J., Miao, H., Stevenson, S., Shay, R., Ur, B. and Cranor, L. "Poster: You can do better – motivational statements in password-meter feedback." In *Symposium on Usable Privacy and Security (SOUPS '15)*, Ottawa, CA: (2015).

14. **Eargle, D.**, Galletta, D., Kirwan, C.B. and Vance, A. "Integrating facial threat signals into security messages: An extension of media naturalness theory to an information security context." In *Dewald Roode Workshop on Information Systems Security Research*, Newark, Delaware: IFIP WG8.11/WG11.13 (2015).

13. Anderson, B., Kirwan, B., Jenkins, J., **Eargle, D.**, Howard, S. and Vance, A. "How polymorphic warnings reduce habituation in the brain: Insights from an fMRI study." In *Proceedings of the ACM Conference on Human Factors in Computing Systems (CHI)*, Seoul, South Korea: ACM (2015).

12. **Eargle, D.**, Taylor, R., Sawyer, L. and Gaskin, J. "Acquiring IS skill through habitual use." In *2014 47th Hawaii International Conference on System Sciences (HICSS)*: (2014), pp. 3-12.

11. **Eargle, D.**, Galletta, D. and Siegle, G. "Using fearful facial facial expressions to increase the effectiveness of protective security messages: Proposing an fMRI and field study." In *The Dewald Roode Workshop on Information Systems Security Research, IFIP WG8.11/WG11.13*, Newcastle, UK: (2014).

10. Anderson, B., Vance, A., Kirwan, B., **Eargle, D.** and Howard, S. "Why users habituate to security warnings: Insights from fMRI." In *The Dewald Roode Workshop on Information Systems Security Research, IFIP WG8.11/WG11.13*, Newcastle, UK: (2014).

9. Anderson, B., Vance, A., Kirwan, B., **Eargle, D.** and Howard, S. "Users aren't (necessarily) lazy: Using NeuroIS to explain habituation to security warnings." In *International Conference on Information Systems*, Auckland, New Zealand: AIS (2014).

8. Vance, A., **Eargle, D.**, Ouimet, K. and Straub, D. "Enhancing password security through interactive fear appeals: A web-based field experiment." In *2013 46th Hawaii International Conference on System Sciences (HICSS)*: (2013), pp. 2988-2997.

7. Vance, A., Anderson, B., Brock, K. and **Eargle, D.** "Using measures of risk perception to predict information security behavior: Insights from electroencephalography (EEG)." In *JAIS workshop, Gmunden Retreat on NeuroIS*, Gmunden, Austria: (2013).

6. **Eargle, D.**, Vance, A.O. and Lowry, P.B. "How moral intensity and impulsivity moderate the influence of accountability on access policy violations in information systems." In *Proceedings of the Eighth Pre-ICIS Workshop on Information Security and Privacy*: (2013).

5. Anderson, B., Vance, A., **Eargle, D.** and Kirwan, C.B. "Your memory is working against you: How eye tracking and memory explain susceptibility to phishing." In *The Dewald Roode Workshop on Information Systems Security Research, IFIP WG8.11/WG11.13*: (2013).

4. Anderson, B., Vance, A. and **Eargle, D.** "Is your susceptibility to phishing dependent on your memory?" In *Proceedings of the Eighth Pre-ICIS Workshop on Information Security and Privacy*, Milan, Italy: (2013).

3. Vance, A., **Eargle, D.**, Ouimet, K. and Straub, D. "How interactivity can enhance the effectiveness of fear appeals: A web-based field experiment of password security." In *The Dewald Roode Workshop on Information Systems Security Research, IFIP WG8.11/WG11.13*, Provo, UT: (2012).

2. **Eargle, D.**, Vance, A., Allen, G., Barrick, D., Bearnson, T. and Tialin, T. "Justifying breaking the glass: How accountability can deter unauthorized access." In *WISP 2012 Proceedings*, Orlando, Florida: AIS SIGSEC and IFIP TC11.1 (2012).

1. Anderson, B., Vance, A., Hansen, J., Kirwan, B., **Eargle, D.**, Hinkle, L. and Weagel, A. "Neural correlates of gender differences in distinguishing malware warnings and legitimate websites: A NeuroIS study." In *IFIP WG8.11/WG11.13*, Provo, UT: (2012).

TEACHING EXPERIENCE

College of Business Administration at the University of Pittsburgh Fall 2015

- Full responsibility for a class of 60 undergraduate students from various departments of the University of Pittsburgh's College of Business Administration.
- Complete direction over course curriculum, policies, and syllabus.
- Course evaluation: Overall `3.7/5`
    - Highest-scoring areas: `4.4/5.0` for "professor accessibility to students"; `4.2/5.0` for "gives appropriate feedback to students"
    - Lowest-scoring areas: `3.5/5.0` for "intellectual challenge of course" and `3.6/5.0` for "helpfulness of textbook". Will improve by choosing a different textbook and by improving in-class discussion questions.

Katz Graduate School of Business at the University of Pittsburgh Fall 2013 – 2015

- Taught four beginner-to-advanced-level Microsoft Excel workshops to part-time Katz MBA students

Department of Information Systems Summer 2013

Marriott School of Management, Brigham Young University

- Full responsibility for four college-level class sections on computer spreadsheet skills, with total enrollment of over 270 across four sections. Mix of online plus in-class teaching. Oversight of three teaching assistants.
- Course evaluations for each section: `6.6/8.0, 6.9/8.0, 6.3/8.0, 6.9/8.0`

Other Teaching Experience

Created three data mining assignments for business students, covering topics such as text mining, association rules, k-means clusters, regressions, and correlations. Currently in use in the business school at the University of Pittsburgh. (Assignments available online at http://daveeargle.com/portfolio)

OTHER WORK EXPERIENCE

Research Assistant Fall 2011 to Summer 2013

Department of Information Systems at Brigham Young University

Digital Forensics Analyst Intern at Paraben Corporation Summer 2012

Paraben Corporation, Ashburn, VA

Network and Systems Administrator Fall 2011 to Spring 2012

Better Logic LLC, Orem, UT

Web Developer Fall 2010 to Winter 2012

Center for Teaching and Learning, BYU

SERVICE

JMIS Website Editor 2014 to Present

Manage the web presence at http://jmis-web.org for the Journal of Management Information Systems, working directly with Vladimir Zwass.

AIS IS Theory Wiki Editor Fall 2011 to Present

Information Systems Theory Community Wiki, http://istheory.byu.edu, associated with the Association for Information Systems

psiTurk Project Leader June 2016 to present

An open platform for science on Amazon Mechanical Turk, hosted on github. Used by researchers around the world.

Ad Hoc Reviewer

- ISR, EJIS, ECIS, ICIS, HICSS, CAIS, WISP, and The Dewald Roode Workshop on Information Systems Security Research, IFIP WG8.11/WG11.13

HONORS AND AWARDS

- Fellowships
  - NSF Graduate Research Fellow (DGE-1247842) - $132,000
  - GAR Foundation Fellow - $24,000
- Grants
  - David Berg Center for Ethics and Leadership at the University of Pittsburgh - $8,420
  - Brigham Young University Marriott School of Business - $1,000
  - Rollins Center for Entrepreneurship & Technology (2013) - $4,000
- Scholarships
  - Brigham Young University Undergraduate Scholarship - $8,278
  - BYU Masters of Information Systems Management Scholarship - $4,380
  - Robert K. Thomas BYU Honors Department Scholarship - $1,488
  - Khona Family BYU Honors Department Scholarship - $1,488
  - Ella M. Herman Scholarship - $1,054
- AIS Global Competition 2012, Windows Phone Development Track, 2nd Place Worldwide

COMPUTER SKILLS

- Statistics
  - R (dplyr, ggplot2), SAS, SPSS, python pandas/scipy/numpy
- Databases
  - MySQL, MS Access, NoSQL (Google cloud datastore)
- Data mining and business intelligence
  - R, python scikit-learn, RapidMiner
- Scripting & programming
  - Bash
  - Python
  - php
  - VBA for Excel
  - Powershell
  - Java
  - C#
- Web development
  - Python, php (slim, CakePHP, propel), javascript/jquery, html/css/less, bootstrap (tbs), bower, npm & grunt, python flask, pip, ruby (rvm, RoR, Jekyll), markdown, twig/Jinja2
- Web Hosting
  - Nginx, apache, gunicorn, Red Hat openshift, amazon web services (s3, ec2, cloudfront, route 53)
- Server administration
  - Linux (Debian), vim
  - Windows server (active directory and group policies)
  - Vagrant, docker

SELECTED GRADUATE COURSEWORK

Doctoral Seminars

- Foundations in Information Systems (Laurie Kirsch, Pitt)
- Human/Computer Interaction (Dennis Galletta, Pitt)
- Technology Innovation Adoption and Diffusion (Chris Kemerer, Pitt)
- Foundations of Organizational Behavior (Carrie Lianna, Pitt)
- Design Perspectives for Information Systems Research (Narayan Rammasubbu, Pitt)
- Open Source Software Development and Adoption (Sherae Daniels, Pitt)
- Usable Privacy and Security (Lorrie Cranor, CMU)
- Information Systems II (Tridas Mukhopadhyay, CMU)
- Developing, Modeling, and Applying Theory in and to Academic Business Research (Dave Whetten, BYU)

Statistics and Methodology

- Hierarchical Linear Modeling
- Theoretical Regression
- Theoretical Multivariate Statistics
- Structural Equation Modeling
- Experimental Design
- Applied Multivariate Analysis
- Analysis of Variance

Systems Design, Development, Computer Networking and Programming Courses

- Enterprise Infrastructure
- Computer Programming
- Business Programming
- Systems Design & Implementation
- Enterprise Application Development
- Data Communication & Networking
- Systems Analysis
- Project Management

Specialized

- Information Systems Security
- Digital Forensics
- Spreadsheet Automation (VBA)
- Data Mining for Business Intelligence

PROFESSIONAL AFFILIATIONS

- IFIP Working Group 8.11/11.13, “Information Systems Security Research” Active Member
- Association for Information Systems Member

FOREIGN LANGUAGE

- Spanish