

MARY B. BURNS, Ph.D., CISA

Jake Jabs College of Business & Entrepreneurship
Montana State University
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Education

Ph.D. (Management with Management Information Systems emphasis), 2012
University of Arizona, Tucson, Arizona
Dissertation title: "Examining Multiple Stages of Protective Behavior of Information System End-Users"
Dissertation Co-Chairs: Dr. Jay F. Nunamaker, Jr. and Dr. Alexandra Durcikova

ABD for Ph.D. in Business Administration (Information Systems)
University of South Florida, Tampa, Florida

Master of Business Administration (Concentration: Control), 1980
Harvard Graduate School of Business Administration, Boston, Massachusetts

Master of Science (Information Science), 1978
Harvard Graduate School of Arts and Sciences, Cambridge, Massachusetts

Bachelor of Science (Mathematics/Computer Science), 1976
College of William and Mary in Virginia, Williamsburg, Virginia

Research Interests

Fraud/Deception Detection
IS Security and Control
Enhancing Accounting Interviews

Teaching Interests

Accounting Information Systems
Cost Accounting/Managerial Accounting
Auditing

Academic Experience

- 2013- current Assistant Professor, Accounting: Jake Jabs College of Business & Entrepreneurship,
Montana State University (Bozeman, MT)
- Teaching responsibilities: undergraduate courses in Accounting Information Systems I and II, and Managerial Accounting.
- 2012-2013 Assistant Professor: Knox School of Accountancy, Hull College of Business, Georgia Regents University (Augusta, GA)
- Teaching responsibilities: undergraduate courses in Accounting Information Systems, Cost Accounting, and Managerial Accounting.

- 1999-2008 Sr. Lecturer: University of South Florida, Sarasota (Sarasota, FL)
- Instructor for undergraduate courses in Accounting Information Systems, Data Management (Database), Business Data Communications, Project Management, Data Security, Information Systems in Organizations, Systems Analysis and Design; full responsibility for all course preparation, delivery, and evaluation. Appointment was .75 IS/DS and .25 Accounting.
- 1996-1999 Instructor: Texas Tech University (Lubbock, TX)
- Instructor for graduate and undergraduate courses in Data Communications and Database Management; full responsibility for all course preparation, delivery, and evaluation. Assisted in development and support of new MS program in Data Communications.
- 1992-1996 Research and Teaching Assistant: University of South Florida (Tampa, FL)
- Instructor for undergraduate courses in Database Management Systems, Distributed Information Systems (Data Communications), Systems Analysis and Design, and Managing Information Resources (MIR).

Professional Certification

Passed CISA exam, December, 2007; certified, April, 2008; "current" status.

Published Journal Articles

- Pickard, Matthew D., Burns, Mary B., and Moffitt, Kevin C., "A Theoretical Justification of Embodied Conversational Agents (ECAs) to Augment Accounting-Related Interviewing Processes," Journal of Information Systems, (2013), 27:2, 159-176.
- Jenkins, Jeffrey L., Durcikova, Alexandra, and Burns, Mary B., "Simplicity is Bliss: Controlling Extraneous Cognitive Load in Online Security Training to Promote Secure Behavior," Journal of Organizational and End User Computing, (2013), 25:3, 52-66.
- Pickard, Matthew D., Brody, Richard G., and Burns, Mary B., "The Effect of Embodied Agents on Users' Behavior," Insights to a Changing World Journal, (2013), 2013:1, 53-69.
- Hikmet, Neset, Snehamy, Banerjee, and Burns, Mary B., "State of Content: Healthcare Executive's Role in Information Technology Adoption," Journal of Service Science and Management, (2012), 5:2, 124-131.
- Humpherys, Sean, Moffitt, Kevin, Burns, Mary B., Burgoon, Judee K., and Felix, William, "Identification of Fraudulent Financial Statements Using Linguistic Credibility Analysis," Decision Support Systems, (2011), 50:3, 585-594.
- Kennedy, Karen Norman, Laskk, Felicia G., and Burns, Mary B., "A Scale Assessing Team-Based Job Performance in a Customer-Oriented Environment," Journal of Quality Management, (2001), 6:2, 257-273.

Accepted Journal Articles

Burns, Mary B., and Moffitt, Kevin C., "Automated Deception Detection of 911 Call Transcripts," Security Informatics, (2014) Fall, *forthcoming*.

Published Conference Proceedings

- "What Kind of Interventions Can Help Users from Falling for Phishing Attempts: A Research Proposal for Examining Stage-Appropriate Interventions," with Alexandra Durcikova, and Jeffrey L. Jenkins, Hawaii International Conference on Computer and Systems Science (HICSS), Maui, Hawaii, January 7-10, 2013.
- "On Not Falling for Phish: Examining Multiple Stages of Protective Behavior of Information Systems End-Users," with Alexandra Durcikova, and Jeffrey L. Jenkins, International Conference on Information Systems (ICIS), Orlando, Florida, December 16-19, 2012.
- "A Forensic Accountant's Second LifeTM: Toward Automated Interviewing for Forensic Accounting Investigations," with Matthew Pickard, and Kevin C. Moffitt, AAA Information Systems Section Midyear Conference, Scottsdale, January 5 – January 7, 2012.
- "Forget the Fluff: Examining How Media Richness Influences the Impact of Information Security Training on Secure Behavior," with Jeffrey L. Jenkins, Alexandra Durcikova, Hawaii International Conference on Computer and Systems Sciences (HICSS), Maui, Hawaii, January 4-7, 2011.
- "Get a Cue on IS Security Training: Explaining the Difference between Security Cues and Security Arguments in Improving Secure Behavior," with Jeffrey L. Jenkins, Alexandra Durcikova, International Conference on Information Systems (ICIS), Shanghai, China, December 4-7, 2011.
- "Facial Thermal Imaging as a Technique for Deception Detection," with Kevin Moffitt, Jeffrey L. Jenkins, Judee K. Burgoon, Hawaii International Conference on Computer and Systems Sciences (HICSS), Kauai, Hawaii, January 5-8, 2010.
- "*What Does That Mean?* Investigating Obfuscation and Readability Cues as Indicators of Deception in Fraudulent Financial Reports," with Kevin Moffitt, Fifteenth Americas Conference on Information Systems, San Francisco, August, 2009.
- "Ethical Judgment of IT Professionals: Effects of Individual, Occupational, and Work Structure Characteristics," with Deborah L. Decker, NEDSI Conference, March, 2007.
- "Risk of Material Misstatements: Exploring Causes of Inadvertent Error," with William C. Quilliam, The 2007 ABR & TLC Conference Proceedings, Honolulu, HI, January 2-5, 2007.
- "Enhanced Audit Risk Model: A Conceptual Framework for Medical Claims Fraud and Error Prevention and/or Detection Using IT," with William C. Quilliam and Neset Hikmet, The 2005 International Business & Economics Research Conference, Las Vegas, NV, October 2005. Received Best Paper Award.
- "Health Care Executives: The Association between External Factors, Use, and Their Perceptions of Health Information Technology," with Neset Hikmet, Tenth Americas Conference on Information Systems, New York, New York, August 5-8, 2004.
- "The 'New' Contract between IS Employees and Organizations," with Rosann Webb Collins, Proceedings of the 1998 ACM SIGCPR Conference on Computer Personnel, Boston, June 1998.
- "A Search for Advertising Placement in Cyberspace: An Analytical Framework," with Ta-Tao Chuang, Fourth Americas Conference on Information Systems, Baltimore, August 14-16, 1998.

“Innovative Solutions: Incorporating ‘Lead Users’ in Systems Development,” with Rosann Webb Collins, Annual Meeting of the Decision Sciences Institute, Boston, November 20-22, 1995.

“Organizational Citizenship Behavior in the IS Context: A Research Agenda,” with Rosann Webb Collins, Inaugural Americas Conference on Information Systems, Pittsburgh, August 25-27, 1995.

“Transference of Power: Shifting Expertise to Expert System Developers,” with France Belanger and Richard P. Will, The IEEE Eleventh Conference on Artificial Intelligence for Applications, Los Angeles, February 19-22, 1995, 65-71.

Papers Accepted/Presented at Workshops/Short Paper Sessions

“Examining Protective Behavior Stages of Information System End-Users: An Exploratory Cluster Analysis,” with Alexandra Durcikova and Jeffrey L. Jenkins, The Dewald Roode Workshop on Information Systems Security Research, IFIP WG8.11/11.13, September 21-22, 2012, Brigham Young University, Provo, UT.

“Closing IT Security Hotspots: Increasing Internal Auditors’ Understanding of the Impacts of IT Security Training on End-User Password Creation,” with Jeffrey L. Jenkins, Kevin C. Moffitt, and Alexandra Durcikova, SIG ASYS Pre-ICIS 2011 Workshop, Shanghai, December 3, 2011.

“Understanding Persistence of Risky IS Behavior with Respect to Phishing: A Multi-Stage Approach,” with Alexandra Durcikova and Jeffrey L. Jenkins, The Dewald Roode Workshop on Information Systems Security Research, IFIP WG8.11/11.13, September 23-24, 2011, Virginia Tech, Blacksburg, VA.

“New Approaches for Auditors: Classification Techniques for Fraudulent and Non-Fraudulent Financial Reports Based on Linguistic Indicators of Deception,” with Kevin Moffitt, William Felix, and Judee K. Burgoon, Interactive Short Paper (ISP) session of the AAA Information Systems Section Midyear Conference, Atlanta, January 6- January 8, 2011.

“Using Lexical Bundles to Discriminate between Fraudulent and Non-fraudulent Financial Reports,” with Kevin Moffitt, William Felix, and Judee K. Burgoon, SIG ASYS Pre-ICIS 2010 Workshop, St. Louis, December 12, 2010.

“Proposing a Vendor-Independent Service-Oriented Architecture (SOA) Maturity Model,” with Koren Elder, Matthew Pickard, Inshad Chowdhury, Kevin Moffitt, and J. Leon Zhao, MISQ-Executive Pre-AMCIS Writing for Practitioners Workshop, San Francisco, August 6, 2009.

Conference Poster Sessions

“Using Eye-Tracking to Compare Pattern Recognition Approaches in Auditor Risk Assessments,” with Pamela Z. Jackson and Kevin C. Moffitt, Emerging and Innovative Research Project Track, AAA Annual Meeting, Anaheim, CA, August 3-7, 2013.

“Persuasive Embodied Agents Tailored to Users’ Self-Esteem and Tendency to Self-Monitor,” with Matthew D. Pickard, Tenth Pre-ICIS SIG-HCI Workshop, Shanghai, December 4, 2011.

“Defending Homeland Transportation Systems through Application of Automated Linguistic Analysis to Transcripts of Emergency Calls for Deception Detection,” with Kevin Moffitt, Jeffrey L. Jenkins, and Jay F. Nunamaker, Jr., Fifth Annual Department of Homeland Security (DHS) University Network Summit, Washington, DC, March, 2011.

“Protecting America’s Cyber Infrastructure through Understanding How Security Controls Influence Humans’ Secure Behavior,” with Jeffrey L. Jenkins, Alexandra Durcikova, and Jay F. Nunamaker, Jr., Fifth Annual Department of Homeland Security (DHS) University Network Summit, Washington, DC, March, 2011.

Research Grants

“Using Eye-Tracking to Compare Pattern Recognition Approaches in Auditor Risk Assessments: An Empirical Analysis,” MSU Faculty Excellence Grant AY 2014-15, funding approved in April, 2014.

“Application of Automated Linguistic Analysis to Deception Detection in 911 Homicide Calls,” Mary B. Burns, Kevin Moffitt, Sean Humpherys, Judee K. Burgoon, and Jay F. Nunamaker, Jr., The Center for Identification Technology Research (CITeR), \$30,000, funding approved in May, 2009.

“Evaluating and Integrating Speech Recognition Software into Agent99 for Real-Time Deception Detection,” Kevin Moffitt, Mary B. Burns, Sean Humpherys, Judee K. Burgoon, The Center for Identification Technology Research (CITeR), \$40,000, funding approved in November, 2008.

“Handedness in Detecting Deception in Cultural Interviews,” Matthew L. Jensen, Thomas Meservy, Mary Burns, and Judee K. Burgoon, The Center for Identification Technology Research (CITeR), \$50,000, funding approved in November, 2008.

Special Honors and Awards

MSU College of Business Dean’s Award for Research, 2014.

University of South Florida Graduate Student Fellowship, 1992-1994.

Professional Experience

1989-1991 Assistant Vice President for Financial Systems Architecture and Development:
Progressive Insurance (Cleveland, OH)

Designed and implemented integrated financial database systems for \$1B financial services organization. Directed 35 member project team; supervised staff of 11. Reported to Chief Accounting Officer.

- Designed financial systems architecture, the blueprint for corporate systems development.
- Completed first phase of \$7 MM Financial/Marketing database system ahead of schedule and under budget. Utilized data/process modeling and project life cycle methodologies.
- Participated in activity-based costing task force.

1986-1989 Controller/Assistant Vice President: Progressive Insurance (Tampa, FL)

Managed all financial, actuarial, and administrative functions for rapidly growing \$125 MM division. Primary responsibilities included: budgeting/planning; strategic cost management; systems/network control; telecommunications; information center; internal auditing; pricing; A/P; A/R control. Supervised staff of up to 35. Reported to Division President.

1985-1986 Assistant Controller/Manager, Internal Consulting:
Progressive Insurance (Tampa, FL)

Reviewed systems, workflow, and procedures within all major business areas for overall efficiency and effectiveness of processing for \$250 MM division.

1984-1985 Manager, Information Services: Rohm and Haas Company (Woburn, MA)

Responsible for converting manual processes to on-line integrated accounting and manufacturing systems for S/36.

1982-1984 Financial and Systems Analyst: Rohm and Haas Company (Multiple Locations)

Supervised all financial functions for a \$60 Million, 75-employee specialty chemical manufacturing facility. Primary responsibilities included: plan/budget preparation, implementing financial systems at operating divisions, inventory control, and cost accounting.

1980-1982 Internal Auditor: Rohm and Haas Company (Philadelphia, PA)

Conducted financial and operational audits at multiple locations for Fortune 200 company.