
G. Mark Grimes, Ph.D.

Assistant Professor, Decision and Information Sciences
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Overview: My primary stream of research involves assessing changes in affective and cognitive states through monitoring human computer interaction behavior. This research has applications in the areas of information security, credibility assessment, improving user satisfaction, and affective computing. I have a long-term research plan with papers targeted at top tier MIS journals.

I also have a strong interest in helping to develop the next generation of IT and business leaders through my teaching. I practice learner-centered teaching and use a variety of instructional techniques to keep the classroom fun and engaging. I incorporate my extensive industry experience into the curriculum to ensure students leave my class with practical knowledge to help them excel in the workplace. My industry and academic experience qualifies me to teach a wide range of information systems classes.

Education

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| 2011 – 2015 | Ph.D., Management Information Systems
Eller College of Management, University of Arizona, Tucson, AZ

Dissertation: Analysis of Human Computer Interaction Behavior to Assess Affect, Cognitive Load, and Credibility
Committee: Dr. Jay F. Nunamaker, Jr., Dr. Joseph S. Valacich (co-chairs),
Dr. Judee K. Burgoon

Minor: Judgment and Decision Making/Management and Organizations
Minor Advisor: Dr. Terry Connolly |
| 2008 – 2010 | MBA, Concentration in Business Negotiation and Dispute Resolution
Jack C. Massey Graduate School of Business, Belmont University, Nashville, TN |
| 1999 – 2003 | BBA, Management Information Systems
University of Mississippi, Oxford, MS |

Research

Journal Publications

1. Jenkins, J. L., Proudfoot, J. G., Valacich, J. S., **Grimes, G. M.** & Nunamaker, J. F. (2019). Sleight of Hand: Identifying Concealed Information by Monitoring Mouse-Cursor Movements. *Journal of the Association for Information Systems* (Forthcoming January 2019).

2. Marquardson, J. M., **Grimes, G. M.** (2019). Supporting Better Decisions: How Order Effects Influence Decision Support System Alignment. *Interacting with Computers*. (Forthcoming).
3. Schuetzler, R. S., Giboney, J. S., **Grimes, G. M.**, Nunamaker, J. F. (2018). The influence of conversational agent embodiment and conversational relevance on socially desirable responding. *Decision Support Systems*, Volume 114(2018), 94-102.
4. Jenkins, J. L., **Grimes, M.**, Proudfoot, J. G., & Lowry, P. B. (2013). Improving Password Cybersecurity Through Inexpensive and Minimally Invasive Means: Detecting and Deterring Password Reuse Through Keystroke-Dynamics Monitoring and Just-in-Time Fear Appeals. *Information Technology for Development*, 20(2), 196-213.

Peer Reviewed Conference Proceedings

1. Schuetzler, R. S., **Grimes, G. M.**, Giboney, J. S. (2018). An Investigation of Conversational Agent Relevance, Presence, and Engagement. *Twenty-fourth Americas Conference on Information Systems*. New Orleans, LA. August 16-18, 2018.
2. Schuetzler, R. S., Giboney, J. S., **Grimes, G. M.**, Nunamaker, J. F. (2018). The Influence of Conversational Agents on Socially Desirable Responding. *Hawaii International Conference on System Sciences*. Hawaii, Hawaii. January 3-6, 2018.
3. **Grimes, G. M.**, Valacich, J. S. (2015). Mind Over Mouse: The Effect of Cognitive Load on Mouse Movement Behavior. *International Conference on Information Systems*. Fort Worth, TX. December 13-16, 2015.
4. Schuetzler, R., **Grimes, M.**, Giboney, J., & Buckman, J. (2014). Facilitating Natural Conversational Agent Interactions: Lessons from a Deception Experiment. *International Conference on Information Systems*. Auckland, New Zealand. December 14-17, 2014.
5. **Grimes, G. M.**, Marquardson, J., & Nunamaker, J. F. (2014). Broken Windows, Bad Passwords: Influencing Secure User Behavior via Website Design. *Americas Conference on Information Systems*. Savannah, GA. August 7-10, 2014.
6. **Grimes, G. M.**, Jenkins, J. L., & Valacich, J. S. (2013). Exploring the Effect of Arousal and Valence on Mouse Interaction. *International Conference on Information Systems*. Milan, Italy. December 15-18, 2013. * **Nominated for Best Paper Award** *
7. **Grimes, M.**, Dror, M. (2013). Observations on Strategies for Goofspiel. *IEEE Conference on Computational Intelligence and Games*. Niagara Falls, Ontario, Canada. August 11-13, 2013.

Symposium Papers

1. **Grimes, G. M.**, Proudfoot, J. G., Valacich, J. S., Jenkins, J. L., Twyman, N. W., Burgoon, J. K., (2017). Controlled Realism in Deception Research. *Hawaii International Conference on Computer and Systems Sciences. Symposium on Rapid Screening Technologies, Deception Detection, and Credibility Assessment.*
2. Schuetzler, R. S., **Grimes, G. M.**, Elkins, A. C., Burgoon, J. K., & Valacich, J. S. (2016). Talking and Typing: A Comparison of Vocalic and Keystroke Dynamics Features for Deception Detection. *Symposium on Credibility Assessment and Screening Technologies (CAST), 49th Annual Hawaii International Conference on System Sciences.* Kauai, Hawaii. January 5-8, 2016.
3. **Grimes, G. M.**, Proudfoot, J. G., Valacich, J.S., Jenkins, J.L., Twyman, N.W., Burgoon, J.K., & Marquardson, J.W. (2015). Lessons Learned From Successive Deception Experiments. *Symposium on Credibility Assessment and Information Quality in Government and Business, 48th Annual Hawaii International Conference on System Sciences.* Kauai, Hawaii. January 5-8, 2015.
4. Byrd, M., **Grimes, M.**, Marquardson, J., & Burgoon, J. (2015). The Misclassification of Deceptive Behavior. *Symposium on Credibility Assessment and Information Quality in Government and Business, 48th Annual Hawaii International Conference on System Sciences.* Kauai, Hawaii. January 5-8, 2015.
5. **Grimes, G. M.**, Jenkins, J. L., & Valacich, J. S. (2013). Assessing Credibility by Monitoring Changes in Typing Behavior: The Keystroke Dynamics Deception Detection Model. *Symposium on Credibility Assessment and Information Quality in Government and Business, 46th Annual Hawaii International Conference on System Sciences.* Maui, Hawaii. January 7-10, 2013.

Papers Under Review

1. “The Influence of Difficulty and Domain Competency on Mouse Movement Behaviors”, **Mark Grimes**, Joe Valacich and Jeff Jenkins. *Submitted to ISR July 27, 2018.*
2. “The effect of responsive automated conversational agents on perceptions and behavior during deception”, Ryan Schuetzler, **Mark Grimes**, and Justin Giboney. *Submitted to Computers and Human Behavior June 14, 2018.*

Working Papers

1. “Quality Matters: Evoking Subjective Norms and Coping Appraisals by Design to Increase Security Intentions”, **Mark Grimes** and Jim Marquardson. *Targeted for Decision Support Systems, to be submitted Fall 2018.*
2. “Controlled Realism in Information Systems Research: Ten lessons for designing experiments that emphasize both control and realism”, **Mark Grimes**, Jeff Proudfoot, Joe Valacich, Nathan Twyman, Jeff Jenkins, Judee Burgoon, and Jay Nunamaker. *Targeted for JMIS, to be submitted Fall 2018.*

3. “An investigation of conversational agent relevance, presence, and engagement” Ryan Schuetzler, **Mark Grimes**, Justin Giboney. *To be submitted to JAIS, Fall 2018.*
4. “Analyzing Mouse-Cursor Movements to Assess People’s Response Certainty”, Jeff Jenkins, Robert Bodily, Ross Larsen, Daniel Sandberg, Parker Williams, **Mark Grimes**, and Joe Valacich. *Targeted for ISR, to be submitted Fall 2018.*
5. “Classifying Domain Experts and Novices by Analyzing Keystroke Dynamics”, **Mark Grimes**, Joe Valacich and Jeff Jenkins. *Targeted for ISR, to be submitted Fall 2018.*

Technical Reports

1. **Grimes, Mark**, Elyse Golob, Alexandra Durcikova, and Jay Nunamaker. 2013. Reasons and Resolve to Cross the Line: A Post-Apprehension Survey of Unauthorized Immigrants along the U.S.-Mexico Border. Tucson, Arizona: National Center for Border Security and Immigration.

Research Grants and Projects

1. An Interviewing Chat Bot for Enhancing Voluntary Information Disclosure (Investigator)
Ryan Schuetzler, **Mark Grimes**, Justin Giboney, Joey Buckman, Jim Marquardson, J. Burgoon
\$40,000 – Awarded May 2014, Center for Identification Technology Research
2. Credibility Assessment on the Go: A Tablet-Based Concealed Information Test (Investigator)
Jim Marquardson, Jeffrey Proudfoot, **Mark Grimes**, Justin Giboney
\$40,000 – Awarded May 2014, Center for Identification Technology Research
3. Lie to me, Chatterbot Style (Investigator)
Joey Buckman, Justin Giboney, **Mark Grimes**, Ryan Schuetzler, Judee Burgoon
\$40,000 – Awarded May 2013, Center for Identification Technology Research
4. Detecting Impostership through Soft Biometrics and Cognitive Metrics (Investigator)
Judee Burgoon, Joe Valacich, Nathan Twyman, Jeffrey Proudfoot, **Mark Grimes**, S. Schuckers
\$55,000 – Awarded January 2013, Center for Identification Technology Research
5. Mobile Interviewing Agents (Investigator)
Ryan Schuetzler, Justin Giboney, **Mark Grimes**, Jim Marquardson, David Wilson
\$50,000 – Awarded January 2013, Center for Identification Technology Research
6. Post Apprehension Survey of Unauthorized Immigrants (Contributor)
Principle Investigators: Jay F. Nunamaker, Elyse Golob
Contributors: Alexandra Durcikova, **Mark Grimes**, Mary Burns
\$496,928 – Awarded September 2011, DHS Office of Immigration Statistics
Overview: This project entailed interviewing over 1,000 apprehended unauthorized immigrants. I managed data collection and analysis with a team of bilingual interviewers and presented results.

Teaching

It is my goal that my students leave class with something they did not have before: a new skill that helps them excel in other areas, a newfound interest in technology, or just a renewed curiosity in the world. If that happens, something more important than grades on a transcript has occurred.

To this end, I focus on incorporating my extensive work experience into the classroom material. I find students are more engaged and get more out of the course content when concrete examples of how the topics are relevant to the “real world” are provided. I use a variety of educational techniques such as group activities and discussions, hands on demos, and videos to keep the classroom fun and engaging. In 2014, I received my Certificate in College Teaching from the UA Office of Instructional Assessment. As part of this program, I completed a series of classes focusing on learner-centered teaching and effective teaching in the college classroom. My teaching was observed and reviewed by both peers and professional educators, which was invaluable in helping me to become a more effective educator. I enjoy being in the classroom and consider it an honor to be a part of the educational growth of my students.

In 2014 I was honored to receive the James F. LaSalle Teaching Excellence Award, an award given every fall to a MIS graduate student instructor at the University of Arizona.

University courses taught or assisted, and ratings of teaching effectiveness:

University of Houston

- Spring 2018: MIS 8397, Current Theories in MIS (Ph.D. Seminar, no rating)
- MIS 7373, Business Applications of Database Management Systems (4.84/5.0)
- MIS 3376, Business Applications of Database Management Systems (4.84/5.0)
- MIS 3376, Business Applications of Database Management Systems (4.80/5.0)
- Spring 2017: MIS 8397, Current Theories in MIS (Ph.D. Seminar, no rating)
- MIS 7373, Business Applications of Database Management Systems (4.86 / 5.0)
- MIS 3376, Business Applications of Database Management Systems (4.54 / 5.0)
- MIS 3376, Business Applications of Database Management Systems (4.78 / 5.0)
- Spring 2016: MIS 7373, Business Applications of Database Management Systems (4.85 / 5.0)
- MIS 3376, Business Applications of Database Management Systems (4.61 / 5.0)
- MIS 3376, Business Applications of Database Management Systems (4.79 / 5.0)

University of Arizona

- Spring 2015: Teaching assistant for MIS 510, Web Mining and Computing
- Fall 2014: MIS 304, Using and Managing Information Systems (4.8 / 5.0)
- Spring 2014: Teaching assistant for MIS 531, Enterprise Data Management (online)
- Fall 2013: MIS 304, Using and Managing Information Systems (4.3 / 5.0)
- Summer 2013: MIS 304, Using and Managing Information Systems (4.8 / 5.0)

Belmont University

- Fall 2007: ISM 1330, Introduction to Business Computing (4.17 / 5.0)
- Fall 2006: ISM 1330, Introduction to Business Computing (4.77 / 5.0)

My teaching interests and capabilities are broad while my technical and interpersonal skills enable me to simplify complex technical concepts into easily understandable and relatable terms. My industry and

academic experience qualifies me to teach a wide range of courses including but not limited to general IS concepts, database design, systems analysis and design, networking, and information security. I am comfortable teaching undergraduate, masters, and doctoral courses.

For a more detailed description of my approach to teaching and full course evaluations, please review the teaching portfolio under the Vitae link on my web site at <http://www.gmarkgrimes.com>.

Dissertation Committees

1. Durner, Vanessa (Member – University of Houston). Can Threats and Fear Foster Security? Cognitive and Emotive Forces of Fear Appeals on Information Security Behavior. Successfully defended August 15, 2018.
2. Kniffen, Richard (Member – University of Houston). Topic TBD. Ongoing.

Service and Professional Memberships

Professional Memberships

- Association for Information Systems (AIS)
- Association for Computing Machinery (ACM)
- Association of Information Technology Professionals (AITP)
- Beta Gamma Sigma
- Institute of Electrical and Electronics Engineers (IEEE)
- Social Psychology Network (SPN)

Service

- DISC representative for Bauer Library Committee (2018-2021)
- DISC faculty search committee (2018-2019)
- HICSS mini-track co-chair: Processes and technologies for small and large team collaboration (2019)
- AMCIS mini-track co-chair: Cognitive, affective, and conversational HCI (2018)
- AMCIS session chair: Interventions and Applications of HCI Research (2018)
- Panelist at Bauer Academic Job Market Training for Doctoral Students (2017)
- University of Houston Freshman Personal Access Liaison (2015-2016)
- Ad hoc reviewer for:
 - Computers and Human Behavior (2018)
 - Hawaii International Conference on System Sciences (2013-2019)
 - Journal of the Association of Information Systems (2017-2018)
 - International Conference on Information Systems (2013-2018)
 - Americas Conference on Information Systems (2014-2015, 2017-2018)
 - European Conference on Information Systems (2016)
 - Annual Symposium on Information Assurance (2016)
 - Group Decision and Negotiation (2012)
- Volunteer at International Conference on Information Systems (2012)

- AITP National Collegiate Conference (NCC) Committee Member (2004-2017)
- AITP NCC Contest Director (2010-2017)

Awards and Honors

- Paul S. and Shirley Goodman Award in International Computer Technology (2015)
- James F. LaSalle Teaching Excellence Award (2014)
- Delegate for AMCIS Doctoral Consortium (2014)
- Nominated for ICIS Best Paper Award (2013)
- First place in University of Arizona Network Design Case Competition (2011)
- AITP NCC Mike Burell Volunteer of the Year (2007, 2011)
- First place in Belmont University MBA Integrated Project Case Competition (2010)
- Belmont University ETS Top 10% Award (2010)
- Belmont University Special Commendation for Exceptional Achievement in Business Negotiation and Mediation (2010)
- Bank of New York Information Technology Recognition Award (2006, 2007)
- First Place in Web Design Competition, AITP National Collegiate Conference (2003)
- Eagle Scout in Boy Scouts of America

Invited Presentations and Panels

- Deception Detection and Credibility Assessment for Corporate Information Systems (Panelist). Phillips 66 Information Protection Week. Bartlesville, OK. July 27, 2016.
- Assessing Cognitive States via Analysis of Human-Computer Interaction Behaviors. University of North Texas MIS Research Forum. Denton, TX. February 19, 2016.
- Research in Deception Detection: The AVATAR. University of Arizona GenCyber Camp. Tucson, AZ. July 16, 2014
- Broken Windows, Bad Passwords: Influencing Secure User Behavior via Website Design. International Information Systems Security Certification Consortium. Tucson, AZ. August 28, 2014
- Post Apprehension Survey of Unauthorized Immigrants. Border Management Southwest Conference. Tucson, AZ. May 29, 2013

Industry Experience

Vice President/Senior Systems Engineer :: The Bank of New York Mellon; Nashville, TN
November 2005 – August 2011

- Team lead for Tennessee division of Intel Distributed Engineering team
- Level 3 support of 6,000+ Windows servers, Active Directory, VMware, and Citrix infrastructure
- Key contributor in migration of servers and associated applications from remote Bank of New York, JPMorgan Chase, and Mellon Financial facilities as part of merger and integration efforts
- Successfully designed and tested business continuity plans for multiple applications
- Lead engineer in selection and architecture of blade server infrastructure
- Lead technical resource for numerous technical initiatives and applications
- Recipient of multiple Information Technology Recognition awards

Adjunct Instructor of Business :: Belmont University; Nashville, TN
August 2006 – December 2007

- Adjunct instructor of ISM1330, Fundamentals of Computing

Enterprise Technologist III :: First Horizon National Corporation; Memphis, TN
February 2005 – November 2005

- Supported and redesigned Microsoft Active Directory, DNS, WINS, and DHCP infrastructure
- Provided third level support for over 200 local and 600 remote Windows servers
- Provided technical guidance for Identity and Access Management solution
- Developed standards and best practices for VMware ESX implementation
- Provided technical expertise for meeting audit compliance goals

Windows Enterprise Architect :: International Paper; Memphis, TN
June 2003 - February 2005

- Provided third level support for large Microsoft Active Directory infrastructure
- Provided technical expertise for implementation of single sign on initiative
- Windows enterprise representative of Incident Response Team
- Extensive experience with VMware GSX and ESX server
- Designed and implemented patch management solution for over 800 Windows servers
- Tasked with handling sensitive security related issues with high level of discretion

Web Developer :: University of Mississippi School of Business Administration; Oxford, MS
February 2001 - January 2003

- Maintained University of Mississippi School of Business Administration website
- Developed web based solutions to simplify daily administrative tasks
- Instructed web development class for future webmasters

Internet Services Intern :: International Paper; Memphis, TN
May 2002 - August 2002

- Maintained and updated DNS servers - developed scripts to automate routine maintenance
- Responsible for controlled promotion of web sites and applications

Chief Technician :: Travelcharts.com LLC; Fulton, MS
May 1998 - May 2000

- Designed and maintained Local Area Network for a small business
- Developed suite of data management applications using C++
- Created aesthetically pleasing, easily maintainable, functional website

Technical Support Representative/Systems Administrator :: Network One ISP; Fulton, MS
March 1997 - May 1999

- Provided technical support, repairs and installations for over 5,000 customers
- Supported multiple UNIX servers hosting Netscape Enterprise Directory and Messaging servers
- Instructed personal computing, Internet, and web design classes

Certifications

- Microsoft Certified Systems Administrator
- CompTIA A+
- CompTIA Security+
- Information Technology Infrastructure Library (ITIL) v3 Foundation