# Dr. Jeffrey L. Jenkins

Professor Kristine and Randy J. Vest Distinguished Fellow Information Systems Department BYU Marriott School of Business

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## **EDUCATION**

<ul> <li>Doctor of Philosophy in Management</li> <li>Eller College of Management, University of Arizona, Tucson, AZ</li> <li>Major: Management Information Systems; Minor: Computational Linguistics</li> <li>Certifications: Certification in College Teaching</li> <li>Dissertation Title: Alleviating Insider Threats: Mitigation Strategies and Detection Techniques</li> </ul>		2013 on
<b>Dissertation Co-Advisors:</b> Joseph S. Valacich and Jay F. Nunamaker Jr.		
Honors:	2012 ICIS Doctoral Consortium National Science Foundation Fellow Science Foundation Arizona Fellow	
Master of Science in Information Systems ManagementMarriott School of Management, Brigham Young University, Provo, UTEmphasis: PhD Preparation TrackHonors:High DistinctionMISM Outstanding Graduate Student Award RecipientPhi Kappa Phi Distinction		2009
	in Information Systems anagement, Brigham Young University, Provo, UT Magna cum Laude	2009
Associate of Science in Information SystemsBrigham Young University-Idaho, Rexburg, IDHonors:Magna cum Laude		2006

## **Research Summary**

My research analyzes how people use the computer mouse, touchscreen, keyboard, and other computer input devices to predict users' cognitive and emotional states. I apply this to a variety of settings, including fraud detection (e.g., detecting suspicious behaviors in online forms and

applications), usability (e.g., detecting when users are frustrated), and behavioral information security (e.g., understanding the cognition of how users make security decisions).

Through the University's Tech Launch program, I have filed several patents and commercialized my research. The technology I co-invented has been implemented in some of the largest finance and insurance companies in the world and has been used billions of times. The technology has been valued at hundreds of millions of dollars and has been highlighted globally by major news outlets. I have consistently published in the best information systems journals. Over the last 10 years, my research productivity has ranked in the top 50 across MISQ, ISR, JMIS, and JAIS (AISResearchRankings.org). I have received best paper awards (as the first author) from both ISR and JAIS. Selected honors received include the AIS Impact Award, the AIS Distinguished Member - Cum Laude Distinction, the Marriott School Faculty Research Award, the BYU Early Career Scholarship Award, and the AIS Early Career Award.

## **JOURNAL PUBLICATIONS**

- 01. Kim, D., Valacich, J. S., **Jenkins, J. L.,** Wilson, D., Kumar, M., Weisgarber, P. (*forthcoming*) "Are You, You? Seamlessly Fighting Identity Fraud with Keystroke Dynamics" Information Systems Research.
- 02. Wilson, D., Valacich, J. S., **Jenkins, J. L. (authors listed reverse-alphabetically)** (*forthcoming*) "Behaviorally Measuring Usability by Analyzing Users' Mouse Movement Efficiency" *MIS Quarterly*.
- 03. Weisgarber, P. A., Valacich, J. S. and **Jenkins, J. L.** (*forthcoming*) "Did I Buy the Right Gadget? A Methodological Replication Study" AIS Transactions on Replication Research.
- 04. Weinmann, M., Valacich, J. S., Schneider, C., **Jenkins, J. L.**, Hibbeln, M. (authors listed reverse-alphabetically) (2022) "The Path of the Righteous: Using Trace Data to Understand Fraud Decisions in Real Time" *MIS Quarterly*. 46 (4). pp. 2317-2336.
- 05. Masters, T.M., Keith, M., Hess, R., **Jenkins J.L.** (2022) "Do privacy assurances work? a study of truthfulness in healthcare history data collection" *PLoS ONE* 17(11), e0276442.
- 06. Kirwan, B. C., Vance, A., **Jenkins, J. L.**, Anderson, B. B (2022) "Embracing brain and behaviour: Designing programs of complementary neurophysiological and behavioural studies" *Information Systems Journal*. pp. 1 26.
- Jenkins, J. L., Valacich, J. S., Zimbelman, M. F, Zimbelman, A. (2021) "Detecting Noncompliant Behavior in Organizations: How Online Survey Responses and Behaviors Reveal Risk" *Journal of Management Information Systems*. 28 (3), pp. 704-731.

- 08. **Jenkins, J. L.**, Durcikova, A., Nunamaker J. F. (2021) "Mitigating the Security Intention-Behavior Gap: The Moderating Role of Required Effort on the Intention-Behavior Relationship" *Journal of the Association for Information Systems. 22 (1)*, Article 1.
- 09. Valacich, J. S, **Jenkins, J. L.** (2021) "Rigor, Relevance, and Practical Significance: A Real-life Journey to Organizational Value" *AIS Transactions on Human-Computer Interaction*, 13 (3), pp. 350-368.
- Kirwan, C. B., Bjornn, D. K., Anderson, B.B., Vance, A., Eargle. D., Jenkins, J. L.. (2020) "Repetition of Computer Security Warnings Results in Differential Repetition Suppression Effects as Revealed with Functional MRI" *Frontiers in Psychology*. 07 December 2020
- Jenkins, J. L., Proudfoot, J. G., Valacich, J. S., Grimes G. M., Nunamaker, J.F. (2019) "Sleight of Hand: Identifying Insider Threats by Monitoring Mouse-Cursor Movements" *Journal of the Association for Information Systems*. 20 (1), pp. 1-32. Awards: 2019 JAIS Best Paper Award.
- 12. Steffen, J., Gaskin, J., Meservy, T., **Jenkins, J. L.,** & Wolman, I. (2019) "A Framework of Affordances for Virtually Assisted Activities" *Journal of Management Information Systems*. 36 (3), pp. 683-729.
- Young, J., Davies, R., Jenkins J. L., & Pfleger, I. (2019). "Keystroke Dynamics: Establishing Keyprints to Verify Users in Online Courses" *Computers in the Schools*. 36 (1), pp. 1-21.
- 14. Vance, A., **Jenkins, J. L.**, Anderson, B. B., Bjorrn, D., Kirwan, B. (2018) "Turning Out Security Warnings: A Longitudinal Examination of Habituation Through fMRI, Eye Tracking, and Field Experiments" *MIS Quarterly*, 42 (2), pp. 355-380.
- 15. Hibbeln, M., Jenkins, J. L., Schneider, C., Valacich, J. S., Weinmann, M. (authors listed alphabetically) (2017) "How Is Your User Feeling? Inferring Emotion Through Human-Computer Interaction Devices". *MIS Quarterly*, 41 (1), pp. 1-21. *Awards: European Research Paper of the Year 2018 from CIONET*
- Williams, P.A., Jenkins, J. L., Valacich, J. S., Byrd, M. D. (2017) "Measuring Actual Behaviors in HCI Research – A call to Action and an Example" *AIS Transactions on Human-Computer Interaction*, 9 (4), pp. 339-352.
- 17. Jenkins, J. L., Anderson, B. B., Vance, A., Kirwan, B., Eargle, D. (2016) "More Harm than Good? How Security Messages that Interrupt Make Us Vulnerable" *Information Systems Research*, 22 (4), pp. 880–896. *Awards: INFORMS Editor's Cut collection "Securing Information in a Digital World."; 2016 ISR Best Paper Award*

- 18. Anderson, B. B., Vance, A., Kirwan, C. B., **Jenkins, J. L.**, Eargle, D. (2016) "From warnings to wallpaper: Why the brain habituates to security warnings and what can be done about it" *Journal of Management Information Systems*, 33 (3), pp. 713-743.
- Anderson, B. B., Vance, A., Kirwan, C. B., Jenkins, J. L., Eargle, D. (2016) "Your Memory is Working Against You: How Eye Tracking and Memory Explain Habituation to Security Warnings" *Decision Support Systems*, 92, pp. 3–13.
- Proudfoot, J. G., Jenkins, J. L., Burgoon J. K., Nunamaker J. F. (2016) "More Than Meets the Eye: How Oculometric Behaviors Evolve Over the Course of Automated Deception Detection Interactions" *Journal of Management Information Systems*, 33 (2), pp. 332-360.
- 21. Anderson, B. B., Vance, A., Kirwan, B., Eargle, D., **Jenkins, J. L.** (2016) "How Users Perceive and Respond to Security Messages: A NeuroIS Research Agenda and Empirical Study" *European Journal of Information Systems*, 25 (4), pp. 364-390.
- Dunbar, N. E., Miller, C. H., Adame, B. J., Elizondo, J., Wilson, S. N., Lane, B. L., Kauffmane, A. A., Bessarabova, E., Jensen, M. L., Straub, S. K., Lee, Y., Burgoon, J. K., Valacich, J. J., Jenkins, J. L., Zhang, J. (2014) "Implicit and Explicit Training in the Mitigation of Cognitive Bias Through the Use of a Serious Game" *Computers in Human Behavior*, 37 (1), pp. 307-318.
- Lowry, P. B., Twyman, N., Pickard, M., Jenkins, J. L., and Bui, Q. N. (2014) "Proposing the Affect-Trust Infusion Model (ATIM) to Explain and Predict the Influence of High- and Low-Affect Infusion on Web-Vendor Trust" *Information & Management*, 51 (5), pp. 579-594.
- 24. Derrick, D. C., Meservy, T., **Jenkins, J. L.**, Nunamaker Jr., J. F. (2013) "Detecting Deceptive Chat-based Communication" *Transactions on Management Information Systems*, 4 (2). Article number: 9.
- 25. 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 warnings" *Information Technology for Development*, 17 (4), pp. 289-305.
- Jenkins, J. L., Durcikova, A., Burns, M. B., (2013) "Simplicity is Bliss: Controlling Extraneous Cognitive Load in Online Security Training to Promote Secure Behavior" *Journal of Organizational and End User Computing*, 25 (3), 17 pages.
- Thatcher, S. M. B., Brown, S. A., Jenkins, J. L. (2012) "E-Collaboration Media Use and Diversity Perceptions: An Evolutionary Perspective of Virtual Organizations" *International Journal of e-Collaboration*, 8 (2), 17 pages.

- Jensen, M. L., Lowry, P. B., Jenkins, J. L. (2011) "Effects of Automated and Participative Decision Support in Computer-Aided Credibility Assessment" *Journal of Management Information Systems*, 28 (1), pp. 201-233.
- 29. Derrick, D. C., **Jenkins, J. L.**, Nunamaker Jr., J. F. (2011) "Design Principles for Special Purpose, Embodied, Conversational Intelligence with Environmental Sensors (SPECIES) Agents" *Transactions on Human-Computer Interaction*, 3 (2), pp. 62-81.
- Lowry, P. B., Moody, G., Vance, A., Jensen, M., Jenkins, J. L., and Wells, T. (2011) "Using an Elaboration Likelihood Approach to Better Understand the Persuasiveness of Website Privacy Assurance Cues for Online Consumers" *Journal of the American Society for Information Science and Technology*, 63 (4), pp. 755-766.
- Lowry, P. B., Romano, N. C., Jenkins, J. L., and Guthrie, R. W., (2009) "The CMC Interactivity Model: How Interactivity Enhances Communication Quality and Process Satisfaction in Lean-Media Groups" *Journal of Management Information Systems*, 26 (1), pp. 159-200.

#### **CONFERENCE PROCEEDINGS / PRESENTATIONS**

- Weisgarber, P. A., Valacich, J. S., Jenkins, J. L., Kim, D., Kumar, M. (2024) "Detecting Social Desirability Bias with Human-Computer Interaction: A Mouse-Tracking Study" Hawaii International Conference on Computer and Systems Sciences. Hawaii, January 3-6.
- 33. Coors, C., Jenkins, J. L., Weinman, M., Valacich, J.S. (2023) "Understanding Product Interest through Mouse-Cursor Tracking Analysis". *Proceedings of the Twenty-Second Annual Workshop on HCI Research in MIS*, Hyderabad, India, December 10.
- Wilson, D., Valacich, J. S., Jenkins, J. L. (2023) "Human or AI? Using Digital Behavior to Verify Essay Authorship" *International Conference on Information Systems*. Hyderabad, India, December 10-13.
- 35. Jenkins, J. L., Denison, A., Valacich, J. S. and Wilson, D. (2023) "Detecting Goal-Oriented vs. Browsing Users Through Behavior Analysis" 46th MIPRO ICT and Electronics Convention (MIPRO), Opatija, Croatia, May 22-26, pp. 13-18.
- 36. Wilson, D., **Jenkins, J. L.**, and Valacich, J. S. (2023) "Measuring State and Trait Attention Control Using Mouse Movements" *2023 46th MIPRO ICT and Electronics Convention (MIPRO)*, Opatija, Croatia, May 22-26, pp. 1-6.
- Kumar, M., Kim, D., Weisgarber, P. A., Valacich, J. S. and Jenkins, J. L. (2023) "Getting What You Paid For: Assessing Participant Experience Parameters for Amazon Mechanical Turk (MTurk) Workers on Survey Response Quality" *46th MIPRO ICT and Electronics Convention (MIPRO)*, Opatija, Croatia, May 22-26, pp. 7-12

- Christensen, R., Hunter, J., and Jenkins, J. L. (2023) "Signaling and Sanctioning the Selfless: Exploring Public Service-, Image- and Extrinsic-Motivation" *International Research Society for Public Management*. Budapest, April 3- 5.
- 39. Kim, D., Valacich, J. S., **Jenkins, J. L.**, and Kumar, M. (2023) "Typing Fast versus Typing Slow: Using Typing Dynamics to Reveal Authentic and Imposter Users" Hawaii International Conference *on Computer and Systems Sciences*. Hawaii, January 3-6.
- 40. Valacich, J. S., **Jenkins, J. L.**, and Čišić, D (2022) "Digital Behavioral Biometrics and Privacy: Methods for Improving Business Processes without Compromising Customer Privacy" MIPRO, IEEE, Opatija, Croatia May 23-27.
- 41. Kumar, M., Valacich, J. S., Jenkins, J. L., and Kim, D. (2022) "Too Fast? Too Slow? A Novel Approach for Identifying Extreme Response Behavior in Online Surveys" 21st Annual Pre-ICIS Workshop on HCI Research in MIS" *Proceedings of the Twenty- First Annual Workshop on HCI Research in MIS*, Copenhagen, Denmark, December 11.
- 42. Kumar, M., Valacich, J. S., Jenkins, J. L., Kim, D. (2022) "When is enough, enough? An Examination of Student Engagement when Watching Online Group Project Presentations" *Hawaii International Conference on Computer and Systems Sciences*. Hawaii, January 4-7.
- 43. Kumar, M., Kim, D., Valacich, J. S., Jenkins, J. L., and Dennis, A. R. (2021) "Improving the Quality of Survey Data: Using Answering Behavior as an Alternative Method for Detecting Biased Respondents" *Proceedings of the Twentieth Annual Workshop on HCI Research in MIS*, Austin, TX December 12. Awards: Best Paper Nominee
- Valacich, J.S., Jenkins, J. L., Byrd, M.; Kim, D., Kumar, M., and Williams, P., "Using Accelerometer and Gyroscope Data in Common Mobile Devices to Assess Credibility" (2020). Americas Conference on Information Systems. August 10 -14.
- 45. Masters, T., Keith M., **Jenkins, J. L.** (2020) "Patient Doctor Lies and their detection", NeuroPsychoEconomic Conference, Amsterdam. June 11-12
- 46. Masters, T., Keith M., **Jenkins, J. L.** (2020) "Patient Doctor Lies and their detection", Winter JDMS, Snowbird, Utah, January. January 16-18.
- 47. Zhang, X. Wu, Y., Valacich, J. S., **Jenkins, J. L.**, Li, K. (2019) "How Online Patient-Physician Interaction Influences Patient Satisfaction" *International Conference on Information Systems*. Munich, German. December 15-18.
- 48. Byrd, M.D., Jenkins, J. L., Kim, D., Kumar, M., Schwartz, A. W., Valacich, J. S. Williams, P. A., Wright, R. T. (2019) "Understanding Unauthorized Access using Fine-Grained Human-Computer Interaction Data" *Proceedings of the Eighteenth Annual Workshop on HCI Research in MIS*, Munich, Germany, December 15.

- 49. Jenkins J. L., Anderson, B. B., Vance, A., Kirwan, C. B., Eargle, D. (2019)
  "Distinguishing the Difference: Critical Warnings and Non-essential Notifications" *The Dewald Roode Workshop on Information Systems Security Research, IFIP WG8.11/WG11.13*, Bossier City, Louisiana, October 4 5, 2019.
- 50. Jenkins, J. L., Kirk, H. Valacich, J. S. (2019) "Improving Compassion Measurement in the Workforce by Analyzing Users' Mouse-Cursor Movements". *Americas Conference on Information Systems*. Cancun, Mexico. August 15-17.
- 51. Vance, A., Eargle, D., Jenkins, J. L., Kirwan, C. B., Anderson, B. B. (2019) "The Fog of Warnings: How Non-Essential Notifications Blur with Security Warnings". Fifteenth Symposium on Usable Privacy and Security (SOUPS), Santa Clara, CA, August 11–13.
- 52. Anderson, B., Kirwan, B., Eargle, D., **Jenkins, J. L.**, Vance, A. (2019), "Neural Evidence of Generalization of Software Notifications to Security Warnings," Security and Human Behavior Workshop, Harvard University, June 6.
- 53. Byrd, M.D., Jenkins, J.L., Valacich, J.S., Williams, P.A. (2018) "Creating a Realistic Experimental Scenario for HCI-Based Deception Detection Research with Ground Truth and Unsanctioned Malicious Acts" *Proceedings of the Seventeenth Annual Workshop on HCI Research in MIS*, San Francisco, California, USA, December 13.
- 54. Zhang, X., Valacich, J.S., Jenkins, J.L., Guo, X., (2018) "The Influence of Buying vs. Receiving an IT-based Device on User Commitment" *Proceedings of the Seventeenth Annual Workshop on HCI Research in MIS*, San Francisco, California, USA, December 13.
- 55. Jenkins, J. L., Valacich, J. S., Williams, P. A., Bryd, M. D. (2018) "Detecting Privacy Concerns Through Users' Human-Computer Interaction (HCI) Dynamics" *The Dewald Roode Workshop on Information Systems Security Research, IFIP WG8.11/WG11.13*, Cape Town, South Africa, June 4-15.
- 56. Vance, A., Jenkins, J. L., Anderson, B. B, Bjorrn, D., Kirwan, B. (2018) "Comprehending Comprehension of Security Warnings: Insights from Eye Tracking, fMRI, and Behavior" *The Dewald Roode Workshop on Information Systems Security Research, IFIP WG8.11/WG11.13*, Cape Town, South Africa, June 4-15.
- 57. Jenkins, J. L., Valacich J.S. (2018) "Threat Detection Through Analyzing Human-Computer Interaction Data" IEEE Symposium on Privacy-Aware Computing, Washington DC, USA. September 26 – 28.
- 58. Anderson, B. B, Vance, A.; Jenkins, J. L., Bjorrn, D., Kirwan, B. (2018) "Improving Security Message Adherence through Improved Comprehension: Neural and Behavioral Insights" *Americas Conference on Information Systems*. New Orleans, August 16-18.

- 59. Jenkins, J. L., Vance, A., Kirwan, C. B., Bjornn, D., Anderson, B. B. (2018) "Improve Your Behavioral Study with a Complementary Neurophysiological Study and Vice Versa". *CHI Workshop on Bridging HCI*, Montreal, Canada, April 21-26.
- 60. Grimes, M., Nunamaker, J. F., Valacich, J. S., Burgoon J. K., Twyman, N., Jenkins. J. L., Proudfoot, J.G. (2018) "Controlled Realism in Behavioral Research: Nine Lessons for Designing Experiments that Maximize both Control and Realism". Credibility Assessment and Screening Technologies, *Hawaii International Conference on Computer and Systems Sciences*. Hawaii, January 3-6.
- 61. Valacich, J. S., Byrd, M., Williams, P., **Jenkins, J. L.** (2018) "A Research Protocol for Examining Countermeasures: Developing Ground Truth and Motivating an Adequate Malicious Baseline". *Credibility Assessment and Screening Technologies, Hawaii International Conference on Computer and Systems Sciences.* Hawaii, January 3-6.
- 62. Jenkins, J. L., Valacich, J. S, Williams, P. (2017) "Human-Computer Interaction Movement Indicators of Response Biases in Online Surveys". *International Conference on Information Systems*. Seoul, Korea, December 10-13.
- 63. Steffen, J., Gaskin, J., Meservy, T., **Jenkins J. L.** (2017) "The Missing Framework for Virtually Assisted Activities". *International Conference on Information Systems*. Seoul, Korea, December 10-13.
- 64. Kirwan, B., Bjornn, D., Anderson, B., **Jenkins, J. L.**, Vance, A. (2017) "Why and How to Design Behavioral Experiments to Complement Decision Neuroscience Experiments," *Interdisciplinary Symposium on Decision Neuroscience*, Philadelphia, PA, June 3-5.
- 65. Anthony V., Kirwan, B., Bjorn, D., Jenkins, J. L., Anderson, B. B. (2017) "What Do We Really Know about How Habituation to Warnings Occurs Over Time?: A Longitudinal fMRI Study of Habituation and Polymorphic Warnings" CHI '17. Denver, Colorado, May 6-11.
- 66. Jenkins, J. L., Proudfoot, G. P., Valacich, J. S., Nunamaker, J. F. (2017) "Sleight of Hand: Identifying Malicious Insider Threats through the Monitoring of Mouse-Cursor Movements". *Credibility Assessment and Screening Technologies, Hawaii International Conference on Computer and Systems Sciences*. Hawaii, January 4-7.
- 67. Grimes, M. G., Proudfoot, J. G., Valacich, J. S., Jenkins, J. L., Twyman, N., Burgoon, J. K., Nunamaker, J. F. (2017) "Controlled Realism in Deception Research". Credibility Assessment and Screening Technologies, Hawaii International Conference on Computer and Systems Sciences. Hawaii, January 4-7.
- 68. Gaskin, J., **Jenkins, J. L.**, Meservy, T., Steffen, J., Payne, K., (2017) "Using Wearable Devices for Non-invasive, Inexpensive Physiological Data Collection". *Hawaii International Conference on Computer and Systems Sciences*. Hawaii, January 4-7.

- 69. Williams, P., Jenkins J. L., Valacich, J. V. (2016) "Real-Time Hand Tremor Detection via Mouse Cursor Movements for Improved Human-Computer Interactions: An Exploratory Study". *Special Interest Group on Human Computer Interaction*, Dublin, Ireland, December 10.
- 70. Anderson, B., Jenkins, J. L., Vance, A., Kirwan, B., Bjornn, D. (2016) "It All Looks the Same to Me: Security Warning and System Notification Generalization Captured through Eye Tracking," *Workshop on Information Security and Privacy (WISP)*, Dublin, Ireland, December 10.
- 71. Anderson, B., Vance, A., Jenkins, J. L., Kirwan, B., Bjornn, D. (2016) "I Can't Spot the Difference: An Eye Tracking Study Examining Generalization between Security Warnings and System Notifications," *The Dewald Roode Workshop on Information Systems Security Research, IFIP WG8.11/WG11.13*, Albuquerque, NM, October 7-8.
- 72. Jenkins, J. L., Anderson, B., Vance, A., Jensen, S., (2016) "When Training Gets Trumped: How Dual-Task Interference Inhibits Security Training," *European Conference on Information Systems (ECIS)*, Istanbul, Turkey, June 12-15.
- 73. Bjornn, D., Kirwan, B., Anderson, B. B., Jenkins, J. L., Vance, A. (2016) "A Longitudinal Investigation of Habituation to Security Warnings: A Parallel fMRI and Eye Tracking Study," *Interdisciplinary Symposium on Decision Neuroscience*, Philadelphia, PA, June 3-5.
- 74. Eargle, D., Galletta, D., Kirwan, B., Vance, A., Jenkins J. L., (2016) "Integrating Facial Cues of Threat into Security Warnings – An fMRI and Field Study". *Americas Conference on Information Systems*, San Diego, CA, August 11-14.
- 75. Vance, A., Anderson, B. B., **Jenkins, J. L.**, Kirwan, B., Bjornn, D. (2016) "It All Blurs Together: How the Effects of Habituation Generalize Across System Notifications and Security Warnings," Lightning Talk, *Symposium on Usable Privacy and Security*, Denver, June 22-24.
- 76. Jenkins, J. L., Anderson, B. B., Vance, A., Kirwan, B., Eargle, D. (2016) "More Harm than Good? How Security Messages that Interrupt Make Us Vulnerable," *Workshop on Security and Human Behavior*, Cambridge, MA, May 31-June 1.
- 77. Vance, A., Anderson, B. B., Jenkins, J. L., Kirwan, B., Bjornn, D., "It All Blurs Together: How the Effects of Habituation Generalize Across System Notifications and Security Warnings," (2016) Workshop on Security and Human Behavior, Cambridge, MA, May 31-June 1.
- 78. Wilson, D., Jenkins, J. L., Twyman, N., Jensen, M., Valacich, J., Dunbar, N., Wilson, S., Miller, C., Adame B., Lee Y., Burgoon, J. K., Nunamaker, J, K. (2016) "Serious Games for Reducing Bias in Credibility Decisions: An Evaluation Framework and Case Study".

Hawaii International Conference on Computer and Systems Sciences. Kauai, Hawaii, January 5-8.

- 79. Valacich, J., Jenkins, J. L., Byrd, M. (2016) "Suspicion Detection in the Wild: Lessons Learned from an Early Stage Company". *Hawaii International Conference on Computer and Systems Sciences, Symposium on Rapid Screening Technologies, Deception Detection, and Credibility Assessment*. Kauai, Hawaii, January 5-8.
- 80. Jenkins J. L., Valacich J. S. (2015) "Behaviorally Measuring Ease-of-Use by Analyzing Users' Mouse Cursor Movements". *Proceedings of the Fourteenth Annual Workshop on HCI Research in MIS*, Fort Worth, Texas, USA, December 13. *Best Paper Nominee*
- 81. Anderson, B., Vance, A., Kirwan, B., Jenkins, J. L. (2015) "Not Now:' Using fMRI and Eye Tracking to Improve the Timing of Security Messages". *Proceedings of the 10th Pre-ICIS Workshop on Information Security and Privacy*, Ft. Worth, TX, December 13.
- 82. Jenkins, J. L., Anderson, B. B., Vance, A., Kirwan, B., Eargle, D. (2015) "More Harm than Good? How Security Messages that Interrupt Make Us Vulnerable ", *The Dewald Roode Workshop on Information Systems Security Research, IFIP WG8.11/WG11.13.* Newark, NJ, October 2-3.
- 83. Jenkins, J. L., Larsen, R., Valacich, J. S., Bodily, R., Sandberg, D., Williams, P., Stokes, S., Harris, S. (2015) "A Multi-Experimental Examination of Analyzing Mouse Cursor Trajectories to Gauge Subject Uncertainty", *Americas Conference on Information Systems*, Puerto Rico, August 13-15. *Best Paper Nominee*
- 84. Anderson, B. B., Eargle, D., Jenkins, J. L., Kirwan, B., and Vance, T. (2015) "The Impact of Technostress on Users' Responses to Security Warnings: A NeuroIS Study", *Americas Conference on Information Systems*, Puerto Rico, August 13-15.
- 85. Proudfoot, J. G., Jenkins, J. L., Burgoon, J. K., Nunamaker, J. K. (2015) "Deception Is In the Eye of the Communicator: Investigating Pupil Diameter Variations in Automated Deception Detection Interviews", *IEEE International Conference on Intelligence and Security Informatics (ISI)*, Baltimore, MD, May 27-19.
- Anderson, B. B., Kirwan, B., Jenkins, J. L., Eargle, D., Howard, S., Vance, A. (2015) "How Polymorphic Warnings Reduce Habituation in the Brain—Insights from an fMRI Study", *CHI* '15, Seoul, Korea, April 18-24.
- 87. Grimes, G. M., Proudfoot, J. G., Valacich, J. S., Jenkins, J. L., Twyman, N. W., Burgoon, J. K., Marquardson, J. (2015) "Lessons Learned from Successive Deception Experiments", *Hawaii International Conference on Computer and Systems Sciences, Symposium on Rapid Screening Technologies, Deception Detection and Credibility Assessment.* Kauai, Hawaii, January 5-8.

- 88. Hibbeln, M., Jenkins, J. L., Schneider, C., Valacich, J. S., Weinmann, M. (2014) "Investigating the Effect of Insurance Fraud on Mouse Usage in Human-Computer Interactions", *International Conference on Information Systems*, Auckland, New Zealand, December 14-17.
- Jenkins, J. L., Durcikova, A., Reeves, K. S. (2014) "Exploring how Dual-Task Interference Influences End-User Secure Behavior." *The Dewald Roode Workshop on Information Systems Security Research, IFIP WG8.11/WG11.13*. Newcastle, England, June 16-17.
- 90. Grimes, 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. *Best Paper Nominee*
- 91. Jenkins, J. L., Durcikova, A. (2013) "What, I Shouldn't Have Done That?: The Influence of Training and Just-in-Time Reminders on Secure Behavior" *International Conference on Information Systems*, Milan, Italy, December 15-18.
- 92. Durcikova, A., Jenkins, J. L. (2013) "Improving End-User Security through SETA Programs: An Action Research Approach" *The Dewald Roode Workshop on Information Systems Security Research, IFIP WG8.11/WG11.13.* Buffalo, NY, October 4-5.
- 93. Jenkins, J. L., Marquardson, J., Proudfoot, J. G., Valacich, J. S., Golob, E., and Nunamaker, J. F. (2013) The Checkpoint Simulation: A Tool for Informing Border Patrol Checkpoint Design and Resource Allocation. *European Intelligence and Security Informatics Conference (EISIC)*. Uppsala, Sweden, August 12-14.
- 94. Dunbar, N. E., Miller, C. H., Adame, B. J., Elizondo, J., Wilson, S. N., Schartel, S. G., Lane, B., Kauffman, A. A., Straub, S., Burgoon, J. K., Valacich, J., Bessarabova, E., Jensen, M. L., Jenkins, J. L., Zhang, J., Morrison, D. (2013) "Mitigation of Cognitive Bias Through the Use of a Serious Game." *Games + Learning + Society Conference 9.0*. Madison, WI, June 12-14.
- 95. Burns, M. B., Durcikova, A., Jenkins, J. L. (2013) "What Kind of Interventions Can Help Johnny to Not Fall for Phish: Examining Stage-Appropriate Interventions". *Hawaii International Conference on Computer and Systems Sciences*. Maui, Hawaii, January 7-10.
- 96. Valacich, J. S., Jenkins, J. L., Nunamaker Jr, J. F., Hariri, S., Howie, J. (2013) "Identifying Insider Threats through Monitoring Mouse Movements in Concealed Information Tests" *Hawaii International Conference on Computer and Systems Sciences, Symposium on Rapid Screening Technologies, Deception Detection and Credibility Assessment.* Maui, Hawaii, January 7-10.
- 97. Grimes, G. M., **Jenkins, J. L.**, Valacich, J. S. (2013) "Assessing Credibility by Monitoring Changes in Typing Behavior: The Keystroke Dynamics Deception Detection

Model." Hawaii International Conference on Computer and Systems Sciences, Symposium on Rapid Screening Technologies, Deception Detection and Credibility Assessment. Maui, Hawaii, January 7-10.

- 98. Burns, M. B., Durcikova, A., Jenkins, J. L. (2012) "Examining Protective Behavior Stages of IS End Users: An Exploratory Cluster Analysis". *The Dewald Roode Workshop* on Information Systems Security Research, IFIP WG8.11/WG11.13. Provo, UT, September 21-22.
- 99. Jenkins, J. L., Durcikova, A., Burns, M. B. (2012)"Forget the Fluff: Examining How Source Credibility Influences the Impact of Information Security Training on Secure Behavior". 2012 Hawaii International Conference on Computer and Systems Sciences. Maui, Hawaii, January 4-7.
- 100. Jenkins, J. L., Proudfoot, J. G., Burns, M. B., Golob, E. (2012) "Estimating Unknown Numbers More Precisely: A Stratified Sampling Methodology for Estimating the Baseline Population of Illegal Immigrants Passing through Open Checkpoints". *Hawaii International Conference on Computer and Systems Sciences, Symposium on Rapid Screening Technologies, Deception Detection and Credibility Assessment.* Maui, Hawaii, January 4-7.
- 101. Pickard, M. D. and Jenkins, J. L. (2012) "Embodied Agents and the Predictive Elaboration Model of Persuasion – Embodied Agents Tailored to Users' Need for Cognition". *Hawaii International Conference on Computer and Systems Sciences, Symposium on Rapid Screening Technologies, Deception Detection and Credibility Assessment.* Maui, Hawaii, January 4-7.
- 102. Lowry, P. B., Jenkins, J. L., Twyman, N. W. (2011) "Proposing the Affect-Trust Infusion Model (ATIM) to Explain and Predict the Influence of High- and Low-Affect Infusion on Web Vendor Trust". *Journal of the Association for Information Systems* (JAIS) ICIS Theory Development Workshop. Shanghai, China, December 4-7.
- 103. Burns, M. B., Moffitt, K., Jenkins, J. L. and Durcikova, A. (2011) "Closing IT Security Hotspot: Increasing Auditors' Understanding of the Impacts of IT Security Training on End-User Secure Behavior". 3rd. Annual pre-ICIS workshop on Accounting Information Systems, Shanghai, China, December 3.
- 104. Burns, M. B., Durcikova, A., and Jenkins, J. L. (2011) "Understanding Persistence of Risky IS Behavior with Respect to Phishing: A Multi-Stage Approach". *The Dewald Roode Workshop on Information Systems Security Research, IFIP* WG8.11/11.13, Virginia Tech, Blacksburg, VA, September 23-24.
- 105. Twyman, N. W., Jenkins, J. L., Nunamaker, Jr., J. F., and Carl, K. (2011) "Knowledge Sourcing and Knowledge Consumption in Computer-Mediated Complex Decision Making". *Hawaii International Conference on Computer and Systems Sciences*, Hawaii, January 4-7.

- 106. Jenkins, J. L., Durcikova, A., Ross, G. & Nunamaker, Jr., J. F. (2010) "Encouraging Users to Behave Securely: Examining the Influence of Technical, Managerial, and Educational Controls on Users' Secure Behavior". *International Conference on Information Systems*, Saint Louis, Missouri, December 12-15.
- 107. Burgoon, J. K., Moffit, K., Burns, M., **Jenkins, J. L.** (2010) "Facial Thermal Imaging as a Technique for Deception Detection". *Hawaii International Conference on Computer and Systems Sciences, Symposium on Rapid Screening Technologies, Deception Detection and Credibility Assessment.* Manoa, Hawaii, January 5-8.
- 108. Jensen, M. J., Lowry, P. B., and **Jenkins, J. L.** (2009) "Using Source Credibility Theory to Explain and Predict the Efficacy of Human-Computer Systems for Credibility Assessment". *The 8th Annual Workshop on HCI Research in MIS*, Phoenix, Arizona, December 14.
- 109. Lowry, P. B., Jenkins, J. L., Twyman, N. W., Hammer, B., Gaskin, J., and Hassell, M. (2008). "Proposing the Hedonic Affect Model (HAM) to Explain how Stimuli and Performance Expectations Predict Affect in Individual and Group Hedonic Systems Use". Journal of the Association for Information Systems (JAIS) ICIS Theory Development Workshop, Paris, December 13.

## **BOOK CHAPTER**

- 110. Kirwan, B.; Anderson, B. B.; Eargle, D.; Jenkins, J. L.; Vance, A. (2019) "Using fMRI to Measure Stimulus Generalization of Software Notification to Security Warnings". In F. D. Davis, R. Riedl, J. vom Brocke, P.-M. Léger, & A. B. Randolph (Eds.), *Information Systems and Neuroscience*: Springer International Publishing.
- 111. Vance, A., Jenkins, J. L. Anderson, B. B., Bjorrn, D.; Kirwan, B. (2018).
  "Improving Security Behavior through Better Security Message Comprehension: fMRI and Eye-tracking In-sights". In F. D. Davis, R. Riedl, J. vom Brocke, P.-M. Léger, & A. B. Randolph (Eds.), *Information Systems and Neuroscience*: Springer International Publishing.
- 112. Vance, A., Jenkins, J. L., Anderson, B. B., Kirwan, B., Bjornn, D (2017) "Why and How to Design Complementary NeuroIS and Behavioral Experiments". In F. D. Davis, R. Riedl, J. vom Brocke, P.-M. Léger, & A. B. Randolph (Eds.), *Information Systems and Neuroscience*: Springer International Publishing.
- 113. Anderson, B. B., Vance, A., Jenkins, J. L., Kirwan, B., Bjornn, D (2016) "It All Blurs Together: How the Effects of Habituation Generalize Across System Notifications and Security Warnings". In F. D. Davis, R. Riedl, J. vom Brocke, P.-M. Léger, & A. B. Randolph (Eds.), *Information Systems and Neuroscience* (Vol. 16, pp. 43-49): Springer International Publishing.

114. Anderson, B. B., Vance, A., Kirwan, B., Jenkins, J. L., Eargle, D. (2015) "Using fMRI to Explain the Effect of Dual-Task Interference on Security Behavior". In F. D. Davis, R. Riedl, J. vom Brocke, P.-M. Léger, & A. B. Randolph (Eds.), *Information Systems and Neuroscience* (Vol. 10, pp. 145-150): Springer International Publishing.

## **CONFERENCE POSTERS**

- 115. Kirwan, C.B., Anderson, B., Eargle, D., Jenkins, J. L., Vance, A. (2019). Attentional habituation to non-essential computer notifications generalizes to security warnings: an fMRI study. Neuroscience 2019 Abstracts. Society for Neuroscience. Washington, DC.
- 116. Bjornn Kirwan, B., Anderson, B., Jenkins, J. L., Vance, A. (2016) "A longitudinal Investigation of Habituation to Security Warnings: A Parrallel fMRI and Eye Tracking Study" 6<sup>th</sup> Annual Interdisciplinary Symposium on Decision Neuroscience (ISDN), Philadelphia, PA.
- 117. Anderson, B., Vance, A., Kirwan, B., **Jenkins, J. L.** and Eargle, D (2015). "How Technostress Impacts Users' Responses to Security Warnings: A NeuroIS Study". *Americas Conference on Information Systems (AMCIS)*, Puerto Rico.
- 118. Grimes, M., Burgoon, J., Valacich, J., Nunamaker, J., Proudfoot, J., Jenkins, J. L. and Elkins, A. (2015). "Assessing Identity and Credibility Using Soft Biometric Features". *Deception: International Conference on Deceptive Behavior*. University of Cambridge, Cambridge, UK.
- 119. Burns, M. B., Durcikova, A., Jenkins, J. L. (2012). "On Not Phalling for Phish: Examining Multiple Stages for Protective Behavior by IS End-Users". *International Conference on Information Systems*. Orlando, Florida.
- 120. Jenkins, J. L., Durcikova, A. and Burns, M. B. (2011) "Get a Cue on IS Security Training: Explaining the Difference between how Security Cues and Security Arguments Improve Secure Behavior". *International Conference on Information Systems*, Shanghai, China.
- 121. Jenkins, J. L., Durcikova, A., Burns, M. B., and Nunamaker, Jr., J. F. (2011) "Protecting America's Cyber Infrastructure through Understanding How Security Controls Influence Humans' Secure Behavior," *Fifth Annual U.S. Department of Homeland Security (DHS) University Network Summit*, Washington DC.
- 122. Burns, M. B., Moffitt, K., **Jenkins, J. L.**, Nunamaker, Jr., J. F. (2011) "Defending Homeland Transportation Systems through Application of Automated Linguistic Analysis to Transcripts of Emergency Calls for Deception Detection," *Fifth Annual U.S. Department of Homeland Security (DHS) University Network Summit*, Washington DC.

123. Jenkins, J. L., Durcikova, A., and Ross, G. (2010) "How Secure is Your System? Examining the Influence of Technical, Managerial, and Educational Controls on Users' Secure Behavior," *Americas Conference on Information Systems*, Lima, Peru

## **AWARDS AND HONORS**

Hawaii International Conference on Computer and Systems Sciences Best Paper Nor	minee 2023	
Association of Information Systems (AIS) Distinguished Member - Cum Laude		
Twentieth Annual Workshop on HCI Research in MIS Best Paper Nominee		
Association for Information Systems (AIS) Impact Award		
BYU Early Career Scholarship Award (University Wide)		
BYU Marriott School Faculty Research Award		
Best Paper Award: Journal of the Association of Information Systems		
European Research Paper of the Year Award		
Association for Information Systems (AIS) Early Career Award		
Best Paper Award: Information Systems Research		
Fourteenth Annual Workshop on HCI Research in MIS Best Paper Nominee		
Americans Conference on Information Systems Best Paper Nominee		
International Conference on Information Systems Best Paper Nominee		
Games + Learning + Society Conference 9.0 Best Game Overall: Business Category		
Games + Learning + Society Conference 9.0 Best Adaptive Force Award (Chosen by the Office		
of the Secretary of Defense)		
Paul S. & Shirley Goodman Award in International Computer Technology		
2012 ICIS Doctoral Consortium		
National Science Foundation Research Fellowship		
Science Foundation Arizona Fellowship		
Marriott School of Management MISM Outstanding Graduate Student		
Phi Kappa Phi distinction		

## **EVIDENCE OF REAL-WORLD RESEARCH IMPACT**

An important emphasis of my research approach is to have an impact on the real world. One way that I have done this is by working with BYU Technology Transfer and Tech Launch Arizona (with my co-inventor Joe Valacich) to patent our research through the university. BYU Technology Transfer then licensed and commercialized the patents through a company called Neuro-ID. In this section, I highlight some recognitions that indicate that my research is having a real-world impact.

- The technology I co-invented has been used billions of times (as of July 2023)
- The research has been featured in Tech Launch Arizona's "Make it Happen" showcase video (2021) <u>https://techlaunch.arizona.edu/news/2021/01/startup-helps-online-businesses-reduce-risk-decoding-online-customer-behavior</u>
- FICO highlighted Neuro-ID for transforming Digital Account Opening (2021): <u>https://www.youtube.com/watch?v=iWjIXdqH7gY</u>

- *Tech Launch Arizona* (University of Arizona) name Neuro-ID the "**Startup of the Year**" (2020) I-Squared Expo and Awards: <u>https://techlaunch.arizona.edu/i2/isquared-awards.html#neuro-id</u>
- Business Insider reported that Neuro-ID was one of the top-38 "next generation of breakout B2B startups...follow[ing] in the footsteps of Plaid and Stripe" (2020): https://www.businessinsider.com/fintech-b2b-early-stage-business-investors-finance-2020-7
- *LendIt* Fintech selected Neuro-ID as a **finalist for "Fintech Innovator of the Year"** (2020): <u>https://www.lendit.com/usa/2020/awards/</u>
- Hundreds of articles covering my research in various news outlets (e.g., Wall Street Journal, Business Insider, CNET, etc.)

## PATENTS

Below is a list of my issued patents through BYU / University of Arizona. All of these patents relate to my methodology of detecting human states through computer input devices.

- **Patent Issued**: Fraudulent application detection system and method of use (U.S. Patent Number 10248804)
- **Patent Issued**: Identifying deceptive answers to online questions through humancomputer interaction data (U.S. Patent Number 10524713)
- **Patent Pending:** System and Method for Inferring Unauthorized Data Access Through Human-Computer Interaction Movement and Behavioral Data
- **Patent Pending**: System and Methods for Detecting and Analyzing Response Bias in Online Survey Questions

## **TEACHING EXPERIENCE**

Full Professor (Department of Information Systems, Brigham Young University) 2024 – Present: IS 590R: Managing a Software Startup; IS 560: Information Security Management

- Associate Professor (Department of Information Systems, Brigham Young University) 2019 – 2024: IS 201: Introduction to Management Information Systems, IS 590R: Managing a Software Startup; IS 560: Information Security Management
- Assistant Professor (Department of Information Systems, Brigham Young University) 2014 – 2019: IS 201: Introduction to Management Information Systems, IS 590R: Managing a Software Startup; IS 560: Information Security Management
- **Online Instructor** (Online Leaning, Business Department, Brigham Young University-Idaho) 2012 2013: Business 250: Web Business
- **Instructor** (Department of Management Information Systems, University of Arizona) 2011: MIS 111: Computers and the Internetworked Society

**Online Course Lead**—Member of the Course Council: (Online Leaning, Business Department, Brigham Young University-Idaho) Business 250: Web Business. 2012-2013

Certificate in College Teaching – University of Arizona	2013
Certified Online Instructor – Brigham Young University – Idaho	2012

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## **PROFESSIONAL EXPERIENCE**

Full Professor Department of Information Systems, Marriott School of Management, Brigham University	Young <b>2024 - Present</b>
Associate Professor Department of Information Systems, Marriott School of Management, Brigham University	Young 2019 - 2024
Visiting Scholar Information Systems Area, Economic and Social Sciences, University of Colog	ne, Germany <b>2023 - 2024</b>
Assistant Professor Department of Information Systems, Marriott School of Management, Brigham University	Young 2013 - 2019
Co-Founder, Neuro-ID, Inc. Chief Innovation Officer Chief Technology Officer Board Member	2021 - Present 2014 – 2021 2014 – Present
Advisory Board Member Ugenome Biotech	2022 - 2023
<b>Board Member</b> Global Energy Transition Forum	2022 - Present
Visiting Research Associate Department of Operations and Decision Technologies, Kelly School of Busines University	ss, Indiana <b>2018 - 2019</b>
<b>Research Associate</b> The Center for the Management of Information, University of Arizona	2009 – 2013
Software Engineer Information and Communication Systems, LDS Church, Salt Lake City, UT	2009
Research Assistant Information Systems Department, Marriott School, Brigham Young University Research Assistant for Dr. Paul Benjamin Lowry	<b>2008-2009</b> , Provo, UT:

## **Software Engineer** 2007 Battelle Energy Alliance, U.S. DOE, Idaho National Laboratory, Idaho Falls, ID **Teaching Assistant** 2007-2008 Information Systems Department, Marriott School, Brigham Young University, Provo, UT **Program Assistant**

Division of Continuing Education, Brigham Young University-Idaho, Rexburg, ID

## **INTERNAL SERVICE**

Peer Evaluation	2016 - 2023
Unit Review Committee	2021 - 2022
MSB Scientific Review Council	2019 – Present
University Information Security and Privacy Committee Member	2021 – Present
Faculty Recruiting Committee	2020 – Present
Evaluation, Rank & Status Committee / Chair (2021 - 2022)	2019 – Present
Master of Information Systems Management Coordinator	2017 – Present
Graduate Admission Committee Chair	2017 – Present
Security Track Coordinator	2017 - 2021
Social Media Coordinator	2014 - 2019
Undergraduate Admission Committee	2013 - 2020
Capstone Project Mentor	2013 – Present
Student Research Mentor	2013 – Present

## **EXTERNAL SERVICE**

Early Career Symposium Co-chair, AMCIS	2024
Panel: Research on AI in a Rapidly Changing World, American Conference of InformationSystems2023	
Conference Chair, Human-Computer Interaction, MIPRO	2023
AMCIS, Web Master	2020
Track Chair, AMCIS HCI Track	2018-Present
Mini Track Chair, Human-Computer Interaction in the Digital Economy	2019-Present
Associate Editor, Decision Sciences	2018-2021

2004-2006

IEEE PAC, Program Committee 2018	•
Associate Editor, ICIS HCI track 2018-2021	
Program Chair, Association for Information Systems Special Interest Group on HumanComputer Interaction—Pre-ICIS workshop2016 - 2019	)
AIS Professional Development Panel: Developing a Scholarly Identity as a Junior Faculty Member, ICIS 2016	- )
Program Chair, The Dewald Roode Workshop on Information Systems Security Research, IFWG8.11/WG11.132016	
Managing Editor: AIS Transactions on Human Computer Interaction.6/2013 – 3/2016	,
Session Chair: Fourteenth Annual Workshop on HCI Research in MIS2015	,
Reviewing for Journals MIS Quarterly Information Systems Research Journal of Management Information Systems The Journal of the Association of Information Systems International Journal of Electronic Commerce The Communications of the Association for Information Systems ACM Transactions on MIS International Journal of Information Technology & Decision Making Information and Management European Journal on Information Systems Information Systems Journal Information Systems Frontiers Decision Sciences AIS Transactions on Replication Research Business & Information Systems Engineering Management Science And others	
Reviewing for Conferences The International Conference on Information Systems Dewald Roode Workshop Hawaii International Conference on System Sciences European Conference on Information Systems American Conferences on Information Systems The NeuroIS Retreat MIPRO	

# GRANTS ON WHICH I WAS A PRINCIPLE INVESTIGATOR (PI) OR CO-PI

Total value of monetary awards received: \$218,800

**\$20,000** "MFilter: A Technique for Assessing Survey Respondent Quality through Analyzing Mouse Cursor Movements" The Office of Research & Creative Activities, Mentoring Environment Grants, Brigham Young University. Project Funding (December 2015)

**\$20,000** "Exploring the Potential Behavioral, Organizational, and Ethical Research Applications of Real-time Physiological Data Tracking." The Office of Research & Creative Activities, Mentoring Environment Grants, Brigham Young University. Project Funding (December 2014)

**\$16,800** "Measuring Uncertainty in Assessments through Mouse Tracking." The Office of Research & Creative Activities, Mentoring Environment Grants, Brigham Young University. Project Funding (December 2014)

**\$37,000** "SPLICE: Integrating Agent99, LIWC & Building an Accessible Platform". Center for Identification Technology Research (CITeR), a National Science Foundation (NSF) Industry/University Cooperative Research Center. Project Funding (October 2009)

**\$33,000** "Animating the Automated Deception Analysis Machine (ADAM)". Center for Identification Technology Research (CITeR), a National Science Foundation (NSF) Industry/University Cooperative Research Center. Project Funding (October 2009)

**\$35,000** "Animating the Automated Deception Analysis Machine (ADAM) continued". Center for Identification Technology Research (CITeR), a National Science Foundation (NSF) Industry/University Cooperative Research Center. Project Funding (May 2010)

**\$40,000** "Improving Information Security through Authentication Technology" Center for Identification Technology Research (CITeR), a National Science Foundation (NSF) Industry/University Cooperative Research Center. funding Project Funding (May 2010)

**\$17,000** "Comparison of Methods for Identification and Tracking of Facial and Head Features Related to Deception and Hostile Intent" Center for Identification Technology Research (CITeR), a National Science Foundation (NSF) Industry/University Cooperative Research Center. Project Funding (October 2010)

## GRANTS ON WHICH I WAS A RESEARCH ASSOCIATE LEAD

Checkpoints Project (2011-2013) Border Patrol, Department of Homeland Security. *Principle Investigators:* Dr. Jay Nunamaker, Dr. Elyse Golob. *Award Amount:* \$500,000

*Description*: The project involved: providing solutions to improve data integrity, consistency, and accuracy; evaluated checkpoint effectiveness; assess the impact of checkpoint on surrounding communities; developed a management tool to assist in resource allocation. This project was a strong demonstration of my leadership ability. Please ask me about it.

**IARPA, Sirius Program.** I was the Arizona Student Lead; this is a multi-university project headquartered at the University of Oklahoma. (2011-2013) U.S. Airforce; Intelligence Advanced Research Projects Activity. *Arizona Principle Investigator*: Judee Burgoon. Total Award Amount: \$10,700,000. *Arizona Award Amount*: \$1,500,000

*Description*: Helped design and test a serious game for mitigating biases of intelligence officers.