

# Ryan M. Schuetzler, Ph.D.

Department of Information Systems  
Marriott School of Management  
Brigham Young University  
Provo, UT 84602 U.S.A.

email: [ryan.schuetzler@byu.edu](mailto:ryan.schuetzler@byu.edu)  
URL: <https://www.schuetzler.net>

## Current Position

*Associate Professor*  
Department of Information Systems  
Marriott School of Management  
Brigham Young University

## Research Interests

In my research, I focus on how people respond to new technology, and how that technology can be built to interact with users most effectively. My primary research focuses on human interaction with embodied conversational agents, robots, and chatbots, and the influence of those chat bots on users' feelings and behavior toward those systems. I am interested to learn how people adapt their behavior, either consciously or unconsciously, as they interact with these types of novel systems.

## Areas of Specialization

Conversational Agents • Human-Computer Interaction • Privacy

## Previous Appointments

2015-2020 University of Nebraska at Omaha, Assistant Professor

## Education

2015 Ph.D. in Management Information Systems, University of Arizona  
2010 MS in Information Systems Management, Brigham Young University  
2010 BS in Information Systems, Brigham Young University

## Grants, Honors & Awards

2019-2020 Principal Investigator, *The Role of Expectations in Shaping Impressions of Artificial Intelligence*, University Committee on Research and Creative Activity, University of Nebraska at Omaha, \$5,000.

- 2016-2019 Co-investigator, *Optimizing EHR Usability for Cardiac Care*, Agency for Healthcare Research and Quality, \$571,835.
- 2015-2018 Principal investigator, *Dynamic Interviewing Agents*, Nebraska Research Initiative, \$200,000.
- 2015 Co-investigator, *Decision Support Capabilities for National Leadership*, National Strategic Research Institute, \$249,875.
- 2011-2014 \$205,000 in research grants, Center for Identification Technology Research
- 2011 Science Foundation Arizona Graduate Research Fellow

#### AWARDS

- 2020 University of Nebraska at Omaha Alumni Outstanding Teaching Award
- Outstanding officer award as President of the Midwest Chapter of the Association for Information Systems
- 2018 Best paper for “Next-Generation Accounting Interviewing: A Comparison of Human and Embodied Conversational Agents (ECAs) as Interviewers” at American Accounting Association Midyear Meeting
- Best paper for “Learning by Teaching through Collaborative Tutorial Creation: Experience using GitHub and AsciiDoc” at EDSIG Conference on Information Systems & Computing Education
- Outstanding officer award as Secretary of the Midwest Chapter of the Association for Information Systems

## Publications & Talks

\* Indicates student co-authors

#### JOURNAL ARTICLES

- 2023 Giboney, J. S., Schuetzler, R. M., & Grimes, G. M. (2023). Know Your Enemy: Conversational Agents for Security, Education, Training, and Awareness at Scale. *Computers & Security*, 129, Article 103207. [\[DOI\]](#)
- 2021 Grimes, G. M., Schuetzler, R. M., & Giboney, J.S. (2021). Mental Models and Expectation Violations in Conversational AI Interactions. *Decision Support Systems*, 144. [\[DOI\]](#)
- Schuetzler, R. M., Grimes, G. M., Giboney, J. S., & Rosser, H. K.\* (2021). Deciding Whether and How to Deploy Chatbots. *MIS Quarterly Executive*, 20(1), p. 4.
- 2020 Schuetzler, R. M., Grimes, G. M., & Giboney, J. S. (2020). The Impact of Chatbot Conversational Skill on Engagement and Perceived Humanness. *Journal of Management Information Systems*, 37(3), pp. 875-900. [\[DOI\]](#)

- Pickard, M., Schuetzler, R. M., Valacich, J. S., & Wood, D. A. (2020). Innovative Accounting Interviewing: A Comparison of Real and Virtual Accounting Interviewers. *The Accounting Review*, 95(6), pp. 339–366. [doi]
- Young, J. A., Biros, D. P., Schuetzler, R. M., Smith, T. J., Stephens, P. R., Syler, R. A., & Zheng, S. H. (2020) When Programs Collide: A Panel Report on the Competing Interests of Analytics and Security. *Communications of the Association for Information Systems*, 46. [doi]
- Clarke, M. A., Schuetzler, R. M., Windle, J. R., Pachunka, E.\*, & Fruhling, F. (2020). Usability and Cognitive Load in the Design of a Personal Health Record. *Health Policy and Technology*, 9(2), pp. 218–224. [doi]
- 2019 Schuetzler, R. M., Grimes, G. M., & Giboney, J. S. (2019). The Effect of Conversational Agent Skill on User Behavior during Deception. *Computers in Human Behavior*, 97, pp. 250–259. [doi]
- Marquardson, J. & Schuetzler, R. M. (2019). Teaching Tip: Learning by Teaching through Collaborative Tutorial Creation: Experience using GitHub and AsciiDoc. *Journal of Information Systems Education*, 30(1), pp. 10–18.
- 2018 Schuetzler, R. M., 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*, 114, pp. 94–102. [doi]
- 2017 Payne, K., Keith, M. J., Schuetzler, R. M., & Giboney, J. S. (2017) Examining the Learning Effects of Live Streaming Video Game Instruction over Twitch. *Computers in Human Behavior*, 77, pp. 95–109. [doi]
- Dunbar, N. E., Jensen, M. L., Miller, C. H., ..., & Schuetzler, R. M. (2017) Mitigation of Cognitive Bias with a Serious Game: Two Experiments Testing Feedback Timing and Source, *International Journal of Game-based Learning*, 7(4), pp. 86–100. [doi]
- 2016 Proudfoot, J. G., Boyle, R., & Schuetzler, R. M. (2016) Man vs. machine: Investigating the effects of adversarial system use on end-user behavior in automated deception detection interviews. *Decision Support Systems*, 85, pp. 23–33. [doi]
- 2015 Twyman, N. T., Proudfoot, J. G., Schuetzler, R., Elkins, A. C., & Derrick, D. C. (2015). Robustness of multiple indicators in controlled, automated deception detection interviews. *Journal of Management Information Systems*, 32(4), pp. 215–245. [doi]
- Lowry, P. B., Schuetzler, R. M., Giboney, J. S., & Gregory, T. (2015) Is trust always better than distrust? The potential value of distrust in newer virtual teams engaged in short-term decision making. *Group Decision and Negotiation*, 24(4), pp. 723–753. [doi]
- Burgoon, J. K., Schuetzler, R., & Wilson, D. W. (2015) Kinesic patterning in deceptive and truthful interactions. *Journal of Nonverbal Behavior*, 39(1), pp. 1–24. [doi]
- 2014 Burgoon, J. K., Proudfoot, J. G., Schuetzler, R., & Wilson, D. W. (2014) Patterns of nonverbal behavior associated with truth and deception: Illustrations from three experiments. *Journal of Nonverbal Behavior*, 38(3), pp. 325–354. [doi]

2011 Barlow, J. B., Giboney, J. S., Keith, M. J., Wilson, D. W., Schuetzler, R., Lowry, P. B., & Vance, A. (2011). Overview and guidance on agile development in large organizations. *Communications of the Association for Information Systems*, 29, pp. 25–44. [doi]

#### BOOK CHAPTERS

2016 Burgoon, J. K., Wilson, D., Hass, M., & Schuetzler, R. (2016). Interactive Deception in Group Decision-Making: New Insights from Communication Pattern Analysis. In S. M. Magnusson, K. J. Burgoon, & M. Casarrubea (Eds.), *Discovering Hidden Temporal Patterns in Behavior and Interaction: T-Pattern Detection and Analysis with THEME™* (pp. 37–62). New York, NY: Springer New York. Retrieved from [doi]

#### CONFERENCE PROCEEDINGS

2022 Schuetzler, R., Giboney, J., & Grimes, G. M. (2022). Design of a Chatbot Social Engineering Victim. *Hawaii International Conference on System Sciences*. January 3–7.

Leavitt, C.\*, Corbin, M.\*, Keith, M., Schuetzler, R., Anderson, G., & Kettles, D. (2022). A Chatbot Tutor Can Lessen the Gender Confidence Gap in Information Systems Learning. *Hawaii International Conference on System Sciences*. January 3–7.

Richardson, B.\*, & Schuetzler, R. (2022). Conversational Agents, Conversational Relevance, and Disclosure: Comparing the Effectiveness of Chatbots and SVITs in Eliciting Sensitive Information. *SIGHCI 2022 Proceedings*, Copenhagen, Denmark, December 11.

Hall, M., & Schuetzler, R. (2022). Factors for assessing doctoral student readiness. *SIGED 2022 Proceedings*, Copenhagen, Denmark, December 11.

2021 Giboney, J. S., Schuetzler, R., Grimes, G. M., & Dayley, I.\* (2021). A Social Engineering Victim Chatbot to Teach Adversarial Thinking. *Americas Conference on Information Systems*, Montreal, Québec, Canada, August 9–13.

Corbin, M., Leavitt, C., Keith, M., Schuetzler, R., Kettles, D. J., & Anderson, G. (2021). The Efficacy of Help Seeking on Creative Self-Efficacy of IS Students. *Americas Conference on Information Systems*, Montreal, Québec, Canada, August 9–13.

2019 Pachunka, E., Windle, J., Schuetzler, R., & Fruhling, A. (2019). Natural-Setting PHR Usability Evaluation using the NASA TLX to Measure Cognitive Load of Patients. *Hawaii International Conference on System Sciences*. Grand Wailea, Maui, HI, January 8–11. [doi]

Schuetzler, R. M., Morrison, B. B., & Hayes, J. (2019). Digital Excellence: A Missing Link. *Americas Conference on Information Systems*, Cancún, Mexico, August 15–17.

Schuetzler, R. M., Clarke, M. A., Windle, J. R., Pachunka, E., & Fruhling, A. L. (2019). Understanding System-induced Cognitive Load with Eye Tracking. *Americas Conference on Information Systems*, Cancún, Mexico, August 15–17.

2018 Pickard, M. D., Schuetzler, R. M., Valacich, J. S., & Wood, D. (2018). Next-Generation Accounting Interviewing: A Comparison of Human and Embodied Conversational Agents (ECAs) as Interviewers. *American Accounting Association Midyear Meeting*, Newport Beach, CA, January 18–20.

- Marquardson, J. & Schuetzler, R. M. (2018). Learning by Teaching through Collaborative Tutorial Creation: Experience using GitHub and AsciiDoc. *EDSIG Conference on Information Systems & Computing Education*, Norfolk, VA, October 31–November 3.
- Schuetzler, R. M., Grimes, G. M., & Giboney, J. S. (2018). An Investigation of Conversational Agent Relevance, Presence, and Engagement *Americas Conference on Information Systems*, New Orleans, LA, August 15–18.
- Fruhling, A. L., Ramachandran, D., Bernard, T., Schuetzler, R. M., & Windle, J. (2018) Patient Preferences for Authentication and Security: A Comparison Study of Younger and Older Patients. *ACM SIGMIS Conference on Computers and People Research*, Buffalo, NY, June 18–20. [doi]
- Schuetzler, R. M., 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*. Waikoloa Village, HI, January 3–6. [doi]
- 2016 Schuetzler, R. M., Grimes, G. M., Elkins, A. C., Burgoon, J. K., & Valacich, J. S. (2016) Talking and typing: A comparison of vocalic and keystroke dynamic features for deception detection. *Hawaii International Conference on System Sciences*. Koloa, HI, January 5–8.
- 2015 Wilson, D. W., Schuetzler, R. M., Dorn, B., Proudfoot, J. G., & Valacich, J. S. (2015) When disclosure is involuntary: Empowering users with control to reduce concerns. *International Conference on Information Systems*. Fort Worth, Texas, December 13–16.
- 2014 Schuetzler, R. M., Giboney, J. S., Grimes, G. M., & Buckman, J. (2014) Facilitating natural conversational agent interactions: Lessons from a deception experiment. *International Conference on Information Systems*. Auckland, New Zealand, December 12–16.
- Dunbar, N. E., Jensen, M. L., Miller, C. H., Bessarabova, E., Straub, S., ... & Schuetzler, R. (2014) Mitigating cognitive bias through the use of serious games: Effects of feedback. *9th International Conference on Persuasive Technology*, Padova, Italy, May 21–23. [doi]
- 2013 Twyman, N. W., Schuetzler, R., Proudfoot, J. G., & Elkins, A. (2013). A systems approach to countermeasures in credibility assessment interviews. *International Conference on Information Systems (ICIS)*, Milan, Italy, December 15–18.
- Schuetzler, R. & Wilson, D. W. (2013) Real-time embodied agent adaptation. *Hawaii International Conference on System Sciences*.
- 2012 Schuetzler, R. (2012) Countermeasures and eye tracking deception detection. *Hawaii International Conference on System Sciences*.
- Nunamaker, J. F., Jr., Burgoon, J. K., Twyman, N. W., Proudfoot, J. G., Schuetzler, R., & Giboney, J. S. (2012) Establishing a foundation for human credibility screening. *2012 IEEE International Conference on Intelligence and Security Informatics (ISI)*. June 11–14.
- Burgoon, J. K., Wilson, D. W., Schuetzler, R. & Hass, M. (2012) Interactive deception in group decision-making. *National Communication Association Convention*.

- Burgoon, J. K., Schuetzler, R., & Wilson, D. W. (2012) Uncovering hidden patterning in interpersonal communication: Illustration with deceptive and truthful interactions. *National Communication Association Convention*.
- 2011 Proudfoot, J. G., Giboney, J. S., Schuetzler, R. & Durcikova, A. (2011). Trends in phishing attacks: Suggestions for future research. *Americas Conference on Information Systems*.
- 2010 Lowry, P. B., Giboney, J. S., Schuetzler, R., Richardson, J., Gregory, T., Romney, J., & Anderson, B. (2010). The value of distrust in computer-based decision-making groups. In *Proceedings of the 43rd Hawaii International Conference on System Sciences*.
- INVITED PRESENTATIONS AND PANELS
- 2022 *When Should a Chatbot Be Less Chatty*. Presentation at AMCIS Workshop on Artificial Intelligence and Human Interaction, Minneapolis, MN.
- 2021 *The Value of Tailoring and Small Talk*. Presentation at the Dagstuhl Seminar: Conversational Agent as Trustworthy Autonomous System (Trust-CA).
- 2019 *When Programs Collide: Competing Interests of Analytics and Security*. Panel at the annual conference of the Midwest Chapter of the AIS. Panel report published in *Communications of the Association for Information Systems*.
- Extending Engagement with Discussion Boards*. Presentation at the UNO STEM TRAIL Center Pedagogy Workshop.
- Fostering a Community of Inquiry with Discourse(.org)*. Presentation at the 2nd annual UNO Digital Learning Showcase.
- 2018 *Developing Instructor Presence Online*. Presentation at the 1st annual UNO Digital Learning Showcase.
- Extending the Conversation about Teaching with Technology*. Panel at the University of Nebraska Technology and Pedagogy Symposium.
- 2016 *Chatbot for Enhancing Voluntary Information Disclosure*. Webinar for the Center for Identification Technology Research, an NSF Industry/University Collaborative Research Center.
- 2015 *Lie to Me: Chatterbot Style*. Webinar for the Center for Identification Technology Research, an NSF Industry/University Collaborative Research Center.
- 2014 *Identifying and Reducing Patient Drug Seeking*. Panel for first-year medical students at University of Arizona College of Medicine.
- A Mobile Interviewing Agent for Deception Detection*. Webinar for the Center for Identification Technology Research, an NSF Industry/University Collaborative Research Center.
- 2012-2014 *Deception and Automated Credibility Assessment*. Fort Huachuca Military Intelligence Captain's Career course.

# Teaching

## TEACHING NARRATIVE

The primary courses I have taught are data communications/IT infrastructure and computer security management. I have successfully adapted both courses for online learning, and continue to teach in both modes. My courses involve a variety of activities, including open access hands-on lab activities I have created to allow students to see the concepts they learn about in action.

## COURSES TAUGHT

### Brigham Young University

2021–present IS 404 – Data Communications (Overall rating: 4.7/5.0)

### University of Nebraska at Omaha

2017–2020 CYBR/ISQA 8546 – Computer Security Management (Overall rating: 4.42/5.0)

2015–2020 ISQA 3400 – Business Data Communications (Overall rating: 4.55/5.0)

2016–2020 ISQA 8310 – Data Communications (Overall rating: 4.65/5.0)

2016–2019 ISQA 4380 – Distributed Systems and Technologies (Overall rating: 4.48/5.0)

### University of Arizona

2013–2015 MIS 307 – Introduction to Business Data Communications (Effectiveness: 4.6/5.0)

2012 MIS 111 – Introduction to Management Information Systems (Effectiveness: 4.9/5.0)

## COURSE ACHIEVEMENTS

### BYU

- Provide fully virtual lab activities for instruction during COVID-19 pandemic when in-person lab activities were impractical
- Add full module on AWS Cloud Practitioner materials, encouraging students to begin receiving certifications to enhance employment prospects (6 students certified in 2022)
- Introduced PollEverywhere to the classroom to allow in-person and remote students to interact, ask questions, and engage with material during lecture time

### Omaha

- Transitioned IT Infrastructure, Computer Security Management, and Distributed Technologies classes to online learning
- Fully updated former data communications course to IT Infrastructure, including new content introducing operating systems and cloud computing.
- Created virtual labs for IT Infrastructure to allow students to gain hands-on experience with data communications (Creative Commons licensed, and available on [GitHub](#))

- Created a discussion board using the open source Discourse program to provide a more flexible and dynamic conversation platform for student-student interactions
- Converted IT Infrastructure course to use Open Educational Resources (OER) to improve flexibility and reduce costs for students
- Online course featured in the 2020 UNO Chancellor’s strategic planning forum

#### SELECT STUDENT COMMENTS

I appreciated your passion and it encouraged me to work harder and study better for this course...I fully digested the information you presented to us. After completing this course, I am seriously considering spending more time in the areas you taught us because I have found a curiosity for the area I did not imagine before.

I really enjoy class. The way the material has been amplified with your own knowledge and the way the slides are structured really help me to pay attention, take notes, and tell myself "Ooo, that’s something I want to put down here. That’s important."

Great teacher, made everything very easy to understand. Made class interesting and fun. Kept everyone engaged in learning.

I really enjoyed that Ryan truly cared if his students understood what was going on and comprehended the material.

## Service

#### CONFERENCE AND AIS ACTIVITIES

- Track Associate Editor (ICIS 2022): Design Research and Methods in Information Systems
- Track Associate Editor (ICIS 2021): Human-Robot Interaction & Digital Learning and IS Curricula
- Mini-track chair (AMCIS 2018–present): Cognitive, Affective, and Conversational HCI
- Mini-track co-chair (HICSS 2019–2022): Design and Development of Collaboration Technologies
- President of the Midwest chapter of the Association for Information Systems (2019–2020)
- Secretary for Midwest chapter of the Association for Information Systems (2016–2018)
- Conference chair: Big XII+ Management Information Systems Symposium (2017, Omaha)

#### REVIEWING

#### Grants

- Dutch Research Council (2020)

#### Journals

- Information Systems Research
- International Journal for Human-Computer Interaction
- MIS Quarterly
- Journal of Management Information Systems



- Journal of the Association for Information Systems
- Computers in Human Behavior
- Decision Support Systems
- Journal of the Midwest Association for Information Systems
- ACM Transactions on Management Information Systems
- Group Decision & Negotiation
- Journal of Nonverbal Behavior
- IEEE, SMC-A

## Conferences

- EDSIG Conference on Information Systems & Computing Education
- International Conference on Information Systems
- Hawaii International Conference on System Sciences
- Americas Conference on Information Systems
- European Conference on Information Systems
- AIS Special Interest Group on Human-Computer Interaction (SIGHCI)

## DEPARTMENT/UNIVERSITY

- ISQA Department Undergraduate Program Committee Chair (2017–2020)
- IS&T Doctoral Program Committee Member (2019–present)
- IS&T Faculty Liaison for Instructional Design (2017–2019)
- IS&T Advisory Committee Member (2018–2019)
- Biomedical Informatics Doctoral Program Committee Member (2018–2019)
- ISQA Department Undergraduate Program Committee Member (2016–2017)
- UNO Success Academy Faculty Presenter (2016–2017)

## COMMUNITY

- Omaha Python User Group: Arranged campus hosting for monthly meetings and presented on conversational agent research (2018)

## Technical and Other Skills

- Programming languages: Python, R, Node.js
- Frontend programming: Vue, TailwindCSS
- AWS (Cloud Practitioner Certified)
- Web application development with Python and Django
- TCP/IP networking (previously CCNA certified)
- SQL & database management
- Linux and Windows servers
- Spanish: Moderate proficiency

Last updated: January 8, 2024 • Typeset in  $\text{\LaTeX}$