

## **Katherine Carl, Ph.D.**

Assistant Professor  
Business Analytics & Management Information Systems  
College of Business  
Governors State University  
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### **Academic Background**

- Ph.D. University of Arizona, Tucson, Arizona, Management Information Systems (Computer Science Emphasis), 2014.
- B.A. Illinois Wesleyan University, Bloomington, Illinois, English Literature (Computer Science, Russian Language & Literature Emphasis), 2008.

### **Academic Experience**

- Assistant Professor of Business Analytics and Management Information Systems, Governors State University (2021 – present), University Park, Illinois.
- Visiting Assistant Professor of Management Information Systems, Governors State University (2021), University Park, Illinois.
- Adjunct Professor of Management Information Systems, Governors State University (2020 – 2021), University Park, Illinois.
- Assistant Professor of Computer Information Systems, West Texas A&M University (2018 - 2020), Canyon, Texas.
- Assistant Professor of Computer Information Systems, University of Incarnate Word (2017 - 2018), San Antonio, Texas.
- Assistant Professor of Management Information Systems, Brigham Young University (2015 - 2017), Provo, Utah.
- Instructor and Graduate Teaching Associate of Management Information Systems, University of Arizona (2009-2014), Tucson, Arizona.
- Teaching Assistant, Illinois Wesleyan University (2005 - 2008), Bloomington, Illinois.

### **Intellectual Contributions**

#### **Refereed Articles**

- Carl, K. (2021). Teachers' sense of efficacy and technology acceptance during the COVID-19 pandemic: A comparison of instructional modalities. *Issues in Information Systems* (*in press*).
- Carl, K., Babb, J., Keith, M., & Spruill, A. (2021). Inside the Antichamber: How Purposeful Game Design Reveals and Refines Player Archetypes. *Issues in Information Systems*, 22 (2), 1-20.
- Payne, K., Giboney, J., Schuetzler, R., & Keith, M. (2017). Examining the learning effects of live streaming video game instruction over Twitch. *Computers in Human Behavior*, 77 (1), 95-109.
- Payne, K., & Dror, M. (2015). Construction of topographical road graph for bicycle tour routes. *Sports Technology*, 8 (1), 1-11.
- Payne, K., & Dror, M. (2015). Multi-day bicycle tour route generation. *Journal of Quantitative Analysis in Sports*, 11 (2), 85-96.
- Carl, K., Brown, S., Dror, M., & Durcikova, A. (2013). Bicycle tours: Modeling the perceived exertion of a path. *Journal of Quantitative Analysis in Sports*, 9 (2), 203-216.

## Articles under Review

- Keith, M.J., Carl, K., & Babb, J. Theoretical Advancement of Creative Self-Efficacy: A Core Outcome for the IS Discipline. *Submitted, Information Systems Research*.

## Articles in Progress

- Carl, K. & Nichols, D. The effects of problem-based instruction on tacit and explicit knowledge acquisition in an online setting.

## Refereed Proceedings

### Full Paper

- Carl, K. (2021). Teachers' sense of efficacy and technology acceptance during the COVID-19 pandemic: A comparison of instructional modalities. *IACIS*.
- Carl, K. E. (2019). Flowcharting Logic: A Language-Independent Approach to Teaching Control Structures in Introductory Programming Courses. *EDSIGCON*, (5114), 1-7.
- Payne, K. C., Babb, J., & Abdullat, A. (2018). Reflections on Applying the Growth Mindset Approach to Computer Programming Courses. *EDSIGCON*, 4 (4641), 1-11.
- Payne, K. C., Keith, M. J., Babb, J., & Spruill, A. N. (2018). Development and Validation of the Information Systems Creative-Self-Efficacy Scale. *Hawaii International Conference on System Sciences (HICSS)*, 51, 124-133.
- Payne, K. C., & Dror, M. (2017). The development of a Smart Map for minimum 'exertion' routing applications. *Hawaii International Conference on System Sciences (HICSS)*.
- Gaskin, J., Jenkins, J., Meservy, T., Steffen, J., & Payne, K. (2017). Using wearable devices for non-invasive, inexpensive physiological data collection. *Hawaii International Conference on System Sciences (HICSS)*.
- Keith, M., Anderson, G., Dean, D., Gaskin, J., Wisner, T., Seth Gremmert, Katherine Carl Payne (2016). The effects of video gaming on work group performance. *International Conference on Information Systems (ICIS)*.

## Presentation of Refereed Papers

### International

- Carl, K. (2021). Teachers' sense of efficacy and technology acceptance during the COVID-19 pandemic: A comparison of instructional modalities. *IACIS*.
- Payne, K. C., Keith, M. J., Babb, J., & Spruill, A. N. (2018). Development and Validation of the Information Systems Creative-Self-Efficacy Scale. *Hawaii International Conference on System Sciences (HICSS)*, Waikoloa, Hawaii. **Best Paper Award**.
- Payne, K. C. & Dror, M. (2017). The development of a Smart Map for minimum 'exertion' routing applications. *Hawaii International Conference on System Sciences (HICSS)*, Waikoloa, Hawaii.

### National

- Carl, K. E. (2019). Flowcharting Logic: A Language-Independent Approach to Teaching Control Structures in Introductory Programming Courses. *EDSIGCON*, Cleveland, Ohio.
- Payne, K. C., Babb, J., & Abdullat, A. (2018). Reflections on Applying the Growth Mindset Approach to Computer Programming Courses. *EDSIGCON*, Norfolk, Virginia.

## **Presentation of Non-Refereed Papers**

### **International**

- Payne, K. C. & Dror, M. (2013). GIS-based construction of a topographical road graph for bicycle tour routes. Invited presentation at INFORMS Annual Meeting, Minneapolis, Minnesota.
- Carl, K. E. & Dror, M. (2012). Bicycle tours: modeling the perceived exertion of a daily path. Invited presentation at INFORMS Annual Meeting, Phoenix, Arizona.

### **Local**

- Carl, K. E. & Nichols, D. (2021). Tacit and explicit knowledge acquisition in an online setting: Insight from gaming. Governors State University Research Day, University Park, Illinois.
- Carl, K. E., Babb, J., Keith, M., & Spruill, A. (2021). Inside the Antichamber: How purposeful game design reveals and refines player archetypes. Governors State University Research Day, University Park, Illinois.
- Carl, K. E. (2021). Technology acceptance in the K-12 classroom during the COVID-19 pandemic. Governors State University Research Day, University Park, Illinois.
- Carl, K. E. & Dror, M. (2012). Bicycle tours: perceived exertion of a daily path. Invited presentation at University of Arizona MIS Department Speaker Series, Tucson, Arizona.
- Carl, K. E. & Dror, M. (2011). Bicycle tours: perceived exertion of a daily path. Graduate and Professional Student Council Showcase, Tucson, Arizona.

### **State**

- Carl, K.E. (2021). The development of problem-based triggers in computer programming courses. Midwest Decision Sciences Institute Conference, Bowling Green, Kentucky.
- Payne, K. C. & Dror, M. (2015). Bicycle tours: perceived exertion of a daily path. Invited presentation at Brigham Young University Statistics Department Symposium, Provo, Utah.
- Payne, K. C. & Dror, M. (2013). GIS-based construction of a topographical road graph for bicycle tour routes. Invited presentation at Information Systems Research Symposium at Brigham Young University, Provo, Utah.

## **Research Grants**

### **Funded**

- 2021: College of Business Faculty Small Grant
- 2019: Graduate Student Research Grant, Designing Problem-Based Learning Triggers in an Online Environment: A Gaming Approach
- 2019: Graduate Student Research Grant, Analytical Comparison of Problem-Based and Traditional Learning in Programming
- 2019: President's Undergraduate Student Research Grant, Creative Self-Efficacy and its Relationship to Expectancy Violation
- 2015: MEG Grant, MFilter: A Technique for Assessing Survey Respondent Quality through Analyzing Mouse Cursor Movements
- 2013: Tech Launch Arizona Proof of Concept Program Award: GIS-based construction of a topographical graph for bicycle tour routes

## **Teaching**

### **Governors State University**

- MIS 2101 (Online Synchronous): Basics of Information Technology
- MIS 3201 (Online Synchronous): Business Systems Analysis
- MIS 3401: Business Information Retrieval
- BAN 7101 (Online Asynchronous): Business Analytics
- BAN 7201: Data Visualization
- MIS 7401 (Online Asynchronous): Database Development and Applications

### **West Texas A&M University**

- CIDM 2315: Programming Business Applications
- CIDM 4382: Back-end Web Development
- CIDM 6311 (Online Asynchronous): Social Networks and Media Analysis
- CIDM 6350 (Online Asynchronous): Data and Information Management

### **University of the Incarnate Word**

- MIS 2321: Introduction to Information Systems
- MIS 3325: Introduction to Business Analytics and Business Intelligence
- MIS 4330: Data Mining
- MIS 4320: Introduction to Python
- MIS 4310: Introduction to Java

### **Brigham Young University**

- IS 201: Introduction to Management Information Systems

### **University of Arizona**

- MIS 560: Operations Management for MBAs
- MIS 373: Basic Operations Management
- MIS 111: Computers and the Inter-networked Society
- MIS 111L (Online Asynchronous): Computers and the Internetnetworked-Society

## **Service**

### **Service to the Profession**

#### **Academic Conference: Panelist**

- 2018: EDSIGCON

#### **Track Chair: Conference**

- 2021: Midwest DSI: Information Systems & Technology
- 2021: Midwest DSI: Special Topics

#### **Reviewer - Article / Manuscript**

- 2018: Review of Managerial Science
- 2018: MIS Quarterly

**Reviewer: Conference Paper**

- 2019: European Conference on Information Systems
- 2018: International Conference on Information Systems (ICIS)
- 2018 – 2019: EDSIGCON
- 2010 – 2018: Hawaii International Conference on System Sciences (HICSS)
- 2017: Decision Science Institute

**Memberships**

- CompTIA Association of IT Professionals, 2018 – present
- Association for Information Systems, 2010 – present
- INFORMS, 2010 – 2014

**Honors-Awards-Grants****Patents**

- Dror, M. and Carl, K. (2013). Systems and methods for providing topographical graphs and travel routes based on perceived exertion. U.S. Patent Issuance Approval No. 14/051,338.

**Awards**

- 2019: Excellence in Teaching Award, WTAMU Chapter of the National Society of Leadership and Success (Sigma Alpha Pi)
- 2011: 1st Place in Business and Public Administration Category Graduate & Professional Student Council Showcase, University of Arizona
- 2011: Outstanding Graduate Teaching Associate, University of Arizona
- 2011: James F. LaSalle Teaching Award, University of Arizona
- 2010: Graduate and Professional Student Council Showcase Winner, University of Arizona
- 2010: Eller College Award for Teaching Excellence, University of Arizona

**Scholarship**

- 2012: Dwight D. Eisenhower Transportation Fellowship Award, Transportation Research Board
- 2008: Science Foundation Arizona Fellowship Award, Science Foundation Arizona