**Zachary E. Davis**

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(434)414-5160

**Education**

**Virginia Tech** Blacksburg, VA

* **PhD Business Information Technology** May 2018

Concentration: Information Systems and Operations

Management

Dissertation: Toward a Healthcare Services Ecosystem

Supervisors: Lara Khansa, PhD and Christopher Zobel, PhD

* **Master’s in Information Technology** August 2014

**University of Central Florida** Orlando, FL

* **Bachelor’s in Medical Laboratory Sciences** May 2009

**Research Interests**

* Analytics
* Healthcare operational processes
* Human Computer Interaction/ Usability/ Adaptation
* Online community behavior
* Healthcare policy

**Journal Publications:**

1. Khansa, L., Barkhi, R., Ray, S., & **Davis, Z**. (2018) Cyberloafing in the Workplace: Mitigation Tactics and their Impact on Individuals' Behavior. *Information Technology and Management* (accepted)
2. Khansa, L., **Davis, Z.**, Davis, H., Chin, A., Irvine, H., Nichols, L., Lang, J.A., & MacMichael, N. (2016). Health Information Technologies for Patients with Diabetes. *Technology in Society, 44*, 1-9.
3. **Davis, Z.,** & Khansa, L. (2016). Evaluating the Epic Electronic Medical Record System: A Dichotomy in Perspectives and Solution Recommendations. *Health Policy and Technology*, *5(1)*, 65-73
4. **Davis, Z.**, & Davis, H. (2015). Taking the show on the road: In-situ clinical simulations’ role in promoting teamwork. *Knowledge Management & E-Learning*, 7(3), 425-435.

**Research in progress**

1. **Davis, Z**., Khansa, L. & Zobel, C.  (2018) Emergency Department Resilience to Disaster Level Overcrowding: A Component Resilience Framework for Analysis and Predictive Modeling, (*Revise and Resubmit*, ***Journal of Operations Management***)
2. **Davis, Z**., Khansa, L. & Zobel, C. (2018). Assessing Adaptation, Fit and Feature Use in Healthcare Information Systems: A Survey and Empirical Analysis. (Under Review, *Information and Management*)
3. **Davis, Z.**, Du, Q., Wang, A Zobel, C., &. Khansa, L. (2018) The Reciprocity Effect in Online Healthcare Communities for Patients with Chronic Illness (Under Review, *Information and Management*)
4. **Davis, Z**., Zaman, N., Essig, R., Khansa, L., & Abrahams, A. (2018)Ignition Factors: Understanding the drivers of overall satisfaction in online reviews
5. **Davis, Z.**, Khansa, L., Zobel, C, Glick, R & Tuck, C. (2018) Rightsizing hospital bed allocation with discrete event simulation

**Conferences Presentations**

1. INFORMS – Houston, TX 2017: Session Chair on “Social Media Analytics” cluster and presentation on “Impact of Health Social Media on the Health State of Patients with Chronic Illness”
2. POMS – Seattle, WA 2017: Presentation on Quantifying Resilience against Emergency Department Overcrowding
3. INFORMS – Nashville, TN 2016: Presentation on Online airline reviews

**Teaching Experience**

Jacksonville University

Undergraduate

* Quantitative Business Methods, Introduction to Business Analytics

Graduate

* Applied Statistical Modeling and Analysis, Data Mining and Predictive Analytics, Applied Managerial Analytics

Piedmont Virginia Community College

Undergraduate

* Principles of Information Systems, Information Literacy

**Awards/Fellowships**

**Leidos Fellow in Advanced Information Systems 8/2015 - 5/2018**

The Leidos Fellow in Advanced Information Systems will conduct work in the fields of health information management, including data-driven decision-making in the field of healthcare including, optimization of electronic healthcare records, big-data and analytics applied to clinical care, public health and scientific research, and bioinformatics, biostatistics and epidemiology.

**Kathy McCaffrey Memorial Endowed Scholarship 1/1/2016**

AHIMA Foundation Scholarship for advancing Health Information Management Technologies

**Service and Affiliations**

Reviewer for *Journal of Operations Management*

ISCRAM 2017 Reviewer

ISCRAM 2018 Reviewer

PACIS 2016 Reviewer

American Health Information Management Association member

American Association of Clinical Chemistry member

American Society of Clinical Pathology member

Association for Information Systems (AIS)

INFORMS

POMS

**Licenses/Certifications**

American Society for Clinical Pathology (ASCP) Certified

Laboratory Information Systems Certified (AACC)

Comptia A+

Certified Blackboard Online Instructor

**Professional Experience**

**Assistant Professor of Decision Science and Information Management – Jacksonville University (Aug. 2018)**

**Graduate Research Assistant – Virginia Tech (Aug. 2015 – May 2018)**

* Interpreted research findings and summarized data into reports
* Conducted basic and applied research on information systems and operations research
* Communicated research results to individuals in the industry, government and general public

**Adjunct Professor – Piedmont Virginia Community College (Jan 2015 – May 2015)**

Taught the following classes:

* **Information Literacy -** Presents the information literacy core competencies focusing on the use of information technology skills. Skills and knowledge will be developed in database searching, computer applications, information security and privacy, and intellectual property issues.
* **Principles of Information Systems -** Provides an overview of the fundamentals of computer information systems. Focuses on the role of computers in business today including hardware, software, analysis, design and implementation of information systems. Includes an introduction to computer ethics, and business and personal security. Exposes students to techniques used in programming and system development. Utilizes a hands-on component for spreadsheets, databases, and web design applications.
* **Protocols and Communications TCP/IP – Course Developer -** Centers on providing an understanding of the TCP/IP suite and the details of its implementation. The details of implementation are treated by discussing IP addressing, the structure of frames and protocol headers that enable communication between two computers. Discusses IP routing, tunneling, SNMP, and security.

**Database Analyst- Revenue Cycle Operations, University of Virginia Medical Center (Jan. 2014 – Oct 2014)**

* Utilize scripting languages to automate manual reporting processes
* Use analytical programs to look at data, including statistical analysis, from different sources to produce meaningful reports and presentations
* Define and perform formal data requests and analysis
* Design studies utilizing ad hoc data warehouse and other reporting tools
* Data analysis reports communicated to end-users using appropriate language determined by their role
* Utilize advanced statistical analysis such as finding co-occurrences, linear and logarithmic regression, tree based methods, cluster analysis, predictive modeling, and function analysis
* Use project management skills to accomplish end results with various team-members
* Ensure data availability and integration into key functions of the organization

**Medical Laboratory Scientist II- Clinical Laboratory, University of Virginia Medical Center (Jan. 2012 – Jan. 2014)**

* Responsible for laboratory tests and results
* Analyzed results to ensure validity
* Troubleshoot analyzers when mechanical or technological problems occurred
* Wrote rules and settings for MOLISWAM 5.0
* Experience with Sunquest and EPIC EHR in utilization, input, and interfacing

**Medical Laboratory Scientist I- Clinical Laboratory, Florida Hospital Orlando (May 2009 – Jan 2012)**

* Responsible for laboratory tests and results
* Analyzed results to ensure validity
* Troubleshoot analyzers when mechanical or technological problems occurred
* Experience with Sunquest and EPIC EHR in utilization, input, and interfacing

**Computer Knowledge**

* Knowledge and use of MS tools including Access, Excel, Word, PowerPoint, SharePoint
* Data Science: R, WEKA, octave, SPSS, SAS, Tensorflow
* Experience with programming languages including Java, MySQL, t-SQL, C/C++, VBA, Python
* Experience with many security programs including: nmap, netcat, Wireshark, Cain and Abel, John the Ripper, What’s Running, Putty
* Experience with the design and implementation of database systems, including the use of Microsoft Access and SQL Server
* Normalization of databases, E/R Diagrams, relational models, designing and running reports and queries
* Knowledgeable in learning management systems: Scholar, Canvas, Blackboard and Angel