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# Heather R. Keathley-Herring

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## ***Educational Background***

Dual Ph.D. Program	August 2016
<b>Management Systems Engineering track</b> Grado Department of Industrial and Systems Engineering, <i>Virginia Tech</i> Primary Advisor: Dr. Eileen Van Aken	
<b>Economy, Management, and Leadership</b> Department of Economy, Management and Leadership, <i>Royal Military Academy, Belgium</i> Primary Advisor: Dr. Geert Letens	
Graduate Certificate	December 2015
<b>Future Professoriate</b> Graduate School, <i>Virginia Tech</i>	
Master of Science	December 2013
<b>Industrial and Systems Engineering</b> Grado Department of Industrial and Systems Engineering, <i>Virginia Tech</i> Advisor: Dr. Eileen Van Aken	
Bachelor of Science	May 2011
<b>Systems Engineering, <i>Cum Laude</i></b> Concentrations in Computer Engineering and Mechanical Engineering Minor in Mathematics Department of Systems Engineering, <i>University of Arkansas at Little Rock</i> Research Advisor: Dr. Guoliang Huang	

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## ***Academic Positions***

<b>Assistant Professor</b> Industrial Engineering & Management Systems Department, University of Central Florida	Aug 2016 - Present
<b>Graduate Research Assistant</b> Grado Department of Industrial and Systems Engineering, <i>Virginia Tech</i>	Feb 2014- Aug 2016
<b>Instructor, Engineering Economy</b> Grado Department of Industrial and Systems Engineering, <i>Virginia Tech</i>	July 2015- Aug 2015
<b>Graduate Teaching Assistant</b> Grado Department of Industrial and Systems Engineering, <i>Virginia Tech</i>	Aug 2011- Feb 2014
<b>Supplemental Instruction Coordinator</b> Department of Systems Engineering, University of Arkansas at Little Rock	Jan 2011- May 2011
<b>Supplemental Instructor</b> Department of Systems Engineering, University of Arkansas at Little Rock	Aug 2010- May 2011
<b>Undergraduate Research Assistant</b> Department of Systems Engineering, University of Arkansas at Little Rock	May 2009- May 2011

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## ***Teaching and Advising Experience***

### **Instructor**

- Industrial Engineering & Management Systems Department, University of Central Florida
- Prepare course materials and conduct lectures for the IEMS Empirical Methods for IE course.
  - Assist students on an individual basis during office hours
- Grado Department of Industrial and Systems Engineering, *Virginia Tech*
- Prepare course materials and conduct lectures for the ISE Engineering Economy course.

- Assist students on an individual basis during office hours and as a group during weekly study sessions.

### **Undergraduate Research Supervisor**

Grado Department of Industrial and Systems Engineering, Virginia Tech

- Supervise undergraduate research students conducting a Systematic Literature Review of topics relevant to the Engineering Management field.
- Key responsibilities include developing the syllabus, monitoring student progress, design of all assignments and assessment activities, and interfacing with the research sponsor (Belgian Royal Military Academy).

### **Graduate Teaching Assistant**

Grado Department of Industrial and Systems Engineering, Virginia Tech

- Courses supported:
  - Engineering Economy (as lead GTA)      Discrete-Event Computer Simulation
  - Deterministic Operations Research      Facilities Planning and Material Handling
- Key responsibilities included tutoring students during office hours and grading student work.
- Collected data and helped to prepare reports for the ABET assessment system.

### **Undergraduate Supplemental Instructor/ Tutor**

Donaghey College of Engineering and Information Technology, UALR

- Courses supported:
  - Physics for Scientists and Engineers I      Physics for Scientists and Engineers II
- Key responsibilities included attending lectures to provide annotated notes and consistent student support, tutoring students during office hours, and providing long-term tutoring arrangements for individual students.

## ***Research Experience***

### **Enterprise Engineering Research Group Member**

May 2012 - Present

Grado Department of Industrial and Systems Engineering, Virginia Tech

- Research group led by Dr. Eileen Van Aken conducting collaborative research on performance measurement, continuous improvement, organizational transformation, and scientometrics. The research group includes members from Virginia Tech in addition to members from Belgium, Mexico, and Brazil.

### **Graduate Research Assistant**

Feb 2014- Aug 2016

Grado Department of Industrial and Systems Engineering, Virginia Tech

- Externally funded research project with the Belgian Military Academy to investigate the relationship between leadership, performance measurement, and Learning Organization characteristics; responsible for design of research methods, data collection instruments, and analysis methods. Traveled twice to Brussels, Belgium for data collection activities and research reporting.

### **MEMS Research Lab Assistant**

May 2009 –May 2011

Department of Systems Engineering, UALR

- Participated in micro-fabrication research in addition to providing technical lab support; responsibilities included conducting a comprehensive literature review, collaborating with graduate students to design and produce micro-electromechanical systems, collaborate to solve problems in functionality and performance with the equipment and processes, maintaining the cleanroom as a class 1000 environment, and administrative tasks to maintain the lab.

### **Student Undergraduate Research Fellowship (SURF) Grant**

Jan 2010 - Dec 2010

Department of Systems Engineering, UALR

- Externally funded research with faculty advisor to design and create micro-cantilever beams that were used in fatigue testing of piezoelectric sensor/ actuators; responsibilities included supporting the design of research methods, preparation of photolithography equipment, substrate fabrication, and data collection.

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## ***Analysis Tools and Software***

Qualitative Analysis	Bibliometric Analysis	Statistical Analysis		Simulation & Modeling	
NVIVO	NodeXL	LISREL	Matlab	Vensim	Simulink
		SAS	R	Arena	AutoCAD
		JMP			

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## ***Professional Development and Learning***

Future Professoriate Graduate Certificate

- Courses include Preparing the Future Professoriate, Pedagogical Practices in Contemporary Contexts, and Diversity and Inclusion in a Global Society.

International Research Conferences

- International Conference on Theory and Practice of Performance Measurement and Management, organized by the Performance Measurement Association (2014 - Aarhus, Denmark)
  - Industrial and Systems Engineering Research Conference, organized by IIE (2013 - San Juan, Puerto Rico; 2014 - Montreal, Canada; 2015 - Nashville, TN; 2016 – Anaheim, CA)
  - International Annual Conference, organized by the American Society for Engineering Management (2012 - Virginia Beach, VA; 2013 - Minneapolis, MN; 2014 - Virginia Beach, VA; 2015 - Indianapolis, IN)
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## ***Professional Affiliations***

**Alpha Pi Mu (APM)**, member Nov 2014 - Present

**Institute of Industrial Engineers (IIE)**, member Aug 2012- Present  
Society for Engineering and Management Systems (SEMS)

**American Society of Engineering Management (ASEM)**, member May 2012- Present

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## ***University and Professional Service***

**Peer Mentor**, Alpha Pi Mu IE Honor Society, ISE Department, Virginia Tech Nov 2015 – Aug 2016

- Key responsibilities include meeting regularly with an undergraduate mentee to discuss and provide feedback on academic and personal progress in the ISE department, plans for after graduation. And university resources and support.

**Institute of Industrial Engineers**

- Student Column Contributor, *SEMS Says* column, *Industrial Management*, Society for Engineering and Management Systems (SEMS)
- Student Blog Contributor, SEMS Blog
- Conference Student Volunteer, 2013 ISERC
- Conference Session Chair
  - o Performance Measurement and Management, Engineering Management Track, 2016 Industrial and Systems Engineering Research Conference
  - o Organizational Learning, Engineering Management Track, 2016 Industrial and Systems Engineering Research Conference
  - o General EM, EM Profession & Education IV Track, 2015, ASEM International Annual Conference
  - o Organization Development Track, 2014, ASEM International Annual Conference
  - o Engineering Management Track, 2013 Industrial and Systems Engineering Research Conference

**Reviewer**, *Engineering Management Journal* Nov 2015- Present

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## ***Honors, Awards, and Accomplishments***

**SEMS Student Paper Competition**, 2<sup>nd</sup> place, 2016

Awarded by the Society for Engineering and Management Systems, Institute of Industrial Engineers

**Merl Baker Best Student Paper Award**, 2<sup>nd</sup> place, 2015

Awarded by the American Society of Engineering Management

**SEMS Student Paper Competition, 2<sup>nd</sup> place, 2015**

Awarded by the Society for Engineering and Management Systems, Institute of Industrial Engineers

**Merl Baker Best Student Paper Award, 1<sup>st</sup> place, 2013**

Awarded by the American Society of Engineering Management

**Fundamentals of Engineering Exam, 2011**

Arkansas Engineer Intern License # 7894

**Outstanding B.S. Graduate, 2011**

Awarded annually to one or two graduating seniors by the Donaghey College of Engineering and Information Technology, UALR

**Outstanding Freshman, Sophomore, Junior, Senior, 2006-2010**

Awarded annually to one student by the Department of Systems Engineering, UALR

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***Publications and Presentations******In Preparation*****Refereed Journal Papers**

1. Keathley, H., Van Aken, E., Letens, G. (2016). Defense Sector Performance Measurement Practices: Systematic Literature Review, *International Journal of Operations and Production Management*, **Planned Submission November 2016.**
2. Keathley, H., Van Aken, E.M., and Letens, G. (2015). Quantitative analysis of factors that affect performance measurement system implementation, Submitted to *Engineering Management Journal*, December 2015 – **Accepted with revisions; under final preparation.**

***Completed*****Refereed Journal Papers**

1. Keathley-Herring, H., Van Aken, E., Gonzalez-Aleu, F., Deschamps, F., Letens, G., & Orlandini, P. C. (2016). Assessing the maturity of a research area: bibliometric review and proposed framework. *Scientometrics*, 1-25.

**Refereed Conference Papers**

1. Keathley, H., Bean, A., Chen, T., Vila, K., Ye, K., Gonzalez-Aleu, F. (2016). Bibliometric Analysis of Research Design Characteristics in Engineering Management Research, *Proceedings of the 2016 Industrial and Systems Engineering Research Conference*, Institute of Industrial Engineers, May 21-24, 2016. (Received 2<sup>nd</sup> Place in the SEMS Best Student Paper Competition for the Engineering Management Track).
2. Keathley, H., Van Aken, E., and Letens, G., (2015). Learning organization characteristics in deployed military units, *Proceedings of the 2015 International Annual Conference*, American Society for Engineering Management, October 7-10, 2015.
3. Keathley, H., Bean, A., Chen, T., Vila, K., Ye, K., and Gonzalez-Aleu, F. (2015). Bibliometric analysis of author collaboration in engineering management research, *Proceedings of the 2015 International Annual Conference*, American Society for Engineering Management, October 7-10, 2015. (Received 2<sup>nd</sup> Place in the Merl Baker Best Student Paper Competition).
4. Keathley, H., Du, R., and Olliges, K. (2015). Review of performance measurement practices in military and government sectors, *Proceedings of the 2015 Industrial and Systems Engineering Research Conference*, Institute of Industrial Engineers, May 30 -June 2, 2015.
5. Gonzalez-Aleu, F. and Keathley, H. (2015). Design and application of a meta-evaluation framework, *Proceedings of the 2015 Industrial and Systems Engineering Research Conference*, Institute of Industrial Engineers May 30-June 2, 2015. (Received 2<sup>nd</sup> Place in the SEMS Best Student Paper Competition for the Engineering Management Track).
6. Keathley, H., Van Aken, E.M., and Letens, G. (2014). Performance measurement system implementation: Systematic review of success factors, *Proceedings of the 2014 International Annual Conference*, American Society for Engineering Management, October 15-18, 2014.
7. Keathley, H., Van Aken, E.M., and Letens, G. (2014). Review of factors affecting performance measurement system implementation, *Proceedings of the 2014 International Conference on Theory and*

*Practice of Performance Measurement and Management*, Performance Measurement Association, June 25-27, 2014.

8. Keathley, H., Van Aken, E.M., and Letens, G. (2014). Performance measurement system implementation: Meta-evaluation of literature on success factors, *Proceedings of the 2014 Industrial and Systems Engineering Research Conference*, IIE, May 31-June 3, 2014.
9. Keathley, H. (2013). Quantitative analysis of factors that affect performance measurement system implementation, *Proceedings of the 2013 International Annual Conference*, American Society for Engineering Management, October 2-5, 2013. (Received 1<sup>st</sup> place, Best Student Paper Competition)
10. Keathley, H., Gonzalez Aleu, F., Cardenas Orlandini, P.F., Van Aken, E.M., Deschamps, F., and Rosa Leite, L. (2013). Maturity assessment of performance measurement implementation success factor literature, *Proceedings of the 2013 International Annual Conference*, American Society for Engineering Management, October 2-5, 2013.
11. Keathley, H. and Van Aken, E.M. (2013). Systematic literature review on the factors that affect performance measurement system implementation, *Proceedings of the 2013 Industrial and Systems Engineering Research Conference*, IIE, May 18-22, 2013.
12. Keathley, H., Gonzalez Aleu, F., Cardenas Orlandini, P.F., Van Aken, E.M., Deschamps, F., and Rosa Leite, L. (2013). Proposed maturity assessment framework for a research field, *Proceedings of the 2013 Industrial and Systems Engineering Research Conference*, IIE, May 18-22, 2013.

#### **Technical Reports**

1. Keathly, H., Du, R., Olliges, K., Van Aken, E.M., Letens, G. (2015). Systematic literature review of performance measurement practices in military and government sectors; Results of an undergraduate research project Part 1, Unpublished Technical Report, January 2015.
2. Keathly, H., Du, R., Olliges, K., Chen, T., Van Aken, E.M., Letens, G. (2016). Systematic literature review of performance measurement practices in military and government sectors; Results of an undergraduate research project Part 2, Unpublished Technical Report, February 2016.

#### **Poster Sessions**

1. Keathley, H. (2015) Factors that affect the successful implementation of performance measurement systems, Virginia Tech Graduate Research Symposium – Poster Session 1, March 25, 2015.
2. Keathley, H., Van Aken, E.M., and Letens, G. (2014) Organizational learning in high risk environments, Royal Military Academy Research Expedition – Poster Session, December 10, 2014.
3. Keathley, H. (2014) Factors that affect the successful implementation of performance measurement systems, Industrial and Systems Engineering Research Conference; Doctoral Colloquium – Poster Session, IIE, June 1, 2014.

#### **Presentations (no paper associated with presentation)**

1. Keathley, H., Van Aken, E., Letens, G., (2016) Factors that Affect the Success of Performance Measurement System Implementation, Industrial and Systems Engineering Research Conference, May 21-24, 2016.
2. Keathley, H., Van Aken, E., Letens, G., (2016) Factors that Affect the Success of Performance Measurement System Implementation, Industrial and Systems Engineering Research Conference, May 21-24, 2016.
3. Keathley, H., Du, R., Olliges, K., (2015). Learning Organization Characteristics in Deployed Units, *International Annual Conference*, American Society for Engineering Management, October 7-10, 2015.
4. Keathley, H., Gonzalez-Alue, F., Cardenas-Orlandini, P., Deschamps, F., Van Aken, E., and Letens, G., (2014). Performance measurement research: Lessons learned from Systematic Literature Review, *International Annual Conference*, American Society for Engineering Management, October 15-18, 2014.
5. Keathley, H., Gonzalez-Alue, F., Cardenas-Orlandini, P., Deschamps, F., and Van Aken, E., (2014). Framework for assessing the maturity of a research field, Industrial and Systems Engineering Research Conference, May 31-June 3, 2014.