

# Stacy Kelley Lukins

## Curriculum Vitae

---

### EDUCATION

**Ph.D., Computer Science**, The Univ. of Alabama in Huntsville, Huntsville, AL (2009)  
Dissertation: *Source Code Retrieval for Bug Localization Using Latent Dirichlet Allocation and its Relationship to Stability of Agilely-Developed Software*.

**M.S., Computer Science**, Wake Forest University, Winston-Salem, NC (2001)  
Thesis: *An Interactive Propositional Logic Proof Assistant with a Machine Learning Analysis*.

- Summa Cum Laude; Upsilon Pi Epsilon member

**B.S., Computer Science**, The Univ. of Alabama in Huntsville, Huntsville, AL (1996)

- Magna Cum Laude; Honors Program; National and Collegiate Dean's List

---

### PUBLICATIONS

Corley, C.S., Kraft, N.A., Etzkorn, L.H., and Lukins, S.K., "Recovering Traceability Links between Source Code and Fixed Bugs via Patch Analysis," Proceedings of the International Workshop on Traceability in Emerging Forms of Software Engineering (TEFSE '11), Honolulu, HI, May 23, 2011, ACM New York, NY, pp. 31-37.  
*Acceptance rate: 44%*

Beard, Matthew , Kraft, Nicholas A., Etzkorn, Letha H., Lukins, Stacy K, Measuring the Accuracy of Information Retrieval Based Bug Localization Techniques. Proceedings of the 8th IEEE Working Conference on Reverse Engineering (WCRE 2011), Limerick, Ireland, October 17-20, 2011, pp.124-128.  
*Acceptance rate 27/104 = 25.9% (full papers)*

Stacy K. Lukins, Nicholas A. Kraft, Letha H. Etzkorn, "Bug Localization Using Latent Dirichlet Allocation," *Information and Software Technology*, Vol. 52, No. 9, September 2009, pp. 972-990.

*Australia CORE Ranking: (2008: B; 2007: B), SCI impact factor (2003: 0.632; 2008: 1.2)*

**\* In top ten most cited papers in Information and Software Technology (since 2010)**

<http://www.journals.elsevier.com/information-and-software-technology/most-cited-articles/>

S.K. Lukins, N.A. Kraft, and L.H. Etzkorn, "Source Code Retrieval for Bug Localization Using Latent Dirichlet Allocation," *Proceedings of the 15<sup>th</sup> IEEE Working Conference on Reverse Engineering (WCRE 2008)*, Antwerp, Belgium, Oct. 15-18, 2008, pp. 155-164.

*Australia 2007 Conf. Ranking: B, Acceptance rate 20/70 = 28.6% (full papers)*

**\* Most cited paper from WCRE 2008**

# Stacy K. Lukins

C. Gall, S. Lukins, L. Etzkorn, S. Gholston, P. Farrington, D. Utley, J. Fortune, and S. Virani, "Semantic Software Metrics Computed from Natural Language Design Specifications," *IET Software (formerly IEE Proceedings Software)*, Vol. 2, No. 1, February, 2008, pp. 17-26.

*Australia CORE Ranking: (2008: B), SCI impact factor (2006: 0.64)*

Stacy Lukins, Alan Levicki, and Jennifer Burg. "A Tutorial Program for Propositional Logic with Human/Computer Interactive Learning." *Proceedings of the 33<sup>rd</sup> SIGSCE Technical Symposium on Computer Science Education*. ACM Press (2002): 381-385.

---

## TEACHING / RESEARCH EXPERIENCE

### **Lecturer** (Fall 2015-Spring 2018)

*Univ. of Alabama in Huntsville, Huntsville, AL*

### **Graduate Teaching Assistant/Adjunct Faculty** (Various terms from 2003-Present)

*Univ. of Alabama in Huntsville, Huntsville, AL*

### **Graduate Research Assistant** (Fall 2004-Spring 2005)

*Univ. of Alabama in Huntsville, Huntsville, AL*

Worked with semantic metrics project under Dr. Letha Etzkorn and in conjunction with faculty and graduate students of the Industrial and Systems Engineering (ISE) department.

### **Graduate Teaching Assistant** (1998)

*Wake Forest University, Winston-Salem, AL*

Taught computer programming labs for 2 semesters.

## **Courses Taught**

- CS 102 Intro to C Programming
- CS 103 Intro Programming using Java
- CS 121 Computer Science I
- CS 214 Intro Discrete Structures
- CS 221 Comp Sci II: Data Structures
- CS 309 Computer Org & Switching Thry
- CS 321 Intro Object-Oriented Prog Java
- CS 413 Intro Digital Comp Architecture
- CS 424 Principles Programming Lang
- CS 487 Database Systems
- CS 513 Intro Computer Architecture
- CS 517 Data Org & Analysis of Algorithms
- CS 524 Principles Programming Lang
- CS 590 Programming Environ w/Unix
- CS 650 Software Engineering Process

# Stacy K. Lukins

---

## PROFESSIONAL SERVICE

### **Reviewer for various journals and conferences (2008-2015)**

- Information and Software Technology (2013, 2015)
  - International Journal of Computers and Applications (2008, 2009)
  - The 21<sup>st</sup> International Conference on Software Engineering and Knowledge Engineering (SEKE 2009), July 1-3, 2009, Boston, MA
  - Special Issue on Information Retrieval Approaches to Software Engineering, Empirical Software Engineering Journal (2008)
- 

## WORK EXPERIENCE

### **Software Analyst (June 2018-present)**

**OASYS, INC.**

Contractor in support of the *U.S. Army Combat Capabilities Development Command Aviation & Missile Center (CCDC AVMC), Redstone Arsenal*

- Performed software independent verification and validation (IV&V) of ballistic missile defense system software
- Ran software static analysis tools and interpreted and summarized results, identifying critical errors in software systems
- Analyzed software code health based on capturing and interpreting software metrics

### **Consultant (September 2009-June 2018)**

**OASYS, INC.**

Contractor with the *Data and Information Standards Center of Excellence (DISCoE)* in support of the *US Army Aviation and Missile Research, Development and Engineering Center, Redstone Arsenal*

- Developed business intelligence applications utilizing Oracle Business Intelligence Enterprise Edition (OBIEE)
- Developed Department of Defense Architecture Framework (DoDAF) documentation for multiple Army aviation maintenance applications, involving the creation of 26 different architectural models per project, and trained employees on DoDAF
- Developed web-based application for the creation and editing of taxonomies

### **Independent Consulting / Projects (1997-2003)**

*Computer Sciences Corporation / NASA, Huntsville, AL (2003)*

- Designed, coded and tested Access database for tracking computer hardware and software licensing

*Huntsville Awning & Storm Window Company, Inc., Huntsville, AL (2002-2003)*

- Developed web presence for company

*High Point University, High Point, NC (2000)*

- Designed, coded and tested Access database for tracking and prioritizing incoming and existing ERP activity; System was largely responsible for on-time completion of ERP implementation

# Stacy K. Lukins

*Wake Forest University Graduate School of Arts and Sciences, Winston-Salem, NC (1998)*

- Co-designed, -developed, -tested and -maintained Access database for tracking application status of prospective students in Graduate School of Arts and Sciences

*Peoples Bank of North Alabama, Cullman, AL (1997)*

- Developed real-estate evaluation tool for potential loans
- Automated and standardized paperwork

**Software Engineer (1996)**

***SPARTA, Inc.***

*Huntsville, Alabama*

- Developed web site for U.S. Government analysis project with database-to-web interface

**Engineering Assistant (1993-96)**

*Research Institute, University of Alabama in Huntsville contracting with Software Engineering Directorate, US Army MICOM, Redstone Arsenal*

- Began intranet web site development for customer
- Designed and implemented databases using MS Access for contract expense tracking (\$1/4 to 1/2 million contracts) and cataloging articles, patents, notes, and memos related to ongoing projects
- Produced detailed electronic drawings of network hubs and room layouts
- Developed software tools and documentation with MS Word to automate contract paperwork