

# JARRELL WAGGONER

## BIOGRAPHICAL DATA

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BIRTH: LYNCHBURG, VA | 24 SEPTEMBER 1984  
ADDRESS: DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING,  
UNIVERSITY OF SOUTH CAROLINA, COLUMBIA, SC 29208  
PHONE: 847-261-4747  
EMAIL: [WAGGONEJ@EMAIL.SC.EDU](mailto:WAGGONEJ@EMAIL.SC.EDU)  
WEBSITE: [WWW.MALLOC47.COM](http://WWW.MALLOC47.COM)  
CITIZENSHIP: UNITED STATES CITIZEN

## RESEARCH INTERESTS

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COMPUTER VISION, SEGMENTATION, CONTOUR COMPLETION, PERCEPTUAL GROUPING, DOCUMENT IMAGE ANALYSIS, EVENT RECOGNITION, IMAGE PROCESSING, SIGNAL PROCESSING, TOMOGRAPHIC IMAGE ANALYSIS.

## EDUCATION

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PRESENT PH.D. CANDIDATE IN COMPUTER SCIENCE, **University of South Carolina**  
ADVISOR: DR. SONG WANG

MAY 2009 MASTER OF ENGINEERING IN COMPUTER SCIENCE, **University of South Carolina**  
GPA: 3.8/4.0 | *magna cum laude*

MAY 2006 BACHELOR OF SCIENCE IN COMPUTER SCIENCE, **Bryan College**  
*summa cum laude*

MAY 2004 ASSOCIATE OF SCIENCE IN COMPUTER SCIENCE  
**University of South Carolina at Lancaster**  
GPA: 4.0/4.0 | *summa cum laude*

## TEACHING EXPERIENCE

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2008–2009 GK-12 FELLOW AT CRAYTON MIDDLE SCHOOL  
*Teaching 8<sup>th</sup> Grade Science*  
SERVED IN CRAYTON MIDDLE SCHOOL, COORDINATING WITH THE CLASSROOM INSTRUCTOR TO ENHANCE THE SCIENCE CURRICULUM AND ACTIVITIES IN AN 8<sup>TH</sup> GRADE SCIENCE CLASSROOM. SUBSEQUENTLY COORDINATED AND TAUGHT AT THE GK-12 INSTITUTE FOR TEACHERS, PRESENTING THE ACTIVITIES DEVELOPED AND DELIVERED IN THE CLASSROOM.

2007–2008 GRADUATE TEACHING ASSISTANT AT USC  
*Teaching Software Development and Web Scripting*  
SUPERVISED CSCE 145 LABS, COVERING SOFTWARE DEVELOPMENT WITH JAVA, AND TAUGHT CSCE 102, COVERING JAVASCRIPT, HTML, AND CSS.

SPRING 2007 INSTRUCTOR FOR CSCE 204 AT USCL  
*Teaching Introductory Programming*  
HIRED AS SPECIAL FACULTY. TAUGHT INTRODUCTORY VISUAL BASIC FOR MAJORS AND NON-MAJORS. SELECTED TEXTBOOKS, DEVELOPED ALL COURSE MATERIAL, GRADED ALL ASSIGNMENTS. WORKED WITH DR. NONI M. BOHONAK

FALL 2006 CAMP INSTRUCTOR FOR USCL ARTS AND SCIENCES ADVENTURE CAMP

### *Teaching 5<sup>th</sup>-8<sup>th</sup> Grade Students*

WORKED IN COLLABORATION WITH DR. DWAYNE BROWN. ONE OF TWO INSTRUCTORS TEACHING MATH AND COMPUTER SCIENCE TO GRADE SCHOOL STUDENTS.

2003–2007

PROFESSIONAL TUTOR AT USCL ACADEMIC SUCCESS CENTER

### *Tutoring High School and College Students*

STUDENT AND GRADUATE TUTOR FOR COLLEGE-LEVEL MATHEMATICS, COMPUTER SCIENCE, PHYSICS, AND ENGLISH CLASSES.

## RESEARCH EXPERIENCE

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2010–PRESENT

RESEARCH ASSISTANT FUNDED BY DARPA

### *Video Event Recognition*

EXPLORED SEGMENTATION METHODS FOR VIDEO EVENT RECOGNITION WHILE WORKING AT THE COMPUTER VISION LAB AT USC. MANAGED LAB COMPUTER NETWORK AND ORGANIZE WEEKLY LAB MEETINGS. ATTENDED P.I. MEETINGS IN SAN DIEGO (2010) AND COLORADO (2011). VISITED PURDUE UNIVERSITY WORKING WITH DR. JEFFREY MARK SISKIND (DEC 2010–JAN 2011).

2009–2010

NSF FELLOW AT THE CENTER FOR DIGITAL HUMANITIES

### *Digital Collation*

CREATED A DIGITAL COLLATION APPLICATION TO HANDLE AUTOMATIC DIFFERENCING OF SUB-TEXTUAL INCONSISTENCIES AMONG MULTIPLE COPIES OF *The Faerie Queene* BY EDMUND SPENSER.

## PUBLICATIONS

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- [C1] A. TEMLYAKOV, B.C. MUNSELL, J.W. WAGGONER, AND S. WANG. TWO PERCEPTUALLY MOTIVATED STRATEGIES FOR SHAPE CLASSIFICATION. IN *IEEE Conference on Computer Vision and Pattern Recognition*, PAGES 2289–2296, 2010.
- [C2] Z. ZHANG, Y. CAO, D. SALVI, K. OLIVER, J. W. WAGGONER, AND S. WANG. FREE-SHAPE SUBWINDOW SEARCH FOR OBJECT LOCALIZATION. IN *IEEE Conference on Computer Vision and Pattern Recognition*, PAGES 1086–1093, 2010.

## PRESENTATIONS

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- [P1] *Image Registration for Digital Collation*. GRADUATE STUDENT DAY COMPETITION, HONORABLE MENTION. APRIL 2, 2010.
- [P2] *Aspect-Oriented Programming*. IN CSCE 531. GUEST LECTURE FOR DR. MARCO VALTORTA. MARCH 19, 2008.
- [P3] *Math 241*. VECTOR CALCULUS. GUEST LECTURE FOR DR. DWAYNE BROWN. APRIL 23–26, 2007.
- [P4] *Math 242*. DIFFERENTIAL EQUATIONS. GUEST LECTURE FOR DR. DWAYNE BROWN. APRIL 23–26, 2007.

## TRAVEL

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- [T1] *Tomography and its Applications to Materials Science and Non-Destructive Evaluation*. ORGANIZED BY M. DE GRAEF, L. DRUMMY, J. SIMMONS, M. COMER, C. BOUMAN, AND J. KNOPP. AT TECH^EDGE, DAYTON, OHIO. DECEMBER 13–15, 2010.
- [T2] VISITING SCHOLAR. IN COLLABORATION WITH J. M. SISKIND. AT PURDUE UNIVERSITY. DECEMBER 6–22, 2010.
- [T3] *Mind's Eye Kickoff Meeting*. DARPA PROJECT P.I. MEETING. SEPTEMBER 23–24, 2010.

## HONORS/AWARDS

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2010	GRADUATE STUDENT DAY PRESENTATION, HONORABLE MENTION	USC
2006	SENIOR COMPUTER SCIENCE AWARD	Bryan College
2004	CLARA P. HAMMOND AWARD	USCL
	SCIENCE AND MATHEMATICS AWARD	
	HIGHEST ACADEMIC AVERAGE AWARD	

## TEACHING

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SUMMER II 2008	» CSCE 102	HTML/CSS/JAVASRIPT	USC
SPRING 2008	» CSCE 145 LAB	JAVA	
FALL 2007	» CSCE 145 LAB	JAVA	
SPRING 2007	» CSCE 204	VISUAL BASIC	USCL
SPRING 2007	» MATH 241 & MATH 242 (GUEST LECTURE)	MAPLE	

## SKILLS & LANGUAGES

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» ASSEMBLY	• •	» JAVA	• • • • •	» PYTHON	• •
» BASH	• • • •	» JAVACRIPT	• • •	» SCHEME	• •
» BLENDER	• •	» $\text{\LaTeX}$	• • •	» SQL	• • •
» C/C++	• • • •	» LISP	•	» SYS. ADMIN.	• • • •
» ENGLISH	• • • • •	» MAPLE	• • •	» VISUAL BASIC	• • • • •
» GIT/SVN/CVS	• • • •	» MATLAB	• • • • •	» WORDPRESS	• • • •
» GNU/LINUX	• • • •	» OPENCV	• • • •		
» HTML/CSS	• • • • •	» PHP	• • • •		

## INTERESTS AND ACTIVITIES

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PROGRAMMING, TEACHING, MATHEMATICS  
OPEN-SOURCE SOFTWARE, SYSTEM ADMINISTRATION, LINUX  
TYPOGRAPHY, MUSIC COMPOSITION