Enrique G. Ortiz

(Ph.D. Candidate – May 2014)

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INTERESTS

Computer Vision, Face Recognition, Action Recognition, Large-Scale Data Mining, Machine Learning

EDUCATION

UNIVERSITY OF CENTRAL FLORIDA Orlando, FL 2007-May 2014 (expected)
M.Sc. (Software Engineering Track) and Ph.D. in Computer Engineering
GPA: 3.87 / 4.00
Dissertation: *Taming Wild Faces: Large-Scale, Real-World Face Recognition in Still and Video Imagery*
Advisor: Dr. Mubarak Shah, UCF Trustee Chair Professor

UNIVERSITY OF CENTRAL FLORIDA Orlando, FL 2003-2007
B.Sc. in Computer Engineering with Honors
GPA: 3.85 / 4.00
Thesis: *A Scalable and Efficient Outlier Detection Strategy for Categorical Data*
Advisor: Dr. Michael Georgiopoulos, Professor

EXPERIENCE

UCF CENTER FOR RESEARCH IN COMPTUER VISION Orlando, FL May 2007–Present
Research Assistant

Video Face Recognition May 2012–Present
- Developed video face recognition algorithm, MSSRC, with 5x speedup over standard SRC.

Web-Scale Face Recognition August 2007–Present
- Developed real-time algorithm, LASRC, for still-image face identification with 100X speedup over standard SRC.

Learning Actions from Few Examples January 2009–Present
- Extended semi-supervised learning technique to multi-class action recognition with few training examples.

Learning Actions from Aerial Imagery – VIRAT Phase I and II January 2010–December 2011
- Aided in the implementation and analysis of algorithms for action recognition in aerial videos.

Persistent Tracking in Aerial and Ground Cameras May 2007–December 2008
- Developed algorithm for persistent tracking of humans across unmanned air vehicle (UAV) and ground cameras.

MACHINE LEARNING LAB AT UCF Orlando, FL January 2006–May 2007
Research Assistant
- Developed efficient, scalable algorithm, Attribute Value Frequency, for outlier detection in categorical data.

AUTOMATION LAB AT UC-BERKELEY Berkeley, CA May 2006–August 2006
Research Assistant
- Developed several use-case scenarios to evaluate failure tolerance in an intruder detection system.

ROBOTICS LAB AT UCF Orlando, FL August 2005–August 2006
Robotics Programmer
- Implemented vision algorithms and visual interface, including segmentation technique for SICK LIDAR points.

PUBLICATIONS

E.G. Ortiz, A. Wright, and M. Shah. *"Video Face Recognition"*. US Patent 61/857,957 (Patent Pending).

E.G. Ortiz and B.C. Becker. *"Face Recognition for Web-Scale Datasets"*. ELSEVIER Computer Vision and Image Understanding, 2013.

E.G. Ortiz, A. Wright, and M. Shah. *"Face Recognition in Movie Trailers via Mean Sequence Sparse Representation-based Classification"*. IEEE Conf. on Computer Vision and Pattern Recognition (CVPR), 2013.

B.C. Becker and **E.G. Ortiz**. *"Evaluating Open-Universe Face Identification on the Web"*. IEEE CVPR Workshop on Analysis and Modeling of Faces and Gestures, 2013.

B.C. Becker and **E. G. Ortiz**. *"Evaluation of Face Recognition Techniques for Application to Facebook"*. IEEE International Conference on Automatic Face and Gesture Recognition, 2008. **(Oral – 7% Acceptance)**

A. Koufakou, **E. G. Ortiz**, M. Georgiopoulos, G. C. Anagnostopoulos, K. M. Reynolds. *"A Scalable and Efficient Outlier Detection Strategy for Categorical Data"*. IEEE International Conference on Tools with Artificial Intelligence (ICTAI), 2007.

Research papers and detailed descriptions available at www.EnriqueGOrtiz.com.

INDUSTRY COLLABORATIONS

JOINT IMPROVISED EXPLOSIVE DEVICE DEFEAT ORGANIZATION (JIEDDO) 2012–2013
- Fulfilled position of project lead and interfacing with engineers to provide computer vision knowledge transfer.

NIGHT VISION AND ELECTRONIC SENSORS DIRECTORATE (NVESD) 2011
- Provided face recognition knowledge transfer.

LOCKHEED MARTIN AND KITWARE 2007, 2010-2011
- Performed task of project lead and software developer for aerial action recognition system.

SKILLS

Programming Languages: C/C++, Python, and Matlab
Environments: Windows, Linux, Mac, and Visual Studio
Libraries: OpenCV
Languages: English and Spanish

Honors

NSF Graduate Research Fellow	2007-2010
McKnight Doctoral Fellow	2007-2013
2nd Place in Engineering at UCF's Undergraduate Research Showcase	2007
Ronald E. McNair Scholar	2005-2007
College of Engineering Dean's List	2003-2007
UCF Scholarship for Academic Excellence	2003-2007

MENTORING

Alan Wright REU–UCF 2012
- Topic: Video Face Recognition in Movie Trailers.

Taylor Rassmann REU–UCF 2011

- Topic: Human Action Recognition Using Chaotic Invariant Features and Hierarchical SVMs.

ORGANIZATIONS

IEEE Student Member	2011–Present
Tau Beta Pi Chapter Treasurer	2006–2007
Tau Beta Pi Member, National Engineering Honors Society	2005–Present
Honors College at UCF	2003–2007

COMMUNITY

Volunteered as scorer for middle school Mathematics State McKnight Brain Bowl competition.	2010-2013
Volunteered as timekeeper for high school History Regional McKnight Brain Bowl competition.	2011-2013
Volunteered research presentation to high school students to motivate pursuit of higher education.	2010, '11, '13
Volunteered presentation to high school teachers to illustrate applications of mathematics in CS.	2009, 2010
Volunteered presentation to undergraduate class to incite interest in the pursuit of research.	2010
Volunteered at IEEE Conference on Computer Vision and Pattern Recognition (CVPR).	2009
Volunteered at Science, Engineering, Communication, Mathematics Enhancement (SECME) competition.	2004

REFERENCES

Dr. Mubarak Shah — University of Central Florida — shah@crcv.ucf.edu
UCF Trustee Chair Professor of Computer Science — (407) 823–6495

Dr. Rahul Sukthankar — Google Research, CMU — rahulsukthankar@gmail.com
Researcher and Adjunct Professor of Computer Science

Dr. Xin Li — University of Central Florida — xli@math.ucf.edu
Professor of Mathematics — (407) 823-5984

Dr. Niels da Vitoria Lobo — University of Central Florida — niels@eecs.ucf.edu
Associate Professor of Computer Science — (407) 823-2873