

CURRICULUM VITAE

Carlos D. Castillo

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Contact

1103 A.V. Williams Bldg.
Department of Computer Science
University of Maryland
College Park, MD 20742

Office: (301) 405 - 1766
Mobile: (202) 660 - 3761
carlos@cs.umd.edu
<http://www.cs.umd.edu/~carlos/>

Research Interests

- **Computer Vision:** object detection and recognition, face recognition, stereo matching.
- **Machine learning:** large scale classification, support vector machines, Markov random fields with applications to computer vision.

Education

- **Ph.D. in Computer Science** (Aug 2005-). Department of Computer Science. University of Maryland, College Park, MD. Advanced to Candidacy: April 2009. Tentative Title of Doctoral Dissertation: *Unconstrained Face Recognition: Methods and Representations*.
- **M.S. in Computer Science** (Aug. 2005 - Dec. 2007). Department of Computer Science. University of Maryland, College Park. Title of scholarly paper (*in lieu* of Master's Thesis): *Using Stereo Matching for 2-D Face Recognition Across Pose*.
- **M.S. in Computer Science** (Sept. 2003 - Jul. 2005). Department of Computer Science. Universidad Simón Bolívar, Caracas, Venezuela. Topic of Master's Thesis: *Automatic Detection of the Human Body in Search and Rescue Operations*.
- **B.S. in Computer Science** (Sept. 1998 - Jul. 2003). Department of Computer Science. Universidad Simón Bolívar, Caracas, Venezuela. *Cum laude*. Topic of Senior Thesis: *A Library for Constraint Programming in C++*.

Awards

1. Fellowship from Aptis/Phil Horvitz (2006-2007).
2. Block Fellowship Grant from the UMD Graduate School (2005-2006).
3. Scholarship from PDVSA (Sept. 1998 - Feb. 2003).

Publications

Journal and Book Chapters

1. Carlos D. Castillo and David W. Jacobs, *Using Stereo Matching with General Epipolar Geometry for 2-D Face Recognition Across Pose*, IEEE TPAMI, December 2009.
2. Carlos D. Castillo and David W. Jacobs, *Face Variation*, in Encyclopedia of Biometrics edited by S. Li, Springer Verlag, 2008.

3. Carlos D. Castillo, Iliana Chollett and Eduardo Klein, *Enhanced duckweed detection using bootstrapped SVM classification on medium resolution RGB MODIS images*. International Journal of Remote Sensing, 2008.

Conference¹

1. Carlos D. Castillo and David W. Jacobs, *Foreshortening and Window Shape in Graphcut Stereo*, under review.
2. Carlos D. Castillo and David W. Jacobs, *Wide-Baseline Stereo for Face Recognition with Large Pose Variation*, IEEE International Conference on Computer Vision and Pattern Recognition (CVPR), 2011.
3. Carlos D. Castillo and David W. Jacobs, *Using Stereo Matching for 2-D Face Recognition Across Pose*, IEEE International Conference on Computer Vision and Pattern Recognition (CVPR), 2007.
4. Carlos D. Castillo and Carolina Chang, *An Approach to Vision-Based Person Detection in Robotic Applications*, 2nd Iberian Conference on Pattern Recognition and Image Analysis, 2005.
5. Ivette C. Martínez, Miguel A. Castro and Carlos D. Castillo, *Vertical Cultural Transmission: An Advise Based Evolutionary Model*, ALEA 2003.

Workshop

1. Carlos D. Castillo and Carolina Chang, *Vision-Based Victim Detection*, IEEE International Workshop on Safety, Security and Rescue Robotics, 2006.
2. Carlos D. Castillo and Carolina Chang, *A Method to Detect Victims in Search and Rescue Operations using Template Matching*, IEEE International Workshop on Safety, Security and Rescue Robotics, 2005.
3. Carlos D. Castillo, Miguel Lurgi and Ivette C. Martínez, *Chimps: An Evolutionary Reinforcement Learning Approach for Soccer Agents*, IEEE Conference on Systems, Man and Cybernetics, 2003.

Technical Reports

1. Thomas Berg, Neeraj Kumar, Alexander C. Berg, Peter N. Belhumeur, Carlos D. Castillo and David W. Jacobs, *Attributes and Stereo Matching Costs for Face Verification*, 2010.

Research Experience

- Center for Automation Research, University of Maryland (June 2006-): I've worked on face recognition across pose and illumination, stereo matching, epipolar geometry and machine learning. The general direction of my research is towards integrated methods (correspondences+learning) for face recognition in unconstrained settings.

¹In computer vision, the top conferences are ICCV, CVPR, and ECCV. These are all rigorously peer-reviewed, with acceptance rates around 20%, and under 5% for oral presentations.

- Artificial Intelligence Lab, Universidad Simón Bolívar (2002-2005): I worked on projects related to robotics and computer vision.
- Remote Sensing Lab, Universidad Simón Bolívar (2003-2005): I worked on analysis and visualization of satellite imagery. I applied machine learning techniques to characterize spatio-temporal dynamics over marine (sea surface temperature, and sea color) imagery.

Teaching Experience

- Instructor (Summer 2006): Department of Computer Science, University of Maryland, College Park. Course: Discrete Math (CMSC-250). I was instructor of the summer CMSC-250 course. My responsibilities included everything related to handling a summer course being taught to 25 undergraduates.
- Teaching Assistant, (Fall 2005, Spring 2006, Spring 2007 and Fall 2007): Department of Computer Science, University of Maryland, College Park. Courses: Discrete Math (CMSC-250) and Computer Graphics (CMSC-427).
- Teaching Assistant (2003-2005): Computer Science Department, Universidad Simón Bolívar. Courses taught: *Data Structures and Algorithms* and *Programming Languages*.

Software Experience

- **Operating Systems:** Linux, Mac OS X, Windows.
- **Programming Languages:** I know C, C++, Java, Python and MATLAB; I've also used and have knowledge of Scala, C#, Prolog, Haskell, and Objective Caml.
- **Other:** bash and shell scripting. TeX and LaTeX.

Professional Activities

- **Professional Associations:** IEEE Student member.
- **Professional Service:** I've been a reviewer for CVPR, ECCV, ICCV, PAMI and Signal Processing Letters.

Personal

Venezuelan-American, born in 1981 in Troy, NY. Married.

References

Available upon request.