

Pablo H. Hennings-Yeomans

Biomedical Engineering
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- EDUCATION
- ◇ **Carnegie Mellon University**, Pittsburgh, PA.
Ph.D. in Electrical and Computer Engineering, 2008.
Thesis title: *Simultaneous Super-Resolution and Recognition*
Committee: B.V.K. Vijaya Kumar, Simon Baker, Marios Savvides and Jelena Kovačević.
 - ◇ **Tecnológico de Monterrey (ITESM), Monterrey Campus**, México.
M.S. in Electrical Engineering, 2002.
Thesis title: *A Wavelet-based Front End for Robust Automatic Speech Recognition*.
B.S. in Electronics and Communications Engineering, *honoriſic mention*, 1998.
 - ◇ **Awards and Scholarships**
Consejo Nacional de Ciencia y Tecnología (CONACYT) Fellowship (Fall 2002 – Spring 2007)
Tecnológico de Monterrey (ITESM) Scholarship (Fall 1994 – Fall 1998)
General Electric Engineering Award (Fall 1998)
Best Final Project Award of B.S. Degree, Tecnológico de Monterrey (1998).
- RESEARCH INTERESTS
- Pattern recognition, computer vision, machine learning, optimization, image and signal processing. Applications of image recognition and super-resolution, image modeling and retrieval, biometrics, biomedical imaging and adaptive multiresolution representations.
- RESEARCH PROJECTS
- ◇ **Low-resolution face recognition using super-resolution methods.** Design of face recognition algorithms using a simultaneous fit of super-resolution and feature extraction models for matching high-resolution training data to low-resolution probe faces. In collaboration with Simon Baker from Microsoft Research.
 - ◇ **Biometric pattern classification using adaptive wavelet transforms.** Design of wavelet packet tree algorithms to find multiresolution subspaces with high recognition performance for classification of biometric patterns, such as fingerprint, iris, palmprint and face. In collaboration with Jelena Kovačević.
 - ◇ **Palmprint recognition for online person identification and verification.** Apply advanced correlation filter classifiers in palmprint regions that are most discriminative using class-specific segmentation.
- SELECTED PUBLICATIONS
- Simultaneous Super-Resolution and Feature Extraction for Recognition of Low-Resolution Faces. Pablo H. Hennings-Yeomans, Simon Baker and B.V.K. Vijaya Kumar. *IEEE Computer Vision and Pattern Recognition (CVPR)* 2008.
- Palmprint Classification Using Multiple Advanced Correlation Filters and Palm-Specific Segmentation. Pablo H. Hennings-Yeomans, B.V.K. Vijaya Kumar and Marios Savvides. *Transactions on Information Forensics and Security, Special Issue on Human Detection and Recognition*. September 2007.
- Wavelet Packet Correlation Methods in Biometrics. Pablo Hennings, Jason Thornton, Jelena Kovačević and B.V.K. Vijaya Kumar. *Journal of Applied Optics, Special Issue on Biometric Recognition Systems*. February 2005.
- SKILLS
- ◇ Matlab, C, Perl, HTML/CSS, L^AT_EX, shell scripting, sed/awk and other unix tools.
 - ◇ Unix/Linux, MS-Windows, Mac OS X.
 - ◇ Fluent spoken/written English, native Spanish.
- RECENT WORK EXPERIENCE
- Post-doctoral Researcher**, Biomedical Engineering, Carnegie Mellon University (Fall 2008).
Teaching Assistant, Carnegie Mellon University. Courses: Pattern Recognition Theory (Spring 2007), Advanced Bioimaging (Fall 2005), Bioimaging (Spring 2005), Signals and Systems (Spring 2004).