# Eshed Ohn-Bar


CONTACT INFORMATION

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CITIZENSHIP

United States of America and Israel

INTRESTS

Computer Vision, Intelligent Vehicles, Spatio-temporal Feature Extraction from RGBD.

EDUCATION

**University of California, San Diego**, La Jolla, CA USA
*Department of Electrical and Computer Engineering*
Ph.D. Electrical Engineering emph. in Signal and Image Processing — **Sep 2011-present**
M.S. Electrical Engineering (GPA 3.83) — **June 2013**

**University of California, Los Angeles**, Los Angeles, CA USA
M.Ed. Teaching, Urban Schools, and Social Justice — **June 2011**
M.S. Mathematics (*Summa Cum Laude*, GPA 3.988) — **June 2010**

RESEARCH EXPERIENCE

**University of California, San Diego**, La Jolla, CA USA
*Graduate Student Researcher* at the Computer Vision and Robotics Research Lab and Laboratory for Intelligent and Safe Autmobiles — **Dec 2011-present**

- Performed novel research and published papers in computer vision, machine learning, probabilistic modeling, and intelligent vehicles.
- Developed a state-of-the-art hand-activity recognition system in real-time using RGBD for driver assistance.
- Developed a C++ on-road vehicle-detection software from multiple cues (motion, static-appearance, stereo) for on chip realization.
- Wrote research proposals, assisted in building and maintaining vehicular sensor suites.; wrote software in C++ and MATLAB; worked in close collaboration with industry sponsors NextChip and Toyota.

**University of California, Los Angeles**, Los Angeles, CA USA
*Researcher* at the Department of Applied Mathematics — **Jun-Aug 2010**

- Worked on developing a multivariate GARCH model to include correlation effects between stocks to improve volatility forecasting and option pricing.
- Implemented data analysis, clustering, parameter estimation, optimization, and Monte-Carlo methods in MATLAB.

TEACHING EXPERIENCE

**University of California, San Diego**, La Jolla, CA USA
*Teaching Assistant*
ECE 109 Probability Theory (two quarters)
ECE 285 Intelligent Systems - Computer Vision and Multimodal Perception.

**Roosevelt High School,** Los Angeles, CA USA — **Sep 2010-Jun 2010**
*Mathematics Instructor*

- Implemented a six-week program in order to develop higher-order and critical thinking skills in a population of low performing students from a low socio-economic background.

PUBLICATIONS

E. Ohn-Bar and M. M. Trivedi, "Hand Gesture Recognition in Real-Time for Automotive Interfaces: A Multimodal Vision-based Approach and Evaluations," IEEE Transactions on Intelligent Transportation Systems (submitted).

E. Ohn-Bar and M. M. Trivedi, "Joint Angles Similarities and $HOG^2$ for Action Recognition," IEEE Conference on Computer Vision and Pattern Recognition, Workshop on Human Activity Understanding from 3D Data, 2013.

E. Ohn-Bar and M. M. Trivedi, "The Power is in Your Hands: 3D Analysis of Hand Gestures in Naturalistic Video," IEEE Conference on Computer Vision and Pattern Recognition, Workshop on Analysis and Modeling of Faces and Gestures, 2013. **BEST PAPER AWARD**

E. Ohn-Bar and M. M. Trivedi, "In-Vehicle Hand Gesture Recognition Using Integration of Regions," Intelligent Vehicles Symposium, 2013.

E. Ohn-Bar, S. Sivaraman, and M. M. Trivedi, "Partially Occluded Vehicle Recognition and Tracking in 3D," Intelligent Vehicles Symposium, 2013.

E. Ohn-Bar, C. Tran, and M. M. Trivedi, "Hand Gesture-based Visual User Interface for Infotainment," 4th ACM SIGCHI International Conference on Automotive User Interfaces and Interactive Vehicular Applications, 2012.

## AWARDS

2009 Wilson Teaching Scholar
2009 Mary and Sarah Nemtzon Scholarship
2009 UCLA University Grant
2008 UCLA Scholarship Recognition Award

## SKILLS

- Programming: C++, MATLAB, C#, HTML.
- APIs: OpenCV, Boost.