

# Eshed Ohn-Bar

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CONTACT INFORMATION	9500 Gilman Drive, MC 0436 Dept. of Electrical and Computer Engineering University of California, San Diego La Jolla, CA 92093-0434 USA	(858) 822-0002  eohnbar@ucsd.edu <a href="http://cvrr.ucsd.edu/eshed">http://cvrr.ucsd.edu/eshed</a>
CITIZENSHIP	United States of America and Israel	
INTRESTS	Computer Vision, Intelligent Vehicles, Spatio-temporal Feature Extraction from RGBD.	
EDUCATION	<b>University of California, San Diego</b> , La Jolla, CA USA <i>Department of Electrical and Computer Engineering</i> Ph.D. Electrical Engineering emph. in Signal and Image Processing M.S. Electrical Engineering (GPA 3.83)  <b>University of California, Los Angeles</b> , Los Angeles, CA USA M.Ed. Teaching, Urban Schools, and Social Justice B.S. Mathematics ( <i>Summa Cum Laude</i> , GPA 3.988)	Sep 2011-present June 2013  June 2011 June 2010
RESEARCH EXPERIENCE	<b>University of California, San Diego</b> , La Jolla, CA USA <i>Graduate Student Researcher</i> at the Computer Vision and Robotics Research Lab and Laboratory for Intelligent and Safe Automobiles <ul style="list-style-type: none"><li>Performed novel research and published papers in computer vision, machine learning, probabilistic modeling, and intelligent vehicles.</li><li>Developed a state-of-the-art hand-activity recognition system in real-time using RGBD for driver assistance.</li><li>Developed a C++ on-road vehicle-detection software from multiple cues (motion, static-appearance, stereo) for on chip realization.</li><li>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.</li></ul> <b>University of California, Los Angeles</b> , Los Angeles, CA USA <i>Researcher</i> at the Department of Applied Mathematics <ul style="list-style-type: none"><li>Worked on developing a multivariate GARCH model to include correlation effects between stocks to improve volatility forecasting and option pricing.</li><li>Implemented data analysis, clustering, parameter estimation, optimization, and Monte-Carlo methods in MATLAB.</li></ul>	Dec 2011-present  Jun-Aug 2010
TEACHING EXPERIENCE	<b>University of California, San Diego</b> , La Jolla, CA USA <i>Teaching Assistant</i> ECE 109 Probability Theory (two quarters) ECE 285 Intelligent Systems - Computer Vision and Multimodal Perception.  <b>Roosevelt High School</b> , Los Angeles, CA USA <i>Mathematics Instructor</i> <ul style="list-style-type: none"><li>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.</li></ul>	Sep 2010-Jun 2010
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 <sup>2</sup> 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. <b>BEST PAPER AWARD</b>	

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," 4<sup>th</sup> ACM SIGCHI International Conference on Automotive User Interfaces and Interactive Vehicular Applications, 2012.

#### AWARDS

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

#### SKILLS

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

#### RELEVANT COURSEWORK

Numerical Analysis (A+), Random Processes (A+), Multimodal and Vision Systems (A+), Vision and Learning (A), Statistical Learning (A-)