Eshed Ohn-Bar

CONTACT INFORMATION

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CITIZENSHIP

United States of America and Israel

INTRESTS

Computer Vision, Machine Learning, Intelligent Vehicles, Human Activity Recognition.

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 3.86) — **June 2013**

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

RESEARCH EXPERIENCE

University of California, San Diego, La Jolla, CA USA
Graduate Student Researcher — **Dec 2011-present**

- Researched novel computer vision techniques with applications to intelligent vehicles.
- Developed a state-of-the-art **hand activity recognition** system in real-time using RGBD for driver assistance.
- Collaborated on the design and implementation of on-road **vehicle detection** software for on-chip realization (C++).
- Submission **ranked first** on a challenging world-class competition for **object detection** (the KITTI dataset).
- Wrote research proposals, assisted in building and maintaining vehicular sensor suites, and 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**

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

PUBLICATIONS

E. Ohn-Bar, A. Tawari, S. Martin, and M. M. Trivedi, "On Surveilliance for Safety Critical Events: In-Vehicle Video Networks for Predictive Driver Assistance Systems," Computer Vision and Image Understanding (**CVIU**) (in review).

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 (**T-ITS**) (submitted).

E. Ohn-Bar, S. Martin, and M. M. Trivedi, "Driver Hand Activity Analysis in Naturalistic Driving Settings: Issues, Algorithms, and Experimental Studies," Journal of Electronic Imaging (**JEI**), 2013.

A. Ramirez, **E. Ohn-Bar**, and M. M. Trivedi, "Panoramic Stitching for Driver Assistance and Applications to Motion Saliency-based Risk Analysis," IEEE Intelligent Transportation Systems Conference (**ITSC**), 2013.

E. Ohn-Bar and M. M. Trivedi, "Joint Angles Similarities and HOG^2 for Action Recognition," IEEE Conference on Computer Vision and Pattern Recognition (**CVPR**), 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 (**CVPR**), 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," IEEE Intelligent Vehicles Symposium (**IV**), 2013.

E. Ohn-Bar, S. Sivaraman, and M. M. Trivedi, "Partially Occluded Vehicle Recognition and Tracking in 3D," IEEE Intelligent Vehicles Symposium (**IV**), 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 (**AUI**), 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.

RELEVANT COURSEWORK

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