Biographical Sketch of Avideh Zakhor

507 Cory Hall:
University of California
Berkeley, CA, 94720

Tel: (510) 384-3272
Email: avz@berkeley.edu
http://www-video.eecs.berkeley.edu/~avz

Education

Oct. 1987	Massachusetts Institute of Technology Ph.D. degree in Electrical Engineering and Computer Science. Thesis: Reconstruction of multidimensional signals from multiple level threshold crossings.
Sept. 1985	Massachusetts Institute of Technology S.M. degree in Electrical Engineering and Computer Science. Thesis title: Error properties of Hartley transform algorithms
June 1983	California Institute of Technology B.Sc. degree in Electrical Engineering. Graduate first in the engineering class of 1983 at Caltech.

Latest Academic Appointment

July 2010	Professor, University of California, Berkeley, CA, USA Dept. of Electrical Engineering and Computer Sciences. Qualcomm Chair in Electrical Engineering

Principal Fields of Interest

3D computer vision; deep learning; signal and image processing, autonomous systems.

Selected Honors and Awards

- 2022 winner of phase 2 Department of Energy E-Robot competition.
- 2021 winner of phase 1 Department of Energy E-Robot competition.
- 2018 Electronic Imaging Scientist of the year.
- 2018 Scientist of the Year, International Achievement Research Center
- 2004 Okawa Foundation Prize.
- 2002 Fellow of IEEE
- 1992 Office of Naval Research Young Investigator Award.
- 1990 Presidential Young Investigator (PYI) Award.
- 1990-1991 IBM Junior Faculty Development Award.
- 1990 - 1995 Analog Devices Junior Faculty Development Award.
- 1984 - 1988 Hertz Fellowship.
- 1983 Henry Ford Engineering Award.
- 1982 - 1983 General Motors Scholarship.

Selected Invited Keynotes and Lectures

- 2021 Invited Speaker at the Berkeley Institute of Data Science (BIDS) ImageXD Conference.
- 2021 Keynote speech at the ICCV second Workshop on Analysis of Aerial Motion Imagery
- 2019 Keynote Speech at ISPRS GeoSpatial Week, Twente, Netherlands
- 2019 Invited Speaker and Panelist at the IEEE Vision Innovation Challenges Summit, San Diego, CA
- 2018 Plenary talk at the 30th Annual Electronic Imaging Symposium, Burlingame, CA
- 2018 Invited Keynote at Cruise Autonomous Driving, San Francisco, CA
- 2018 Keynote, 22nd Annual Signal and Image Sciences Workshop at Lawrence Livermore Lab, Livermore, CA.
- 2016 Keynote talk at the IS&T International Symposium on Electronic Imaging , Computational Imaging XIV, San Francisco, CA
- 2016 Invited Talk at the IEEE Signal Processing Santa Clara Valley Chapter, Santa Clara, CA,
- 2012 Plenary talk at IEEE Visual Communication and Image Processing Conf. (VCIP), San Diego, CA.
- 2012 Invited talk at Optical Society of America (OSA) Topical Meeting on Imaging Systems and Applications (IS), Monterey, CA, June 2012
- 2012 SPAR International Conference on End to End 3D: Capture, Process, Deliver, March 2012
- 2011 Keynote on IEEE International Conference on Multimedia Exposition (ICME) Barcelona, Spain.
- IEEE Signal Processing Distinguished Lecture, Ozyegin University, Istanbul, Turkey, May 2011
- 2011 Plenary talk, BEARS Conference, U.C. Berkeley
- 2010 Plenary talk on IS&T/SPIE Electronic Imaging Conference, San Jose, CA.
- 2007 Plenary talk CITRIS, UC Berkeley

Best Paper Award Publications

1. 2016 SPIE Electronic Imaging Best paper award for the paper: R. Garcia and A. Zakhor, "Markerless Motion Capture with Multi-view Structured Light"

2. 2009 IEEE Transactions on Multimedia Best paper award for the paper: M. Chen and A. Zakhor, "Multiple TFRC Connections Based Rate Control for Wireless Net- works," IEEE Trans. on Multimedia, Vol. 8, No. 5, Oct. 2006, pp. 1045-1062.

3. 2008 IEEE Transactions on Semiconductor Manufacturing Best paper award for the paper: A. Gu and A. Zakhor, "Optical Proximity Correction with Linear Regression", IEEE Trans. on Semiconductor Manufacturing, Vol. 21, No. 2, pp 263 - 271, May 2008.

4. 2007 IEEE Workshop on Multimodal Sentient Computing: Sensors, Algorithms, and Systems, in conjunction with CVPR 2007; best paper award for the paper: A. Zakhor and C. Frueh, "Automatic 3D Modeling of Cities with Multimodal Air and Ground Sensors" in Multimodal Surveillance, Sensors, Algorithms and Systems, Z. Zhu and T. S. Huang, Editors, Arctech House, 2007, Chapter 15, pp. 339-362.

5. 2002 Packet Video Workshop best paper award for the paper: T. Nguyen and A. Zakhor, "Distributed Video Streaming with Forward Error Correction" in Packet Video 2002, Pittsburgh, April 2002.

6. 1999 International Conference on Image Processing best paper award for the paper: R. Neff and A. Zakhor, "Adaptive Modulus Quantizer Design for Matching Pursuit Video Coding," in Proceedings of the Int. Conf. on Image Processing , Kobe, Japan, October 1999, vol. 2, pp. 81-85.

7. 1999 IEEE Circuits and Systems Society Video Technology Transactions Best Paper Award for the paper: R. Neff and A. Zakhor, "Very Low Bit-Rate Video Coding based on Matching Pursuits," in IEEE Trans. on Circuits and Systems for Video Technology, February 1997, vol. 7, no. 1, pp. 158-171.

8. 1997 IEEE Circuits and Systems Society Video Technology Transactions Best Paper Award for the paper: D. Taubman and A. Zakhor, "A Common Framework for Rate and Distortion Based Scaling of Highly Scalable Compressed Video," IEEE Trans. on CSVT, August 1996, vol. 6, no. 4, pp. 329-354

9. 1997 IEEE Signal Processing Society Transactions Young Paper Award for the paper: S. Hein and A. Zakhor, "Reconstruction of Oversampled Bandlimited Signals from Sigma Delta Encoded Binary Sequences," IEEE Trans. on Signal Processing, March 1994, vol. 42, no. 4, pp. 799-811.

Significant Professional Activities

- Co-Founder of Signamask Inc., supplier of optical proximity correction software to CAD, lithography and mask industries: 1996–1998. Acquired by Mentor Graphics in 1998.
- Elected Member of Signal Processing Board of Governors, 1999–2002.
- Fellow of IEEE, 2002.
- Co-Founder of UrbanScan Inc., supplier of automated 3D mapping systems; 2005 to 2007. Acquired by Google in 2007.
- Consultant to Lockheed, 2007-2008
- Consultant to Stanford Research Institute 2008-2009
- Consultant to Rockwell International 2010
- Consultant to Navteq, 2010 – 2011
- Consultant to Intel 2008 – 2010
- Founder, Indoor Reality, 2015 – 2019; Supplier of 3D indoor modeling and positioning systems; acquired by construction supplies company Hilti AG in 2019.
- Consultant to Hilti AG 4/2019 to 4/2021