

Biographical Sketch of Avideh Zakhor

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Latest Academic Appointment

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

Education

Oct. 1987 Massachusetts Institute of Technology
Ph.D. degree in Electrical Engineering and Computer Science.
Thesis title: 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.

Principal Fields of Interest

Digital signal, image, and video processing and Processing and applications to 3D reality capture, scene modeling, virtual and augmented reality.

Selected Honors and Awards

- 2018 Electronic Imaging Scientist of the year.
- 2018 Plenary talk at SPIE Electronic Imaging Conference, Burlingame, CA
- 2012 Plenary talk on IEEE Visual Communication and Image Processing Conference (VCIP), San Diego, CA.
- 2011 Keynote on IEEE International Conference on Multimedia Exposition (ICME) Barcelona, Spain.
- 2010 Plenary talk on IS&T/SPIE Electronic Imaging Conference, San Jose, CA.
- 2004 Okawa Foundation Prize.
- 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.

Best Paper Awards and Publications

- R. Garcia and A. Zakhor, "Markerless Motion Capture with Multi-view Structured Light" SPIE Electronic Imaging, **best paper** award, San Francisco, CA, February 2016.
- 2009 IEEE Transactions on Multimedia Best paper award for the paper: M. Chen and A. Zakhor, "Multiple TFRC Connections Based Rate Control for Wireless Networks," IEEE Trans. on Multimedia, Vol. 8, No. 5, Oct. 2006, pp. 1045-1062.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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
- 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.

Professional Activities

- Fellow of IEEE, 2002.
- Elected Member of Signal Processing Board of Governors, 1999–2002.
- Co-Founder and CTO of Signamask Inc., supplier of optical proximity correction software to CAD, lithography and mask industries: 1996–1998. Acquired by Mentor Graphics in 1998.
- Co-Founder of Urban Scan Inc., supplier of automated 3D mapping systems; 2005 to 2007. Acquired by Google in 2007.
- Founder, Indoor Reality, 2015 – 2019; Supplier of 3D indoor modeling and positioning systems; Acquired by European construction supplies company 2019.