Zachary (Zak) Murez

Contact Information	804 Main Street Venice, Ca 90291	E-mail: zak@murez.com Website: zak.murez.com

---

Education

University of California, San Diego
Ph.D., Computer Science and Engineering, June 2018
M.S., Computer Science and Engineering, June 2015
Yale University
B.S., Computer Science, June 2011
B.S., Intensive Mathematics, June 2011

Experience

Magic Leap, INC.
Lead Software Engineer, Spring 2020-Present
Senior Software Engineer, Fall 2018-Spring 2020
Deep Learning Group, Manager: Andrew Rabinovich

HRL Laboratories, LLC.
Software Engineer Intern, Summer 2017
Information and Systems Sciences Lab, Manager: Kyungnam Kim

Magic Leap, INC.
Software Engineer Intern, Summer 2016
Deep Learning Group, Manager: Andrew Rabinovich

University of California, San Diego
Graduate Student Researcher, 2011-2018
Computer Vision Lab, Advisors: David Kriegman & Ravi Ramamoorthi
- Deep learning
- Photometric stereo with complex BRDFs
- Photometric stereo in a scattering medium
- Particle tracking for Keck microscope (underwater in situ microscope)
- Shape from fluorescence

The Scripps Research Institute
Research Programmer, 2012-2013
Automated Molecular Imaging Group
- Particle alignment for cryo-electron microscopy

Publications

Z. Murez, T. van As, J. Bartolozzi, A. Sinha, V. Badrinarayanan, A. Rabinovich "Atlas: End-to-End 3D Scene Reconstruction from Posed Images", Under review 2020.

Z. Murez, S. Kolouri, D Kriegman , R. Ramamoorthi, K. Kim "Image to Image Translation for Domain Adaptation", IEEE Conference on Computer Vision and Pattern Recognition (CVPR) 2018.

Z. Li, Z. Murez, D Kriegman, R. Ramamoorthi, M. Chandraker "Learning to See through

Turbulent Water", IEEE Winter Conf. on Applications of Computer Vision (WACV) 2018.

J. Tian, Z. Murez, T. Cui, Z Zhang, D Kriegman , R. Ramamoorthi "Depth and Image Restoration from Light Field In a Scattering Medium", *IEEE International Conference on Computer Vision (ICCV)* 2017.

Z. Murez, T. Treibitz, D. Kriegman, R. Ramamoorthi, "Photometric Stereo in a Scattering Medium," *IEEE Transactions on Pattern Analysis and Machine Intelligence 2016.*

Z. Murez, T. Treibitz, D. Kriegman, R. Ramamoorthi, "Photometric Stereo in a Scattering Medium," *IEEE International Conference on Computer Vision (ICCV)* 2015.

Veesler, David, et al. "Maximizing the potential of electron cryomicroscopy data collected using direct detectors." *Journal of structural biology* 184.2 (2013): 193-202.

T. Treibitz, Z. Murez, B. G. Mitchell, D. Kriegman, "Shape from Fluorescence," *European Conference for Computer Vision (ECCV)* 2012.

Invited Talks	"Photometric Stereo with Fluorescence and in Scattering Media", International Workshop on Aqua Vision 2016, Kyoto, Japan.

Other Experience	**Teaching Assistant:** Biometrics (UCSD CSE 190), Spring 2014 Selected Topics in Vision and Learning (UCSD CSE 252c), Spring 2017 Computer Vision I (UCSD CSE 252a), Fall 2017 Computer Vision II (UCSD CSE 252b), Winter 2018 Selected Topics in Vision and Learning (UCSD CSE 252c), Spring 2018

Selected Course Work: Computer Vision (CSE 252a,b), Computer Graphics (CSE 272,291), Artificial Intelligence/Machine Learning (CSE 250a,291), Convex Optimization (ECE 273)

Building Construction Worker, Main Street Equipment Co., 2006-2010
Production Assistant, "Plug-In America" Public Service Announcements, 2010
Videographer, Yale University Swim Team 2009 & 2010
Mushroom Vendor, Venice Farmers' Market 2008
Solar Electric System Installer for James Murez, Contractor, 2002-2003
Volunteer Tree Planter & Tractor Operator, TreePeople, Inc., 1992-1995
Website Developer
- California Department of Food and Agriculture, 2009
- Venice Properties Real Estate, 2007-2008
- Robin Murez, Artist, 2006
- Raymond Federman, Professor & Author, 2005
- Billy Al Bengston, Artist, 2004

Academic Honors & Awards	Yale University Barge & Runk Math Competition Finalist, 2009 Science Bowl Southern California Regional Finalist, 2006 & 2007 Comp TIA A+ computer certified (8th grade, youngest known) 2003

Athletic Achievements	USA Ultimate (Frisbee) College National Championships Qualifier, 2014
	Four Time NCAA D1 Letterman, 2007-2011
	Ivy League Swim Finalist, 2010
	Maccabiah Swim Finalist (Tel Aviv, Israel), 2009
	Five Venice High School Swim Records, 2004-2007
	USA Swimming Junior National Qualifier, 2005
	Pan-Am Maccabi Games: Four Gold Swim Medals (Santiago, Chile), 2003
	Tae-Kwon-Do Karate 2nd Degree Black Belt, 2002