David Lindell

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Education

Stanford University Sept. 2016 – Present
Ph.D. Electrical Engineering
Brigham Young University Sept. 2015 – Apr. 2016
M.S. Electrical Engineering
Brigham Young University Sept. 2009 – Apr. 2015
B.S. Electrical Engineering (4.00/4.00)
Summa Cum Laude

Research Experience

Ph.D. Student September 2016 – Present
Stanford University
Advisor: Prof. Gordon Wetzstein
Area: Computational Imaging
- Optimization, machine learning, optics, and time-of-flight sensors for computer vision and remote sensing

Research Assistant May 2014 – Apr 2016
Brigham Young University
Advisor: Prof. David Long
Area: Radar Image Processing, Geoscience, Remote Sensing
- Arctic sea ice classification and soil moisture estimation (`http://github.com/davelindell/soil_moisture`).

Undergraduate Research Assistant May 2013 – May 2014
Brigham Young University
Advisor: Prof. Aaron Hawkins
Area: Microfabrication, semiconductor devices, circuit design
- Fabrication of a solid-state single ion detection unit.

Publications

[1] **D. B. Lindell** and D. G. Long, "Multiyear Arctic sea ice classification using OSCAT and QuikSCAT," *IEEE Transactions on Geoscience and Remote Sensing*, vol. 54, no. 1, pp. 167–175, Jan. 2016, ISSN: 0196-2892. DOI: 10.1109/TGRS.2015.2452215.

[2] **D. B. Lindell** and D. G. Long, "Multiyear Arctic ice classification using ASCAT and SSMIS," *Remote Sensing*, vol. 8, no. 4, p. 294, 2016, ISSN: 2072-4292. DOI: 10.3390/rs8040294. [Online]. Available: http://www.mdpi.com/2072-4292/8/4/294.

[3] **D. B. Lindell** and D. G. Long, "High-resolution soil moisture retrieval with ASCAT," *IEEE Geoscience and Remote Sensing Letters*, vol. 13, no. 7, pp. 972–976, Jul. 2016, ISSN: 1545-598X. DOI: 10.1109/LGRS.2016.2557321.

[4] M. O'Toole, F. Heide, **D. B. Lindell**, K. Zang, S. Diamond, G. Wetzstein, "Reconstructing transient images from single-photon sensors," in *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2017.

Industry Experience

Software For Hire March 2016 – August 2016
Computer Vision Specialist
- Built a fast, multithreaded vision algorithm for a pharmaceutical tablet counter using open source software, including **Boost**, **OpenCV**, and **Point Cloud Library**.

Rincon Research Corporation June 2016 – July 2016
Electrical Engineering Intern
- Developed a cloud-based digital video recording system to stream and record live video. Integrated live broadcast television demodulation capability using **GNU Radio** and Rincon Research Corporation signal processing hardware.

Skills

Languages	Bash, C, C++, Java, Matlab, LaTeX, Python
Systems	Linux, Windows

Graduate Coursework

- Convex Optimization (EE-364A), S. Boyd Sp2017
- Convolutional Neural Networks for Visual Recognition (CS-231N), F. Li Sp2017
- Computational Imaging and Display (EE-367), G. Wetzstein W2017
- Information Theory (EE 376), D. Tse W2017
- The Fourier Transform and its Applications (EE-261), B. Osgood F2016
- Linear Dynamical Systems (EE-263), R.N. Mahalati F2016
- Detection and Estimation Theory (EE-672), M. Rice W2016
- Continuous Phase Modulation (EE-682R), M. Rice W2016
- Robotic Vision (EE-631), D.J. Lee W2016
- Math of Signals and Systems (EE-671), B. Jeffs F2015
- Stochastic Processes (EE-670), B. Mazzeo F2015
- Medical Imaging & Image Reconstruction (EE-576), N. Bangerter F2015
- Antennas and Propogation (EE-665), K. Warnick W2015
- Microwave Remote Sensing (EE-568), D. Long F2014

Honors & Awards

- Stanford Graduate Research Fellowship 2016 – 2019
- Tau Beta Pi Honor Society Inducted 2013
- BYU Office of Research & Creative Activities Grant Winner 2015
- BYU Heritage Scholarship 2012 – 2015
- Tau Beta Pi Scholarship 2014