SHAI AVIDAN

Curriculum Vitae

School of Electrical Engineering
Tel-Aviv University, ISRAEL
(+972) 3-6407206
avidan@eng.tau.ac.il
My Webpage

Education

1994–1999 **PhD (Direct Track), Computer Science (Summa cum Laude)**, *The Hebrew Univeristy*, Jerusalem, ISRAEL.

1989–1993 **Bachelor of Computer Science & Math (with Honors)**, *Bar-Ilan University*, Ramat-Gan, ISRAEL.

PhD Thesis

Title **From Static to Dynamic Structure from Motion**

Adviser **Prof. Amnon Shahsua**

Academic Positions

School of Electrical Engineering, Tel-Aviv University, ISRAEL

2018 – **Professor**

2013 – 2018 **Associate Professor**

2009 – 2013 **Assitant Professor**

Publications (last 5 years)

Journal Articles

2021 Dana Berman, Deborah Levy, **Shai Avidan**, and Tali Treibitz. Underwater single image color restoration using haze-lines and a new quantitative dataset. *IEEE Trans. Pattern Anal. Mach. Intell.*, volume 43, pages 2822–2837, 2021.

2020 Dana Berman, Tali Treibitz, and **Shai Avidan**. Single image dehazing using haze-lines. *IEEE Trans. Pattern Anal. Mach. Intell.*, volume 42, pages 720–734, 2020.

2018 Shaul Oron, Tali Dekel, Tianfan Xue, William T. Freeman, and **Shai Avidan**. Best-buddies similarity - robust template matching using mutual nearest neighbors. *IEEE Trans. Pattern Anal. Mach. Intell.*, volume 40, pages 1799–1813, 2018.

2017 Simon Korman, Daniel Reichman, Gilad Tsur, and **Shai Avidan**. Fast-match: Fast affine template matching. *Int. J. Comput. Vis.*, volume 121, pages 111–125, 2017.

2017 Ohad Fried, **Shai Avidan**, and Daniel Cohen-Or. Patch2vec: Globally consistent image patch representation. *Comput. Graph. Forum*, volume 36, pages 183–194, 2017.

2017 Adi Dafni, Yael Moses, **Shai Avidan**, and Tali Dekel. Detecting moving regions in crowdcam images. *Comput. Vis. Image Underst.*, volume 160, pages 36–44, 2017.

2016 Simon Korman and **Shai Avidan**. Coherency sensitive hashing. *IEEE Trans. Pattern Anal. Mach. Intell.*, volume 38, pages 1099–1112, 2016.

2016 Roy Josef Jevnisek and **Shai Avidan**. Semi global boundary detection. *Comput. Vis. Image Underst.*, volume 152, pages 21–28, 2016.

2015 Simon Korman, Roee Litman, **Shai Avidan**, and Alexander M. Bronstein. Probably approximately symmetric: Fast rigid symmetry detection with global guarantees. *Comput. Graph. Forum*, volume 34, pages 2–13, 2015.

In Conference Proceedings

2020 Iris Tal, Yael Bekerman, Avi Mor, Lior Knafo, Jonathan Alon, and **Shai Avidan**. Nldnet++: A physics based single image dehazing network. In *2020 IEEE International Conference on Computational Photography, ICCP 2020, Saint Louis, MO, USA, April 24-26, 2020*, pages 1–10. IEEE, 2020.

2020 Amir Markovitz, Gilad Sharir, Itamar Friedman, Lihi Zelnik-Manor, and **Shai Avidan**. Graph embedded pose clustering for anomaly detection. In *2020 IEEE/CVF Conference on Computer Vision and Pattern Recognition, CVPR 2020, Seattle, WA, USA, June 13-19, 2020*, pages 10536–10544. Computer Vision Foundation / IEEE, 2020.

2020 Inbal Lavi, **Shai Avidan**, Yoram Singer, and Yacov Hel-Or. Proximity preserving binary code using signed graph-cut. In *The Thirty-Fourth AAAI Conference on Artificial Intelligence, AAAI 2020, The Thirty-Second Innovative Applications of Artificial Intelligence Conference, IAAI 2020, The Tenth AAAI Symposium on Educational Advances in Artificial Intelligence, EAAI 2020, New York, NY, USA, February 7-12, 2020*, pages 4535–4544. AAAI Press, 2020.

2020 Itai Lang, Asaf Manor, and **Shai Avidan**. Samplenet: Differentiable point cloud sampling. In *2020 IEEE/CVF Conference on Computer Vision and Pattern Recognition, CVPR 2020, Seattle, WA, USA, June 13-19, 2020*, pages 7575–7585. Computer Vision Foundation / IEEE, 2020.

2020 Amnon Drory, Tal Shomer, **Shai Avidan**, and Raja Giryes. Best buddies registration for point clouds. In Hiroshi Ishikawa, Cheng-Lin Liu, Tomás Pajdla, and Jianbo Shi, editors, *Computer Vision - ACCV 2020 - 15th Asian Conference on Computer Vision, Kyoto, Japan, November 30 - December 4, 2020, Revised Selected Papers, Part I*, volume 12622 of *Lecture Notes in Computer Science*, pages 314–329. Springer, 2020.

2020 Yael Bekerman, **Shai Avidan**, and Tali Treibitz. Unveiling optical properties in underwater images. In *2020 IEEE International Conference on Computational Photography, ICCP 2020, Saint Louis, MO, USA, April 24-26, 2020*, pages 1–12. IEEE, 2020.

2020 Sharon Ayzik and **Shai Avidan**. Deep image compression using decoder side information. In Andrea Vedaldi, Horst Bischof, Thomas Brox, and Jan-Michael Frahm, editors, *Computer Vision - ECCV 2020 - 16th European Conference, Glasgow, UK, August 23-28, 2020, Proceedings, Part XVII*, volume 12362 of *Lecture Notes in Computer Science*, pages 699–714. Springer, 2020.

2019 Irina Shevlev and **Shai Avidan**. Co-occurrence neural network. In *IEEE Conference on Computer Vision and Pattern Recognition, CVPR 2019, Long Beach, CA, USA, June 16-20, 2019*, pages 4797–4804. Computer Vision Foundation / IEEE, 2019.

2019 Oren Dovrat, Itai Lang, and **Shai Avidan**. Learning to sample. In *IEEE Conference on Computer Vision and Pattern Recognition, CVPR 2019, Long Beach, CA, USA, June 16-20, 2019*, pages 2760–2769. Computer Vision Foundation / IEEE, 2019.

2018 Rotal Kat, Roy Josef Jevnisek, and **Shai Avidan**. Matching pixels using co-occurrence statistics. In *2018 IEEE Conference on Computer Vision and Pattern Recognition, CVPR 2018, Salt Lake City, UT, USA, June 18-22, 2018*, pages 1751–1759. Computer Vision Foundation / IEEE Computer Society, 2018.

2017 Dana Menaker, Tali Treibitz, and **Shai Avidan**. Color restoration of underwater images. In *British Machine Vision Conference 2017, BMVC 2017, London, UK, September 4-7, 2017*. BMVA Press, 2017.

2017 Roy Josef Jevnisek and **Shai Avidan**. Co-occurrence filter. In *2017 IEEE Conference on Computer Vision and Pattern Recognition, CVPR 2017, Honolulu, HI, USA, July 21-26, 2017*, pages 3816–3824. IEEE Computer Society, 2017.

2017 Dana Berman, Tali Treibitz, and **Shai Avidan**. Air-light estimation using haze-lines. In *2017 IEEE International Conference on Computational Photography, ICCP 2017, Stanford, CA, USA, May 12-14, 2017*, pages 115–123. IEEE Computer Society, 2017.

2016 Dana Berman, Tali Treibitz, and **Shai Avidan**. Non-local image dehazing. In *2016 IEEE Conference on Computer Vision and Pattern Recognition, CVPR 2016, Las Vegas, NV, USA, June 27-30, 2016*, pages 1674–1682. IEEE Computer Society, 2016.