



Tali Dekel

Research Scientist @ Google



Experience and Education

- 2016-Now **Senior Research Scientist**
[Google Inc., Machine Perception Group](#)
 Research at the intersection of computer vision, computer graphics and machine learning.
 Manager: Prof. William T. Freeman
- 2014-2016 **Postdoctoral Associate**
[MIT Computer Science & Artificial Intelligence Lab \(CSAIL\)](#)
 Host: Prof. William T. Freeman
- 2009-2015 **Ph.D. Electrical Engineering**
[Tel-Aviv University, Israel](#)
 Direct track towards a Ph.D. in computer vision.
 Thesis: From Camera-Array to CrowdCam
 Advisors: Prof. Yael Moses and Prof. Shai Avidan
- 2010 **Intern**
[Disney Research, ETH University, Switzerland](#)
 Host: Prof. Wojciech Matusik
- 2007-2009 **M.Sc. Electrical Engineering, cum laude**
[Tel-Aviv University, Israel](#)
 Direct track toward an M.Sc. in computer vision and image processing
 Advisors: Prof. Yael Moses and Prof. Nahum Kiryati
- 2004-2007 **B.Sc. Electrical Engineering, cum laude**
[Tel Aviv University, Israel](#)
 Major in signal processing, software engineering

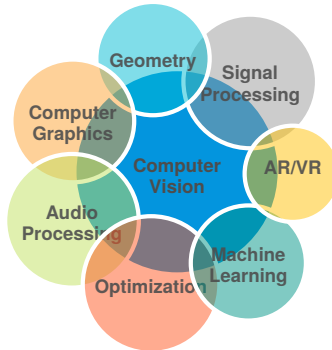
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Research Interests



Languages

English ★★★★★
Hebrew ★★★★★

Honors & Awards

- 2015 **Rothschild Postdoctoral Fellowship**
[Yad-Hanadiv](#)
<http://yadhanadiv.info/recipient/tali-dekel>
- 2014 **The National Postdoctoral Award for Advancing Women in Science**
[The Weizmann Institute](#)
<https://www.weizmann.ac.il/WomenInScience/>
- 2013 **Prof. Norman W. Rosenberg Memorial Prize**
[Tel-Aviv University](#)
- 2009 **Excellence Scholarship of Tel Aviv University's School of Electrical Engineering**
[Tel-Aviv University](#)
- 2005 **RAD scholarship for B.Sc. in Electrical Engineering**
[RAD Data Communications Ltd.](#)
<https://www.rad.com/>

Publications



Top-tier conferences and journals in the fields computer vision (CVPR, ICCV, ECCV, IJCV, TPAMI) and computer graphics (ACM SIGGRAPH, UIST).



MoSculp: Interactive Visualization of Shape and Time

Xiuming Xhang, **Tali Dekel**, Tianfan Xue, Andrew Owen, Jiajun Wu, Freeman William T., Stefanie Mueller

ACM symposium on User interface software and technology (UIST), 2018



Sparse, Smart Contours to Represent and Edit Images

Tali Dekel, Chuang Gan, Dilip Krishnan, Ce Liu, William T Freeman

IEEE Conference of Computer Vision and Pattern Recognition (CVPR), 2018



Modifying Non-Local Variations Across Multiple Views

Tal Tlusty, Tomer Michaeli, **Tali Dekel**, Lihi Zelnik-Manor

IEEE Conference of Computer Vision and Pattern Recognition (CVPR), 2018



Looking to Listen at the Cocktail Party: A Speaker-Independent Audio-Visual Model for Speech Separation

Ariel Ephrat, Inbar Mosseri, Oran Lang, **Tali Dekel**, Kevin Wilson, Avinatan Hasidim, William T Freeman, Michael Rubinstein

ACM Transactions on Graphics (Proc. SIGGRAPH), 2018



On the Effectiveness of Visible Watermarks

Tali Dekel, Michael Rubinstein, Ce Liu, William T Freeman

IEEE Conference of Computer Vision and Pattern Recognition (CVPR), 2017



Detecting Moving Regions in CrowdCam Images

Adi Dafni, Yael Moses, Shai Avidan, **Tali Dekel**

Computer Vision and Image Understanding, 2017



Best-Buddies Similarity - Robust Template Matching using Mutual Nearest Neighbors

Shaul Oron, **Tali Dekel**, Tianfan Xue, W.T. Freeman, Shai Avidan

IEEE Transactions on Pattern Analysis & Machine Intelligence



Best-Buddies Similarity for Robust Template Matching

Tali Dekel, Shaul Oron, Michael Rubinstein, Shai Avidan, William T. Freeman

IEEE Conference of Computer Vision and Pattern Recognition (CVPR), 2015



Revealing and Modifying Non-Local Variations in a Single Image

Tali Dekel, Tomer Michaeli, Michal Irani, William T. Freeman

ACM Transactions on Graphics (Proc. SIGGRAPH Asia), 2015

Deviation Magnification: Revealing Geometric Deviation in a Single Image

Neal Wadhwa, **Tali Dekel**, Donglai Wei, Frederic Durand, William T. Freeman

ACM Transactions on Graphics (Proc. SIGGRAPH Asia), 2015

Photo Sequencing

Tali Dekel, Yael Moses, Shai Avidan

International Journal of Computer Vision (IJCV), 2014

Stereo Seam Carving a Geometrically Consistent Approach

Tali Dekel, Yael Moses, Shai Avidan

IEEE transactions on pattern analysis and machine intelligence, 2013

Space-time Tradeoffs in Photo Sequencing

Tali Dekel, Yael Moses, Shai Avidan

IEEE International Conference on Computer Vision, 2013

Photo Sequencing

Tali Dekel, Yael Moses, Shai Avidan

European Conference on Computer Vision (ECCV), 2012, **oral presentation**.

Multi-View Scene Flow Estimation: A View Centered Variational Approach

Tali Dekel, Yael Moses, Shai Avidan

International Journal of Computer Vision (IJCV), 2012

Structure and Motion from Scene Registration

Tali Dekel, S Avidan, A Hornung, W Matusik

IEEE Conference of Computer Vision and Pattern Recognition (CVPR), 2012

Racing Bib Numbers Recognition

Idan Ben-Ami, **Tali Dekel**, Shai Avidan

British Machine Vision Conference (BMVC), 2012

Geometrically Consistent Stereo Seam Carving

Tali Dekel, Yael Moses, Shai Avidan

IEEE International Conference on Computer Vision (ICCV), 2011, **oral presentation**

Multi-View Scene Flow Estimation: A View Centered Variational Approach

Tali Dekel, Yael Moses, Shai Avidan

IEEE Conference of Computer Vision and Pattern Recognition (CVPR), 2010

In the Media

2018 **Looking to Listen: Audio-Visual Speech Separation**

[Google Research Blog](#)

<https://ai.googleblog.com/2018/04/looking-to-listen-audio-visual-speech.html>

2017 **Making Visible Watermarks More Effective**

[Google Research Blog](#) (ranked among the top 10 blogs of 2017)

<https://ai.googleblog.com/2017/08/making-visible-watermarks-more-effective.html>

2015 **Amplifying — or removing — visual variation**

[MIT News](#)

<http://news.mit.edu/2015/algorithms-graphics-software-reveal-structural-defects-1106>

2017 **10-Questions Interview**

[LDV CAPITAL](#)

<https://kaptur.co/ldv-vision-summit-10-questions-for-a-research-scientist-google/>

Teaching Experience

2017 **Invited Lecturer**

[Course: *Advances in Computer Vision* \(6.819\)](#)

CSAIL MIT

2007–2014 **Teaching Assistant**

[Course: *Statistical Signal Processing*](#)



School of Electrical Engineering Tel Aviv University, Israel

2010 **Teaching Assistant**

[Course: *Computer Graphics*](#)

Efi Arazi School of Computer Science, IDC, Israel

Recent Invited Talks

- 2018 **Looking to Listen: Audio-Visual Speech Separation**
[“Sound and Sight” workshop, CVPR](#)
- 2018 **Looking to Listen: Audio-Visual Speech Separation**
[ICCP, CMU](#)
 Recording
- 2017 **Securing Visible Watermarks**
[Vision Day, Weizmann Institute of Science, Israel](#)
- 2017 **On the Effectiveness of Visual Watermarks**
[“Bright and Dark Side of Computer Vision” workshop, CVPR](#)
- 2017 **How Can Computer Vision Reduce or Magnify Subtle Imperfection in Digital Images?**
[LDV Vision Summit](#)
 Recording
- 2016 **Exploring and Modifying Spatial Variations in a Single Image**
[Carnegie Mellon University \(CMU\), VASC Seminar](#)
- 2016 **Detecting and Modifying Spatial Variation in Images**
[Rising Stars Workshop](#)
<http://risingstars.ece.cmu.edu/tali-dekel/>