



Tali Dekel

Curriculum Vitae

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

Mail

tdekel@google.com
talidekel@csail.mit.edu

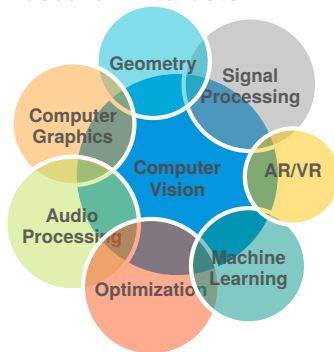
Phone

+1-617-505-0682

Website

people.csail.mit.edu/talidekel

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/>



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/>

List of Publications



Doctoral Dissertation:

From Camera-Array to CrowdCam

Tali Dekel, Advisors: Prof. Shai Avidan and Prof. Yael Moses
Tel Aviv University, Israel, 2015

Total of 5 conference papers and 3 journal papers ([13, 14, 15, 18, 19] and [11, 12, 16] in publication list below, respectively).

Articles

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

- 1. MoSculp: Interactive Visualization of Shape and Time**
Xiuming Xiang, **Tali Dekel**, Tianfan Xue, Andrew Owen, Jiajun Wu, Freeman William T., Stefanie Mueller
ACM symposium on User interface software and technology (UIST), 2018
- 2. 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
- 3. 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
- 4. 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 Hassidim, William T Freeman, Michael Rubinstein
ACM Transactions on Graphics (Proc. SIGGRAPH), 2018, **Patented**
- 5. 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
- 6. Detecting Moving Regions in CrowdCam Images**
Adi Dafni, Yael Moses, Shai Avidan, **Tali Dekel**
Computer Vision and Image Understanding, 2017
- 7. 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, 2016
- 8. 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
- 9. 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
- 10. 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, **Patented**
- 11. Photo Sequencing**
Tali Dekel, Yael Moses, Shai Avidan
International Journal of Computer Vision (IJCV), 2014
- 12. Stereo Seam Carving a Geometrically Consistent Approach**
Tali Dekel, Yael Moses, Shai Avidan
IEEE transactions on pattern analysis and machine intelligence, 2013
- 13. Space-time Tradeoffs in Photo Sequencing**
Tali Dekel, Yael Moses, Shai Avidan
IEEE International Conference on Computer Vision, 2013

14. **Photo Sequencing**
Tali Dekel, Yael Moses, Shai Avidan
European Conference on Computer Vision (ECCV), 2012, **oral presentation.**
15. **Structure and Motion from Scene Registration**
Tali Dekel, S Avidan, A Hornung, W Matusik
IEEE Conference of Computer Vision and Pattern Recognition (CVPR), 2012
16. **Multi-View Scene Flow Estimation: A View Centered Variational Approach**
Tali Dekel, Yael Moses, Shai Avidan, Nahum Kiryati
International Journal of Computer Vision (IJCV), 2012
17. **Racing Bib Numbers Recognition**
Idan Ben-Ami, **Tali Dekel**, Shai Avidan
British Machine Vision Conference (BMVC), 2012
18. **Geometrically Consistent Stereo Seam Carving**
Tali Dekel, Yael Moses, Shai Avidan
IEEE International Conference on Computer Vision (ICCV), 2011, **oral presentation**
19. **Multi-View Scene Flow Estimation: A View Centered Variational Approach**
Tali Dekel, Yael Moses, Shai Avidan, Nahum Kiryati
IEEE Conference of Computer Vision and Pattern Recognition (CVPR), 2010