Yoav Y. Schechner
Curriculum Vitae

Personal details

Name:	Yoav Y. Schechner
Home page:	$http://www.ee.technion.ac.il/{\sim}yoav/$
E-mail:	yoav@ee.technion.ac.il

Academic Degrees

2000   Ph.D. in Electrical Engineering (Technion, Haifa, Israel).

1996   M.Sc. in Physics (Technion, Haifa, Israel).

1990   B.A. in Physics cum laude (Technion, Haifa, Israel).

Academic Appointments

2016–Present   Professor, Viterbi Faculty of Electrical Engineering, Technion.

2016   Visiting Scientist, CSAIL, MIT.

2010–2011   Visitor, California Inst. of Tech., and NASA's Jet Propulsion Laboratory.

2007–2015   Associate Professor, Department of Electrical Engineering, Technion.

2002–2007   Senior Lecturer, Department of Electrical Engineering, Technion.

2000–2002   Research Scientist, Department of Computer Science, Columbia University.

1996–1999   Teaching assistant, Department of Electrical Engineering, Technion.

1994–1996   Teaching assistant, Faculty of Physics, Technion.

Professional Experience

2006–Present   Consultant

1990–1994   Meteorological officer, IDF.

Teaching Experience

2002–Present   Technion—Israel Institute of Technology –
Advanced course *Three-Dimensional Imaging and Reconstruction.*
Advanced course *Imaging Systems for Computer Vision.*
Undergraduate/graduate course *Electroopic Systems.*
Undergraduate/graduate course *Image Processing and Analysis.*
Undergraduate course *Intr. to Digital Signal Processing,*
Academic supervisor of the Vision and Image Sciences Lab (Supervision of undergraduate projects in the field of computer vision.)

1994–1999   Technion — Israel Institute of Technology –
Undergraduate/graduate course *Image Processing and Analysis.*
Received the Award for Excellence in Teaching.
Instruction of undergraduate students in the electrooptics laboratory.
Instruction of undergraduate students in the physics laboratories (Faculty of Physics).

Public Professional Activities

2001   Program Committee
IEEE Comp. Soc. Conf. on Computer Vision & Pattern Recognition (CVPR'01).

2003   Program Committee
IEEE International Conference on Computer Vision (ICCV'03).

2004   Organizer and Chair
CCIT Workshop about Innovations in Signal and Image Processing, March 2004.

2004   Program Committee.
IEEE Comp. Soc. Conf. on Computer Vision & Pattern Recognition (CVPR'04).

2004   Chairing session on Non-Acoustic Sensors
IEEE/MTS Oceans'04.

2005   Chairing session on Non-Acoustic Imaging
IEEE/MTS Oceans'05.

2005   Program Committee
IEEE International Conf. on Computer Vision (ICCV'05).

2005   Program Committee; Chairing special session on Polarization in Computer Vision
SPIE Conf. on Polarization Science and Remote Sensing II.

2005   Program Committee
IEEE Comp. Soc. Conf. on Computer Vision & Pattern Recognition (CVPR'05).

2006   Program Committee.
European Conf. on Computer Vision (ECCV'06).

2006   Program Committee
IEEE Comp. Soc. Conf. on Computer Vision & Pattern Recognition (CVPR'06).

2007   Organizer and Chair
IEEE/ONR Scattering'2007: Int. Sympos. on Volumetric Scattering in Vision & Graphics.

2007   Program Committee
IEEE Comp. Soc. Conf. on Computer Vision & Pattern Recognition (CVPR'07).

2007   Program Committee
IEEE BMG - Beyond Multiview Geometry Workshop (Adjacent to CVPR 2007).

2007	Program Committee SPIE Conf. on Polarization Science & Remote Sensing III.
2007	Organizer and Chair Computer Vision and Graphics, Israel Ministry of Science Infrastructure Research Workshop.
2008	Organizer and Chair CCIT Workshop on Computer Vision and Multimedia, July 2008.
2008	Organizer German-Israel Workshop for Vision and Image Sciences.
2009	Workshop Chair IEEE International Conference on Computer Vision (ICCV'09).
2009	Program Committee Int. Conf. on Computational Photography (ICCP'09).
2009	Area Chair IEEE Comp. Soc. Conf. on Computer Vision & Pattern Recognition (CVPR'09).
2009	Program Committee Pacific-Rim Symposium on Image and Video Technology (PSIVT 2009).
2010	Finance Chair IEEE Int. Conf. on Computational Photography (ICCP'10).
2010	Steering Committee Israel Machine Vision Conference (2010).
2011	Program Committee Int. Conf. on Computational Photography (ICCP'11).
2012	Program Chair Int. Conf. on Computational Photography (ICCP'12).
2012	Area Chair European Conf. on Computer Vision (ECCV'12).
2012–2014	Section Editor Computer Vision: A Reference Guide (Encyclopedia of Computer Vision), Springer, 2014.
2012–2017	Associate Editor Optics Express.
2013-2016	Steering Committee Int. Conf. on Computational Photography (ICCP).
2014	Scientific Committee Member and Session Chair Int. Congress Imaging Science (ICIS'14).
2014	Program Committee IEEE International Workshop on Computational Cameras and Displays (CCD'14).
2015	Program Committee SPIE Conf. on Polarization Science & Remote Sensing VII.
2015	Area Chair IEEE Int. Conf. Computer Vision (ICCV'15).
2016	Program Committee SEEEI Optical Engineering.
2016	Area Chair IEEE Comp. Soc. Conf. on Computer Vision & Pattern Recognition (CVPR'16).

2016	Program Committee
	Int. Conf. on Computational Photography (ICCP'16).
2016	Chair, jointly with Miri Ben-Chen
	The Annual Henry Taub International TCE Conference *3D Visual Computing: Graphics, Geometry & Imaging*.
2016	Guest Editor, jointly with W. Freeman, A. Savakis, N. Snavely, W. Heidrich,
	IEEE Trans. Computational Imaging, Special Issue on *Extreme Imaging*.

Reviewer for:

Science Foundation Ireland; ISF Grants; BSF Grants; NOAA Grant; 3DV14; IEEE TPAMI; Int. J. Computer Vision; SIGGRAPH; IEEE TIP; JOSA A; Signal Processing; J. Electronic Imaging; Photogrammetric Eng. and Remote Sensing; Machine Vision and App.; Integrative and Comparative Biology; IEEE ICCV; IEEE CVPR; ECCV; ICPR; Int. Conf. on Advances in Pattern Recognition (ICAPR); IEEE Trans. Circuits and Systems for Video Technology; Applied Optics.

Technion Activities

1996–1999	Coordinator of the "Pixel-Club" - a colloquium forum of Technion researchers in the fields of image processing and computer vision.
2004,2014	Public Relations for the Technion in the press (press releases regarding the invention dealing with underwater photography, including interviews to the general press, television interviews to *Reuters*, *Channel 8*, ATS, etc.
2004–2005	Lectures to Technion invited guests and donors.
2005	Trip to Germany (Munich) for making the case in front of the Scientific Review Committee of the Minerva Ollendorff Center.
2004–2006	Interviewing students for the Technion's Excellence Program.
2012–2015	EE representative to the Technion Senate.
2014-2017	Member in the Standing Committee for Academic Studies.
2013–2015	Outreach: Advising a year-long project of high-school (Kabri) student (Sapir Matlaw) for Physics matriculation.
2015	Fund-raising tour for the ATS, February.
2015–2017	Member of the Technion inter-departmental committee for Marine Engineering.
2016–2017	Advisory Board Committee, Samuel Neaman Institute.

Department Activities

2002-2003	Gave introductory lectures in the course "Topics in electrical engineering".
2003-2005	Gave talks to motivate high-school students in technical studies ("Girls day").
2002-2006	Served in the Study-Termination Committee of the Elect. Eng. Dept.
2005-2006	Served in the Undergraduate Curricula Committee of the Elect. Eng. Dept.
2006-2010	Served as an advisor for distinguished undergraduate students (Dept. of Elect. Eng.).
2007-2009	Served in the faculty-students committee of the Elect. Eng. Dept.
2008-2012	Served as Elbit-Systems/Technion vision systems program coordinator (Dept. of Elect. Eng.).
2008-2010	Served in the social/cultural committee of the Elect. Eng. Dept.

2009	Coordinator of the Elect. Eng. Dept. undergraduate excellence track with research emphasis.
2010	Served in the Academic Development Committee of the Elect. Eng. Dept.
2012-2015	EE representative to the Technion Senate.
2011-2015	Organizing the EE colloquium.
2014-2016	Member of the Academic Development Committee.
2014-2016	Chairing the social/cultural committee of the Elect. Eng. Dept.
2015-2017	EE Vice-Dean for representation activities.
2002-Present	Serves as the academic supervisor of the *Vision and Image Sciences Lab.*

Membership in Professional Societies

IEEE, MTS (Marine Technology Society), OES (Oceanic Engineering Society), OSA

Awards and Honors

1. Best Lecture Award (Mark Sheinin is first author), IAAS 2016.
2. Best Student Paper (Marina Alterman is first author), 2nd place IMVC 2015.
3. Best Paper Award, ICCP 2013.
4. Outstanding Reviewer Award, ICCV 2009.
5. Outstanding Reviewer Award, ECCV 2008.
6. Henry Taub Prize for Academic Excellence, 2008.
7. Outstanding Reviewer Award, IEEE ICCV 2007.
8. Outstanding Reviewer Award, IEEE CVPR 2007.
9. Ray and Miriam Klein Research Award, 2006.
10. Harry Goldman Academic Lectureship - Canada, 2005.
11. Alon Fellowship, 2002-2005 (This fellowship is a national award to the most outstanding new Israeli faculty members in the Natural and Exact Sciences).
12. Landau Fellowship - supported by the Taub Foundation, 2002-2004.
13. The Louis Morin Fellowship, 2000,2001.
14. The Award for Excellence in Teaching, from the Technion, 1999.
15. Otto Schwarz Foundation Excellence Award, 1999.
16. Israeli Ministry of Science (Eshkol) Distinction Fellowship, 1998-99.
17. Ollendorff Award for research in the field of image processing and analysis, 1998.
18. Gutwirth Special Distinction Fellowship, 1995.
19. Wolf Foundation Excellence Award for graduate students, 1994.
20. Invention Award, from the Chief Eng. Logistic Director (RALZA"D) Israeli Air Force, 1994.
21. Excellence Award from the President of the Technion, 1990.
22. Excellence Award from the Dean, 1989.
23. Excellence Award from the Dean, 1988.

Graduate Students

Completed Theses

2004   Mr. Nir Karpel, MSc., *Recovering underwater scenes using polarization analysis.*

2005   Ms. Einat Kidron, MSc., *Audio-visual cross-modal analysis*
(Secondary Adv.: Prof. Michael Elad).

2005   Ms. Sarit Shwartz, MSc., *Blind separation of high dimensional sources.*

2006   Mr. Saar Bobrov, MSc., *Image-based prediction of thermal imaging performance.*

2006   Mr. Anatoly Litvinov, MSc., *Image mosaicing in the presence of radiometric distortions.*

2006   Ms. Yael Erez, MSc., *Spatially varying frequency compounding of ultrasound images.*
(Secondary Adv.: Prof. Dan Adam);

2006   Mr. Yuval Averbuch, MSc., *Adaptive filtering of visibility degraded images.*

2006   Mr. Nir Maor, MSc., *Compression at the source.*
(Primary Adv.: Prof. Arie Feuer);

2007   Mr. Michael Kolomenkin, MSc., *Image matching using photometric information.*
(Primary Adv.: Dr. Ilan Shimshoni);

2007   Mr. Netanel Ratner, MSc., *Optimal multiplexing for imaging.*

2008   Mr. Yaron Diamant, MSc., *Overcoming secondary reflections.*

2008   Mr. Zohar Barzilay, MSc., *Relating audio and video of multiple simultaneous events.*

2009   Mr. Fima Koreban, MSc., *Geometry by Deflaring.*

2009   Ms. Tali Treibitz, **PhD**. *Geometry and Photometry of Imaging Through a Medium.*

2011   Ms. Marina Alterman, MSc., *Multiplexed Fluorescence Unmixing.*

2011   Mr. Amit Aides, MSc., *Multiscale Ultrawide Video Extrapolation*

2012   Ms. Dana Segev, MSc., *Visual Audio Denoising*
(Secondary Adv.: Prof. Michael Elad).

2013   Mr. Amit Oved, MSc., *Weak Coupling of Spectral-Dimensional Scattering Functions for Atmospheric Recovery and Correction*
(Primary Adv.: Prof. Steve Lipson).

2013   Mr. Meir Hatzvi, MSc., *Three dimensional optical transfer of rotating beams.*

2013   Mr. Yohay Swirski, **PhD**, *Three dimensional reconstruction using natural flickering illumination.*

2014   Mr. Yuval Bahat, MSc, *Multimodal audio inpainting.*

2014   Mr. Ron Schneider, MSc, *Light propagation in fog.*

2015   Mr. Alex Golts, MSc, *Resolution limits due to pointwise degradations in color imaging.*

2015   Ms. Marina Alterman, **PhD**. *Vision through random dynamic distortions.*
(Secondary Adv.: Prof. Joseph Shamir)

2015   Ms. Moran Mordechay, MSc, *Optimal measurements for poisson compressed sensing.*

2016   Mr. Daniel Veikherman, MSc, *Clouds in The Cloud.*

2016   Mr. Vadim Holodovsky, MSc, *In-situ multi-view multi-scattering stochastic tomography.*

Theses in Progress

Mr. Amit Aides, (towards **PhD**) expected in 2017.

Mr. Aviad Levis, (towards **PhD**) expected in 2018.

Mr. Lior Arbel, (towards **PhD**) expected in 2017.

Mr. Mark Sheinin, (towards **PhD**) expected in 2018.

Mr. Adam Geva (towards MSc) expected in 2018.

Ms. Adi Vainiger, (towards MSc) expected in 2018.

Mr. Jonatan Chernyak, (towards MSc) expected in 2018.

Research Grants

2016–2020	ISF, 828,184 NIS. Principal Investigator: Yoav Y. Schechner. "Self calibration in polarized imaging".
2017–2019	Ministry of Science, Technology and Space, 800,000 NIS. Principal Investigators: Daniel Rosenfeld (HUJI) and Yoav Y. Schechner (Technion). "Development of satellite constellations for observing cloud dynamic properties".
2016–2018	Ministry of Science, Technology and Space, 2,000,000 NIS Principal Investigators: Timor Katz (IOLR), Gitai Yahel (Ruppin Academic Center), Uri Shavit (Technion), Tali Treibitz (Haifa U.), Yoav Schechner (Technion) "Developing new methodologies for quantifying biological sediment resuspension in the sea and for studying its dynamics."
2015–2018	Magnet (The Israel Ministry of Commerce), 953,150 NIS for the first two years. Principal Investigators: Joshua Zeevi, Guy Gilboa and Yoav Y. Schechner. "OMEK" Consortium.
2015–2017	Norman and Helen Asher Fund (Space Research Inst.) \$ 10,000, Principal Investigator: Yoav Y. Schechner, "Verification of a multiview sensed atmosphere"
2015–2016	National Geographic Society, \$ 20,000, Principal Investigator: Gadi Katzir. Contributing Investigators: Daniel Weihs and Yoav Y. Schechner. "Anthropogenic changes in water optical/photic qualities: Their effects on avian visual predation of fish and 'fish nurseries' in coastal shallow water habitats"
2015–2017	GIF (The German-Israel Foundation), 90,000 Euro, Principal Investigators: Yoav Y. Schechner and Dietrich Althausen. Contributing Investigators: Mordechai (Moti) Segev and Albert Ansmann. "3D Widefield Sky Scatterer Tomography by Lidar Anchor"
2014–2015	Cornell Tech Faculty Exchange Program \$ 7,000, Principal Investigators: Yoav Y. Schechner and Lihi Zelnik-Manor.
2014	Minerva equipment fund, Eu 60,000, Principal Investigator: Yoav Y. Schechner,
2014–2015	Norman and Helen Asher Fund (Space Research Inst.) \$ 10,000, Principal Investigator: Yoav Y. Schechner, "Network for Remote Atmospheric Scatterer Sensing"

2013–2017	BSF (The US-Israel Binational Science Foundation), $ 136,000, Principal Investigator: Yoav Y. Schechner and David Diner, "Multiangular Computational Remote Photography"
2012–2016	TASP (Technion Autonomous Systems Program), $ 50,000, Principal Investigator: Yoav Y. Schechner, Lihi Zelnik-Manor and Alon Wolf, "Technion Underwater-Threats Snake Robots Detection System"
2013–2014	TASP (Technion Autonomous Systems Program), $ 34,483, Principal Investigator: Michael Elad and Yoav Y. Schechner, "Better Sensing by Joint Audio-Visual Processing"
2012–2016	ISF (The Israel Science Foundation), 736,000 NIS, Principal Investigator: Yoav Y. Schechner, "Inter-Media Vision"
2011–2012	Elbit Systems Ltd., $ 28,000, Principal Investigator: Yoav Y. Schechner, "Static vs. Dynamic Object Discrimination at Long Range"
2009–2011	Elbit Systems Ltd., $ 30,000, Principal Investigator: Yoav Y. Schechner, "Peripheral Distractions and Alerts."
2008–2012	ISF (The Israel Science Foundation), 736,000 NIS, Principal Investigators: Yoav Y. Schechner and Michael Elad , "Auditory computer-vision."
2007–2011	BSF (The US-Israel Binational Science Foundation), $ 106,000, Principal Investigators: Yoav Y. Schechner, Srinivasa Narasimhan , Shahriar Negahdaripour , "Sensing fusion for underwater scene recovery."
2007–2011	Philips, 154,000 Euro. Principal Investigator: Yoav Y. Schechner, "Visual extrapolation."
2007–2009	Magneton (The Israel Ministry of Commerce), 2,169,058 NIS, Principal Investigators: Yoav Y. Schechner and Iscan-Robotics "Defect detection in automotive glass."
2006–2009	Ministry of Science (Infrastructure Inter-institution Grant), 900,000 NIS, Principal Investigators: Yoav Y. Schechner, Aryeh Weiss, Ehud Rivlin, "Computer micro-vision."
2005–2006	ElOp Ltd., 113,281 NIS. Principal Investigator: Yoav Y. Schechner, "Improvement of vision in haze."
2005	GIF (The German-Israel Foundation), 30,000 Euro, Principal Investigator: Yoav Y. Schechner, "Quantitative image mosaics."
2004–2008	ISF (The Israel Science Foundation), 475,079 NIS, in addition to $ 50,000 of equipment (for building a new lab). Principal Investigator: Yoav Y. Schechner, "Computer vision in turbid media."
2004–2005	Magneton (The Israel Ministry of Commerce), 1,021,564 NIS, Principal Investigators: Yoav Y. Schechner and El-Op Electrooptics Industries "Improving capabilities of long-range observations."
2003–2005	BSF (The US-Israel Binational Science Foundation), $ 59,984, Principal Investigators: Yoav Y. Schechner, Shree K. Nayar, Peter Belhumeur, "Coded vision and illumination."
2002-2005	Alon Fellowship, $ 29,000, in addition to salary.
2002-2004	NSF (USA), $ 250,000, Principal Investigators: Rafael Piestun, Carol Cogswel and Yoav Y. Schechner, "High-speed 3D microscopy by hybrid optical-digital encoding and processing."

2000-2002 The Morin Foundation, $ 100,000
      Principal Investigators: Yoav Y. Schechner and Shree K. Nayar, "Multidimensional image mosaics."

1998-1999 The Eshkol Fund, Doctorate Fellowship.

PUBLICATIONS

Theses

1. Y. Y. Schechner, Advisor: Prof. J. Shamir *"Rotation phenomena in waves,"* M.Sc. Thesis in Physics, Technion (1996).

2. Y. Y. Schechner, Advisors: Dr. N. Kiryati and Prof. J. Shamir *"Analysis and reconstruction of complex scenes via optical cues,"* Ph.D Thesis in Electrical Engineering, Technion (1999).

Journal Papers

1. Y. Y. Schechner and J. Shamir, *"Parameterization and orbital angular momentum of anisotropic dislocations,"* Journal of the Optical Society of America - A **13**, pp. 967-973 (1996).

2. Y. Y. Schechner, R. Piestun and J. Shamir, *"Wave propagation with rotating intensity distributions,"* Physical Review E. **54**, R50-R53 (1996).

3. R. Piestun, Y. Y. Schechner and J. Shamir, *"Self-imaging with finite energy,"* Optics Letters **22**, pp. 200-203 (1997).

4. Y. Y. Schechner, J. Shamir and N. Kiryati, *"Vision through semi-reflecting media: Polarization analysis,"* Optics Letters **24**, pp. 1088-1090 (1999).

5. R. Piestun, Y. Y. Schechner and J. Shamir, *"Propagation invariant wave-fields with finite energy,"* Journal of the Optical Society of America - A **17**, pp. 294-303 (2000).

6. Y. Y. Schechner, J. Shamir and N. Kiryati, *"Polarization and statistical analysis of scenes containing a semi-reflector,"* Journal of the Optical Society of America - A **17**, pp. 276-284 (2000).

7. Y. Y. Schechner, N. Kiryati and R. Basri, *"Separation of transparent layers using focus,"* International Journal of Computer Vision **39**, pp. 25-39 (2000).

8. Y. Y. Schechner and N. Kiryati, *"Depth from defocus vs. Stereo: How different really are they?"* International Journal of Computer Vision **39**, pp. 141-162 (2000).

9. Y. Y. Schechner and S. K. Nayar, *"Generalized mosaicing: Wide field of view multispectral imaging,"* IEEE Trans. Pattern Analysis & Machine Intelligence **24**, pp. 1334-1348 (2002).

10. Y. Y. Schechner and S. K. Nayar, *"Generalized mosaicing: High dynamic range in a wide field of view,"* International Journal of Computer Vision **53**/3, pp. 245-267 (2003).

11. Y. Y. Schechner, S. G. Narasimhan and S. K. Nayar, *"Polarization-based vision through haze,"* Applied Optics **42**/3, Special Feature on *Light on Color in the Open Air* pp. 511-525 (2003).

12. A. Litvinov and Y. Y. Schechner *"A radiometric framework for image mosaicking,"* Journal of the Optical Society of America - A **22**, pp. 839-848 (2005).

13. Y. Y. Schechner and S. K. Nayar, *"Generalized mosaicing: Polarization panorama,"* IEEE Trans. Pattern Analysis & Machine Intelligence **27**, pp. 631-636 (2005).

14. S. Shwartz, M. Zibulevsky and Y. Y. Schechner, *"Fast kernel entropy estimation and optimization,"* Signal Processing, Special Issue on *Information Theoretic Signal Processing* **85**/5, pp. 1045-1058 (2005).

15. Y. Y. Schechner and N. Karpel, *"Recovery of underwater visibility and structure by polarization analysis,"* IEEE Journal of Oceanic Engineering **30**, pp. 570-587 (2005).

16. A. Greengard, Y. Y. Schechner and R. Piestun, *"Depth from diffracted rotation,"* Optics Letters **31**, pp. 181-183 (2006).

17. E. Kidron, Y. Y. Schechner and M. Elad, *"Cross-modal localization via sparsity,"* IEEE Trans. Signal Processing **55**, pp. 1390-1404 (2007).

18. Y. Y. Schechner, S. K. Nayar, and P. N. Belhumeur, *"Multiplexing for optimal lighting,"* IEEE Trans. Pattern Analysis & Machine Intelligence **29**, pp. 1339-1354 (2007).

19. S. Bobrov and Y. Y. Schechner, *"Image-based prediction of imaging and vision performance,"* Journal of the Optical Society of America - A **24**, pp. 1920-1929 (2007).

20. Y. Y. Schechner and Y. Averbuch, *"Regularized image recovery in scattering media,"* IEEE Trans. Pattern Analysis & Machine Intelligence **29**, pp. 1655-1660 (2007).

21. N. Ratner, Y. Y. Schechner and F. Goldberg, *" Optimal multiplexed sensing: bounds, conditions and a graph theory link,"* Optics Express **15**/25, pp.17072-17092 (2007).

22. Y. Erez, Y. Y. Schechner and D. Adam, *"Space variant ultrasound frequency compounding based on noise characteristics,"* Ultrasound in Medicine and Biology **34**/6, pp. 981-1000 (2008).

23. D. M. Kocak, F. R. Dalgleish, F. M. Caimi and Y. Y. Schechner, *"A focus on recent developments and trends in underwater imaging,"* Marine Technology Society Journal **42**, pp. 52-67 (2008), special issue on *State of the Technology.*

24. S. Shwartz, Y. Y. Schechner and M. Zibulevsky, *"Blind separation of convolutive image mixtures,"* Neurocomputing **71**, pp. 2164-2179 (2008), special issue on *advances in blind signal processing.*

25. E. Namer, S. Shwartz and Y. Y. Schechner, *"Skyless polarimetric calibration and visibility enhancement,"* Optics Express **17**, pp. 472-493 (2009).

26. T. Treibitz and Y. Y. Schechner, *"Active polarization descattering,"* IEEE Trans. Pattern Analysis & Machine Intelligence **31**, pp. 385-399 (2009).

27. Z. Barzelay and Y. Y. Schechner, *"Onsets coincidence for cross-modal analysis,"* IEEE Transactions on Multimedia **12**, pp. 108-120 (2010).

28. Y. Y. Schechner, *"Inversion by P^4: Polarization picture post-processing,"* Philosophical Transactions of The Royal Society B **366**:1565, pp. 638-648 (2011).

29. T. Avraham and Y. Y. Schechner, *"Ultrawide foveated video extrapolation,"* IEEE Selected Topics in Signal Processing **5**, pp 321-334 (2011), special issue on *recent advances in processing for consumer displays.*

30. Y. Swirski, Y. Y. Schechner, B. Herzberg, and S. Negahdaripour, *"CauStereo: Range from light in nature,"* App. Optics **50**/28, Special Feature on *Light on Color in the Open Air* pp. F89-F101 (2011). **Selected** for publication at the Virtual Journal for Biomedical Optics **6**/11 (2011).

31. T. Treibitz, Y. Y. Schechner, C. Kunz and H. Singh, *"Flat refractive geometry,"* IEEE Trans. Pattern Analysis & Machine Intelligence 34:1, pp. 51-65 (2012).

32. T. Treibitz and Y. Y. Schechner *"Resolution loss without imaging blur,"* Journal of the Optical Society of America - A **29**, pp. 1516-1528 (2012).

33. M. Hatzvi and Y. Y. Schechner, *"Three dimensional optical transfer of rotating beams,"* Optics Letters **37**, pp. 3207-3209 (2012).

34. T. Treibitz and Y. Y. Schechner, *"Turbid scene enhancement using multi-directional illumination fusion,"* IEEE Trans. Image Processing **21**, pp. 4662-4667 (2012).

35. M. Alterman, Y. Y. Schechner, P. Perona and J. Shamir, *"Detecting motion through dynamic refraction,"* IEEE Trans. Pattern Analysis & Machine Intelligence **35**, pp. 245-251 (2013).

36. Y. Y. Schechner, *"A view through the waves,"* Marine Technology Society Journal **47**/5, pp. 148-150, Commentary (2013) **Invited**.

37. A. Aides, Y. Y. Schechner, V. Holodovsky, M. J. Garay and A. B. Davis, *"Multi sky-view 3D aerosol distribution recovery"* Optics Express **21**, pp. 25820–25833 (2013). **Selected** for OSA's **Spotlight on Optics**, Dec/2013.

38. A. Golts and Y. Y. Schechner, *"Cutoff due to pointwise degradations in color images,"* Journal of the Optical Society of America - A **31**/12, pp. 2711-2718 (2014).

39. Y. Bahat, Y. Y. Schechner and M. Elad, *"Self-content-based audio inpainting,"* Signal Processing **111**, pp. 61-72 (2015).

40. A. Deleforge, R. Horaud, Y. Y. Schechner and L. Girin *"Co-Localization of audio sources in images using binaural features and locally-linear regression,"*, IEEE Trans. Audio, Speech and Language Processing bf 23, pp. 718-731 (2015).

41. M. Alterman, Y. Y. Schechner, and Y. Swirski, *"Triangulation in random refractive distortions,"* IEEE Trans. Pattern Analysis & Machine Intelligence **39**, pp. 603-616 (2016).

Book Chapters

1. Y. Y. Schechner and S. K. Nayar, *"Multidimensional fusion by image mosaics,"*, in Image Fusion: Algorithms and Applications, pp. 193-221, ed. Tania Stathaki (Academic Press 2008).

Patents

1. Y. Y. Schechner and S. K. Nayar *"Methods and apparatus for image mosaicing,"* US Patent 7,440,637 B2, approved 2008.

2. S. K. Nayar and Y. Y. Schechner *"Method and apparatus for recording a sequence of images using a moving optical element,"* US Patent 7,554,596 B2, approved 2009.

3. R. Piestun, C. Cogswell, A. Greengard and Y. Y. Schechner *"Method and system for optical imaging and ranging,"* US Patent 7,705,970 B2, approved 2010.

4. N. Karpel and Y. Y. Schechner *"Enhanced underwater imaging,"* US Patent 7,804,518 B2, approved 2010.

5. T. Treibitz and Y. Y. Schechner *"Recovering object visibility and structure in a scattering medium when using artificial illumination,"* US Patent 8,350,957 B2, approved 2013.

6. Y. Y. Schechner and T. Treibitz *"Imaging systems and methods for recovering object visibility,"* US Patent 8,836,810 B2, approved 2014.

7. Z. Barzeley and Y. Y. Schechner *"Method and apparatus for the use of cross-modal association to isolate individual media sources"* US Patent 8,660,841 B2, approved 2014.

8. Y. Y. Schechner and T. Treibitz *"Imaging systems and methods for recovering object visibility,"* Israeli Patent 195124, issued Aug/2013.

Magazine Papers

1. Y. Schechner, *"Northern exposure - a kayaking trek in Alaska,"* The Nature of Things (Hebrew)- The Society for Research of Man and Surroundings **27**, pp. 24-47 (1998).

2. Y. Y. Schechner, *"Aurora Borealis,"* Optics and Photonics News **9**/9, p. 72 (1998).

3. Y. Y. Schechner, *"The arc-family of the rainbow,"* Optics and Photonics News **9**/4, p. 64 (1998).

Invited Lectures in Conferences and Advanced International Schools

1. J. Shamir, R. Piestun and Y. Y. Schechner, *"Propagation-invariance and 3D light fields,"* ICO XVIII *Optics for the Next Millennium*, San Francisco (1999).

2. Y. Y. Schechner, N. Kiryati and J. Shamir, *"Multi-valued images and their separation,"*, Multi Image Analysis Workshop, Schloss Dagstuhl, Germany (2001).

3. Y. Y. Schechner *"Multidimensional image sensing,"* Vision & Image Science Workshop, Schloss Dagstuhl, Germany (2002).

4. Y. Y. Schechner, *"Hybrid imaging: Recent advances in physics-based vision,"* German-Israeli Binational Workshop, Israel (2004).

5. Y. Y. Schechner, *"Underwater vision,"* German-Israeli Binational Workshop, Israel (2004).

6. Y. Y. Schechner, *"Efficient image-based relighting,"* Second Israel-UK Symposium on Computer Graphics, Israel (2004).

7. Y. Y. Schechner, *"Recovery of underwater visibility and structure by polarization analysis,"* MTS Underwater Imaging Workshop, Washington DC (2005).

8. Y. Y. Schechner, *"Control of active radiation to improve imaging,"* MTS Underwater Imaging Workshop, Boston (2006).

9. Y. Y. Schechner, *"Light propagation effects for the benefit of 3D structure estimation,"* Israel-Italy Bi-National Conference (2007).

10. Y. Y. Schechner, *"Double-click imaging,"* IEEE/ONR Scattering'2007 - Int. Sympos. on Volumetric Scattering in Vision and Graphics, Minneapolis (2007).

11. Y. Y. Schechner, *"Hybrid imaging,"* Third ORT Braude Research Conference, Israel (2007).

12. Y. Y. Schechner, *"Harmony in motion,"* Indo-Israeli Workshop on Computer Vision, Hyderabad, India (2008).

13. Y. Y. Schechner, *"Look at sparse events,"* International Workshop on Computational and Cognitive Models for Audio-Visual Interactions, Sheffield, England (2008).

14. Y. Y. Schechner, *"Inversion by the P^4: Polarization picture post-processing,"* Polarization Conference - New directions in Research on Polarization of Light, Heron Island, Australia (2008).

15. Y. Y. Schechner, *"Fusing sights and sounds,"* CCIT Workshop on Computer Vision and Multimedia, Haifa, Israel (2008).

16. Y. Y. Schechner, *"Glasswork,"* German-Israel Workshop for Vision and Image Sciences , Haifa, Israel (2008).

17. Y. Y. Schechner, *"Things you can't resolve,"* CVPR AC Workshop, Atlanta (2009).

18. Y. Y. Schechner, *"Improvement of underwater visual capabilities,"* Unmanned Marine Vehicles Symposium, AUVSI Israeli Chapter , Haifa, Israel (2009).

19. Y. Y. Schechner, *"Improvement of underwater visual capabilities,"* Erasmus-Mundus Master in Computer Vision and Robotics, Girona, Spain (2010).

20. Y. Y. Schechner, *"Take the blues away: Recovering scenes underwater,"* Multi-angle Imaging SpectroRadiometer (MISR) Data Users Science Symposium, Pasadena (2010).

21. Y. Y. Schechner, *"Geometry from refracted radiance,"* Keynote talk, Workshop on Color and Photometry in Computer Vision, Barcelona, Spain (ICCV 2011).

22. Y. Swirski and Y. Y. Schechner, *"CauStereo: Structure from underwater flickering illumination,"* Proc. SPIE **8480**: The Nature of Light: Light in Nature IV (2012).

23. Y. Y. Schechner, *"Turning photographic degradations into scene information sources,"* Israel Machine Vision Conference (2013).

24. Y. Y. Schechner, *"Scattered and stray light as scene encoding,"* OSA Frontiers in Optics (2013).

25. Y. Y. Schechner, *"A view through the waves,"* Underwater Vision Workshop, Sydney, Australia (ICCV 2013).

26. D. J. Diner, J. Chen, A. B. Davis, M. J. Garay, O. V. Kalashnikova, F. Seidel, M. Tosca, G. van Harten, F. Xu, A. Levis, Y. Schechner, *"Capabilities and challenges in remote sensing of aerosol (and cloud) properties using multiangular and polarimetric imaging,"* Gordon Research Conference, Radiation and Climate (2015).

27. Y. Y. Schechner, *"Distributed viewpoints: Grand Nature Challenge,"* CVPR AC Workshop, Vancouver (2016).

28. M. Alterman and Y. Y. Schechner, *"3D in natural random refractive distortions,"* SPIE 3D Imaging, Visualization, and Display Conference (2016).

29. Y. Y. Schechner, *"Revealing the polarization analyzer angles, and the unknown target,* SPIE Polarization: Measurement, Analysis, and Remote Sensing XII (2016).

30. Y. Y. Schechner, *"Atmospheric 3D volumetric recovery,"* Royal Society International Scientific Seminar - Imaging in Graphics, Vision and Beyond (2016).

31. Y. Y. Schechner, *"The next best underwater view,"* Schleswig-Holsteinische Bildverarbeitungstage (2016).

32. Y. Y. Schechner, *"Opportunities in distributed imaging through scatter,"* Marine Imaging Workshop (2017).

33. Y. Y. Schechner, *"Distributed views across media: From space to ocean-depths,"* EarthVision Workshop at CVPR (2017).

Refereed Conference Papers

Within the fully refereed papers of this section:
Papers # 2,3,5,9-11,13,15,20,22,23,24,27-30,32-34,37-39,43-45,47,48 were *Orals*
Papers # 1,4,8,12,14,16-19,21,25,26,31,35,36,40-42,46,49 were *Posters*.

1. Y. Y. Schechner, N. Kiryati and R. Basri, *"Separation of transparent layers using focus,"* Proc. IEEE ICCV - International Conference on Computer Vision, pp. 1061-1066 (1998).

2. Y. Y. Schechner and N. Kiryati, *"Depth from defocus vs. stereo: How different really are they?"* Proc. IAPR ICPR - International Conference on Pattern Recognition pp. 1784-1786 (1998).

3. Y. Y. Schechner, N. Kiryati and J. Shamir, *"Separation of transparent layers by polarization analysis,"* Proc. IAPR SCIA - Scandinavian Conference on Image Analysis, Vol-I, pp. 235-242 (1999).

4. Y. Y. Schechner and N. Kiryati, *"The optimal axial interval in estimating depth from defocus,"* Proc. IEEE ICCV - Int. Conference on Computer Vision, pp. 843-848 (1999).

5. Y. Y. Schechner, J. Shamir and N. Kiryati, *"Polarization-based decorrelation of transparent layers: The inclination angle of an invisible surface,"* Proc. IEEE ICCV - International Conference on Computer Vision, pp. 814-819 (1999).

6. J. Shamir, R. Piestun and Y. Y. Schechner, *"Propagation-invariance and 3D light fields,"* ICO XVIII *Optics for the Next Millennium*, pp. 108-109, (1999) — **Invited**.

7. Y. Y. Schechner, N. Kiryati and J. Shamir, *"Multi-valued images and their separation,"*, Multi-Image Analysis, LNCS **2032**, pp. 129-141 (2001).

8. Y. Y. Schechner, N. Kiryati and J. Shamir, *"Blind recovery of transparent and semireflected scenes,"* Proc. IEEE CVPR - Computer Vision and Pattern Recognition, Vol. 1, pp. 38-43 (2000).

9. Y. Y. Schechner and S. K. Nayar, *"Generalized Mosaicing"*, Proc. IEEE ICCV - International Conference on Computer Vision, Vol. 1, pp. 17-24 (2001).

10. Y. Y. Schechner, S. G. Narasimhan and S. K. Nayar, *"Instant dehazing of images using polarization,"* Proc. IEEE CVPR - Computer Vision and Pattern Recognition, Vol. 1, pp. 325-332 (2001).

11. Y. Y. Schechner, S. K. Nayar, and P. N. Belhumeur *"A theory of multiplexed illumination,"* Proc. IEEE ICCV - Int. Conference on Computer Vision, Vol. 2, pp. 808-815 (2003).

12. Y. Y. Schechner and S. K. Nayar *"Uncontrolled modulation imaging,"* Proc. IEEE CVPR - Computer Vision and Pattern Recognition, Vol. II, pp. 197-204 (2004).

13. Y. Y. Schechner and N. Karpel *"Clear underwater vision,"* Proc. IEEE CVPR - Computer Vision and Pattern Recognition, Vol. I, pp. 536-543 (2004).

14. S. Shwartz, M. Zibulevsky and Y. Y. Schechner *"ICA Using kernel entropy estimation with NlogN complexity,"* Proc. ICA - International Conference on Independent Component Analysis and Blind Signal Separation, pp. 422-429 (2004).

15. A. Litvinov and Y. Y. Schechner *"Addressing radiometric nonidealities: A unified framework,"* Proc. IEEE CVPR - Computer Vision and Pattern Recognition, Vol. II, pp. 52-59 (2005).

16. E. Kidron, Y. Y. Schechner and M. Elad, *"Pixels that sound,"* Proc. IEEE CVPR - Computer Vision and Pattern Recognition, Vol. I, pp. 88-96 (2005).

17. S. Shwartz, Y. Y. Schechner and M. Zibulevsky, *"Efficient separation of convolutive image mixtures,"* Proc. ICA - International Conference on Independent Component Analysis and Blind Signal Separation, pp. 246-253 (2006).

18. T. Treibitz and Y. Y. Schechner, *"Instant 3D escatter,"* Proc. IEEE CVPR - Computer Vision and Pattern Recognition, Vol. II, pp. 1861-1868 (2006).

19. S. Shwartz, E. Namer and Y. Y. Schechner, *"Blind haze separation,"* Proc. IEEE CVPR - Computer Vision and Pattern Recognition Vol. II, pp. 1984-1991 (2006).

20. Y. Erez, Y. Y. Schechner and D. Adam, *"Ultrasound image denoising by spatially varying frequency compounding,"* Proc. DAGM Symposium, LNCS **4147**, pp. 1-10 (2006).

21. N. Ratner and Y. Y. Schechner, *"Illumination multiplexing within fundamental limits,"* IEEE CVPR - Computer Vision and Pattern Recognition (2007).

22. R. Kaftory, Y. Y. Schechner and Y. Y. Zeevi, *"Variational distance dependent image restoration,"* Proc. IEEE CVPR - Computer Vision and Pattern Recognition (2007).

23. Z. Barzeley and Y. Y. Schechner, *"Harmony in motion,"* Proc. IEEE CVPR - Computer Vision and Pattern Recognition (2007).

24. T. Treibitz, Y. Y. Schechner and H. Singh, *"Flat refractive geometry,"* Proc. IEEE CVPR - Computer Vision and Pattern Recognition (2008).

25. M. Gupta, S. Narasimhan and Y. Y. Schechner, *"On controlling light transport in poor visibility environments,"* Proc. IEEE CVPR - Computer Vision and Pattern Recognition (2008).

26. Y. Diamant and Y. Y. Schechner, *"Overcoming visual reverberations,"* Proc. IEEE CVPR - Computer Vision and Pattern Recognition (2008).

27. F. Koreban and Y. Y. Schechner, *"Geometry by deflaring,"* Proc. IEEE ICCP - Int. Conference on Computational Photography (2009).

28. T. Treibitz and Y. Y. Schechner, *"Recovery limits in pointwise degradation,"* Proc. IEEE ICCP - Int. Conference on Computational Photography (2009).

29. T. Treibitz and Y. Y. Schechner, *"Polarization - Beneficial for visibility enhancement?,"* Proc. IEEE CVPR - Computer Vision and Pattern Recognition (2009).

30. Y. Swirski, Y. Y. Schechner, B. Herzberg and S. Negahdaripour, *"Stereo from flickering caustics,"* Proc. IEEE ICCV - Int. Conference on Computer Vision (2009).

31. A. Sarafraz, S. Negahdaripour and Y. Y. Schechner, *"Enhancing Images in Scattering Media Utilizing Stereovision and Polarization,"* IEEE WACV - Workshop on Applications of Computer Vision (2009).

32. M. Alterman, Y. Y. Schechner and A. Weiss, *Multiplexed fluorescence unmixing*, Proc. IEEE ICCP - Int. Conference on Computational Photography (2010).

33. A. Aides, T. Avraham and Y. Y. Schechner, *Multiscale ultrawide foveated video extrapolation*, Proc. IEEE ICCP - Int. Conference on Computational Photography (2011).

34. Y. Y. Schechner, D. J. Diner and J. V. Martonchik, *Spaceborne underwater imaging*, Proc. IEEE ICCP - Int. Conference on Computational Photography (2011).

35. Y. Swirski, Y. Y. Schechner and T. Nir, *Variational stereo in dynamic illumination*, Proc. IEEE ICCV - Int. Conference on Computer Vision (2011).

36. D. Segev, Y. Y. Schechner and M. Elad, *Example-based cross-modal denoising*, Proc. IEEE CVPR - Computer Vision and Pattern Recognition (2012).

37. Y. Swirski and Y. Y. Schechner, *3Deflicker from motion*, Proc. IEEE ICCP - Int. Conference on Computational Photography (2013). **Best Paper Award**.

38. M. Alterman, Y. Swirski and Y. Y. Schechner, *Triangulation in random refractive distortions*, Proc. IEEE ICCP - Int. Conference on Computational Photography (2013).

39. M. Alterman, Y. Swirski and Y. Y. Schechner, *STELLA MARIS: stellar marine refractive imaging sensor*, Proc. IEEE ICCP - Int. Conference on Computational Photography (2014).

40. M. Alterman, Y. Y. Schechner, M. Vo and S. Narasimhan, *Passive tomography of turbulence strength*, Proc. ECCV - European Conference on Computer Vision (2014).

41. D. Veikherman, A. Aides, Y. Y. Schechner and A. Levis, *Clouds in The Cloud*, Proc. ACCV - Asian Conference on Computer Vision (2014).

42. M. Mordechay and Y. Y. Schechner, *Matrix optimization for poisson compressed sensing*, Proc. IEEE GlobalSIP (2014).

43. Y. Y. Schechner, *Self-calibrating imaging polarimetry*, Proc. IEEE ICCP - Int. Conference on Computational Photography (2015).

44. A. Levis, Y. Y. Schechner, A. Aides and A. B. Davis, *Airborne three-dimensional cloud tomography*, Proc. IEEE ICCV - Int. Conference on Computer Vision (2015).

45. V. Holodovsky, Y. Y. Schechner, A. Levin, A. Levis and A. Aides, *In-situ multi-view multi-scattering stochastic tomography*, Proc. IEEE ICCP - Int. Conference on Computational Photography (2016)

46. M. Sheinin and Y. Y. Schechner, *The next best underwater view*, IEEE CVPR - Computer Vision and Pattern Recognition (2016).

47. M. Alterman, A. Schwartzman, R. Zamir, Y. Y. Schechner, *Turbulence-induced 2D correlated image distortion*, Accepted to Proc. IEEE ICCP - Int. Conference on Computational Photography (2017).

48. M. Sheinin, Y.Y. Schechner, K. N. Kutulakos, *Computational imaging on the electric grid*, Accepted to Proc. IEEE CVPR - Computer Vision and Pattern Recognition (2017).

49. A. Levis, Y. Y. Schechner, A. B. Davis, *Multiple-scattering microphysics tomography*, Accepted to Proc. IEEE CVPR - Computer Vision and Pattern Recognition (2017).

Other Conference Publications

1. Y. Y. Schechner and J. Shamir, *"Orbital angular momentum of anisotropic dislocations,"* OSA Annual Meeting, p. 76 (1995).

2. R. Piestun, Y. Y. Schechner and J. Shamir, *"Generalized self-imaging in free space,"* EOS Topical meeting on Diffractive Optics, pp. 128-129 (1997).

3. R. Piestun, Y. Y. Schechner and J. Shamir, *"Rotating waves and the generalized self-imaging effect,"* OSA Annual Meeting, (1997).

4. Y. Y. Schechner, S. Nayar and P. Belhumeur *"Codes for multiplexing images and lighting,"* Israeli Computer Vision Day, Herzliya (2003).

5. Y. Y. Schechner and S. K. Nayar, *"Polarization mosaicking: High dynamic range and polarization imaging in a wide field of view.,"* Proc. SPIE **5158**: Polarization science and remote sensing, pp. 93-102 (2003).

6. N. Karpel and Y. Y. Schechner, *"Portable polarimetric underwater imaging system with a linear response,"* Proc. SPIE **5432**: Polarization: Measurement, Analysis and Remote Sensing VI, pp. 106-115 (2004).

7. N. Karpel and Y. Y. Schechner, *"Overcoming turbidity in underwater imaging,"* 1st Sympos. of the Israeli Assoc. Aquatic Sciences (2004).

8. Y. Y. Schechner, M. Elad and E. Kidron *"Pixels correlated to sound,"* Israeli Computer Vision Day (2004).

9. Y. Y. Schechner, S. K. Nayar, P. N. Belhumeur and H. S. Peri *"Imaging in multiplexed illumination,"* SPIE **5529**: Nonimaging Optics and Efficient Illumination Systems, pp. 198-205 (2004).

10. A. Greengard, Y. Y. Schechner and R. Piestun *"Depth from rotating point spread functions,"* Proc. SPIE **5557**: Optical Information Systems II, pp. 106-115 (2004).

11. Y. Y. Schechner and N. Karpel, *"Recovering scenes by polarization analysis,"* MTS/IEEE OCEANS, pp. 1255-1261 (2004).

12. Y. Y. Schechner and N. Karpel, *"Attenuating natural flicker patterns,"* MTS/IEEE OCEANS, pp. 1262-1268 (2004).

13. E. Namer and Y. Y. Schechner, *"Advanced visibility improvement based on polarization filtered images,"* Proc. SPIE **5888**: Polarization Science and Remote Sensing II, pp. 36-45 (2005).

14. Y. Y. Schechner and Y. Averbuch *"Distance dependent regularization,"* Israeli Computer Vision Day (2005).

15. Y. Y. Schechner, *"Compensating haze in long range observations,"* MilTech, pp. 63-70 (2006).

16. S. Bobrov and Y. Y. Schechner, *"Image-based prediction of thermal imaging performance,"* Proc. SPIE **6395**: Electro-Optical and Infrared Systems: Technology and Applications III (2006).

17. Y. Erez, Y. Y. Schechner and D. Adam *"Acousticlean images,"* Israeli Computer Vision Day (2006).

18. Y. Y. Schechner *"Optimal multiplexing within fundamental limits,"* Computer Vision and Graphics, Israel Ministry of Science Infrastructure Research Workshop (2007).

19. Y. Y. Schechner *"Glasswork,"* Computer Vision and Graphics, Israel Ministry of Science Infrastructure Research Workshop (2008).

20. Y. Y. Schechner, D. J. Diner, A. Davis and R. Chipman *"Polarization-based dehazing,"* Multiangle Imaging SpectroRadiometer (MISR) Data Users Science Symposium, Pasadena (2009).

21. A. Sarafraz, S. Negahdaripour and Y. Y. Schechner, *"Performance assessment in solving the correspondence problem in underwater Stereo Imagery"* Proc. MTS/IEEE OCEANS (2010)

22. Y. Swirski, Y. Y. Schechner, B. Herzberg and S. Negahdaripour, *"Underwater stereo using natural flickering illumination"* Proc. MTS/IEEE OCEANS (2010)

23. Z. Barzeley and Y. Y. Schechner *"Audio-visual association: look at sparse events,"* 3rd Annual Southern California Computer Vision Meetup (2010).

24. M. Alterman, Y. Y. Schechner and A. Weiss *"Multiplexed fluorescence unmixing,"* Israeli Computer Vision Day (2010).

25. J. Martonchik, Y. Schechner, M. Bull and D. Diner, *"Application of graph cut theory to the MISR aerosol retrieval process,"* American Geophysical Union (AGU) Fall Meeting, San Francisco (2011).

26. J. Martonchik, Y. Schechner, M. Bull and D. Diner, *"Application of graph cut theory to the MISR aerosol retrieval process,"* Multi-angle Imaging SpectroRadiometer (MISR) Data Users Science Symposium, Pasadena (2011).

27. Y. Y. Schechner, M. Alterman, J. Shamir, P. Perona, D. Diner nd J. Martonchik *"Vision through the air-water surface,"* Israel Computer Vision Day (2011).

28. Y. Y. Schechner, A. Aides *"Multiscale ultrawide video extrapolation,"* Israeli Machine Vision Conference (2012).

29. Y. Y. Schechner, M. Alterman, J. Shamir, P. Perona, *"Detecting motion through dynamic refraction,"* Israeli Machine Vision Conference (2012).

30. Y. Swirski and Y. Y. Schechner, *"CauStereo: Structure from underwater flickering illumination,"* Proc. SPIE **8480**, The Nature of Light: Light in Nature IV (2012).

31. A. Aides, Y. Y. Schechner, V. Holodovski and M. Garay, *"Recovery of aerosol 3D distribution based on multiangular imaging: a single scattering baseline,"* Multi-angle Imaging SpectroRadiometer (MISR) Data Users Science Symposium, Pasadena (2012).

32. A. Aides and Y. Y. Schechner, *"Hi-res cloud base and layer recovery from multi-angle dense images,"* Multi-angle Imaging SpectroRadiometer (MISR) Data Users Science Symposium, Pasadena (2012).

33. V. Kotlar, M. Tavil, Y. Erez, Y. Y. Schechner, M. J. Garay and D. J. Diner, *"Detecting moving watercrafts using MISR,"* Multi-angle Imaging SpectroRadiometer (MISR) Data Users Science Symposium, Pasadena (2012).

34. A. B. Davis, D. J. Diner, I. Yanovsky, M. J. Garay, F. Xu, G. Bal, Y. Y. Schechner, A. Aides, Z.Qu and C. Emde, *3D-TRACE: A new NASA initiative in three-dimensional Tomographic Reconstruction of the Aerosol-Cloud Environment*, Proc. EGU - European Geosciences Union general assembly (2013).

35. Y. Y. Schechner, *"Views affected by a wavy air-water surface,"*, Light and Color in Nature Conference, Fairbanks, Alaska (2013).

36. Y. Swirski and Y. Schechner, *"3Descatter from Motion,"*, Israel Computer Vision Day (2013).

37. A. Aides, Y. Y. Schechner, V. Holodovski, M. Garay, and A. B. Davis, *"Lightfields for recovering aerosol distributions,"* IEEE ICCP (2014).

38. M. Alterman, Y. Schechner, P. Perona and J. Shamir, *Independent components in dynamic refraction*, SIAM Conf. Imaging Science, MS on Models and Methods for Imaging through Turbulence, Hong Kong (2014).

39. A. Aides, Y. Y. Schechner, V. Holodovski, M. Garay, and A. B. Davis, *"Multi sky-view 3D aerosol distribution recovery,"* Int. Congress Imaging Sci., Tel-Aviv (2014).

40. M. Alterman, Y. Y. Schechner and Y. Swirski, *Vision through random refractive distortions*, Int. Congress Imaging Sci., Tel-Aviv (2014).

41. A. Aides, Y. Y. Schechner, V. Holodovski, M. Garay, A. B. Davis, *"Lightfield for recovering aerosol distributions,"* Int. Workshop Computer Vision, Alghero (2014).

42. Y. Schechner, *Virtual Periscope by stellar sensing of wave shape*, Shape and Image Modeling & Analysis (2014).

43. D. Veikherman, A. Aides, Y. Y. Schechner and A. Levis, *Clouds in The Cloud*, Israel Computer Vision Day (2014).

44. Y. Y. Schechner, *Multi-view sensing across media*, 5$^{\text{th}}$ OASIS (2015).

45. A. Aides, D. Veikherman, A. Levis and Y. Y. Schechner, *Ground-based multi-angle imaging network for 3D atmospheric sensing,* Challenges for Three-Dimensional Radiative Transfer in the Earth and Atmospheric Sciences, AGU-GAC-MAC-CGU Joint Assembly (2015).

46. A. Levis, A. Aides, V. Holodovsky, Y. Y. Schechner, A. Levin and A. B. Davis, *Efficient 3D atmospheric tomography of scatter distribution,* Challenges for Three-Dimensional Radiative Transfer in the Earth and Atmospheric Sciences, AGU-GAC-MAC-CGU Joint Assembly (2015).

47. L. Arbel, Y. Schechner and N. Amir, *Methods for exciting wine glasses by coupling to plucked strings - theory and experiment* Vienna Talk on Music Acoustics (2015).

48. D. Rosenfeld, A. Levis, I. Bibi, Y. Y. Schechner, A. Rosenfeld, D. Fischer and J. Woytach, *Globe imaging of 3D motion: Microphysics to centuries of change,* 1$^{\text{st}}$ Int. Workshop on Extreme Imaging (2015).

49. A. Levis, Y. Y. Schechner, A. Aides and V. Holodovski *Airborne Three-Dimensional Cloud Tomography*, The 2015 Israel Computer Vision Day (2016).

50. A. Levis, Y. Y. Schechner, A. Aides and A. B. Davis, *Airborne Three-Dimensional Cloud Tomography*, Israeli Machine Vision Conference (2016).

51. V. Holodovsky, A. Levis, Y. Y. Schechner, A. Levin, A. Aides, and A. B. Davis, *3D Multi-Scattering Tomography* , Int. Conf. Computational Photography (2016).

52. A. Levis, Y. Y. Schechner, A. Aides, and A. B. Davis, *3D Cloud Tomography via Solar Radiative Transfer*, International Radiation Symposium (2016).

53. A. Levis, Y. Y. Schechner, A. Aides, and A. B. Davis, *3D Cloud Tomography using Solar Radiative Transfer*, Atmospheric Radiation Science Workshop (2016).

54. M. Sheinin and Y. Y. Schechner, *Underwater Multi-Platform Visual Observation Paths*, The Israeli Association for Aquatic Sciences Conference (2016). **Best Lecture Award**.

55. V. Holodovsky, A. Avni, Y. Y. Schechner, T. Treibitz, S. Grossbard, U. Shavit, *Underwater Optical Imaging for Quantifying Sediment Resuspension*, The Israeli Association for Aquatic Sciences Conference (2016).

56. M. Sheinin and Y. Y. Schechner, *Physical Models in 3D Recovery Problems*, OMEK Symposium (2016).

57. L. Arbel, Y. Y. Schehner, N. Amir, *An Electromagnet-Based Wine Glass Instrument*, Proc. International Symposium on Musical Acoustics (ISMA 2017).