

Yoav Y. Schechner

Curriculum Vitae

Personal details

Name: Yoav Y. Schechner
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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

2007–Present 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.

Research Interests

Physics-based computer vision, Imaging, Cross-Modal Analysis. Influencing the sensing process to extract enhanced information about scenes. Computational analysis of the acquired data by accounting for processes of image formation.

Teaching Experience

- 2002–Present Technion—Israel Institute of Technology –
Advanced course *Imaging Systems for Computer Vision*.
Undergraduate/graduate course *Electrooptic Systems*.
Undergraduate/graduate course *Image Processing and Analysis*.
Undergraduate course *Intr. to Digital Signal Processing*,
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

Participation in Organizing Conferences

- 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).

Reviewer for:

ISF Grants; BSF Grants; NOAA Grant; IEEE Trans. on Pattern Recognition and Machine Intelligence; International Journal of Computer Vision; IEEE Trans. on Image Processing; Journal of the Optical Society of America A; Signal Processing; Journal of Electronic Imaging; Photogrammetric Engineering and Remote Sensing; Machine Vision and Applications; Integrative and Comparative Biology; IEEE International Conferences on Computer Vision (ICCV); IEEE Conferences on Computer Vision & Pattern Recognition (CVPR); International Conference on Pattern Recognition (ICPR); International Conference on Advances in Pattern Recognition (ICAPR); European Conference on Computer Vision (ECCV); IEEE Trans. on Circuits and Systems for Video Technology; Applied Optics; SIGGRAPH.

Membership in Professional Societies

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

Awards and Honors

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

Graduate Students

Completed Theses

- 2004 Nir Karpel, *Recovering underwater scenes using polarization analysis*.
- 2005 Einat Kidron, *Audio-visual cross-modal analysis*
(Secondary Adv.: Prof. Michael Elad).
- 2005 Sarit Shwartz, *Blind separation of high dimensional sources*.
- 2006 Saar Bobrov, *Image-based prediction of thermal imaging performance*.
- 2006 Anatoly Litvinov, *Image mosaicing in the presence of radiometric distortions*.
- 2006 Yael Erez, *Spatially varying frequency compounding of ultrasound images*.
(Secondary Adv.: Prof. Dan Adam);
- 2006 Yuval Averbuch, *Adaptive filtering of visibility degraded images*.
- 2006 Nir Maor, *Compression at the source*.
(Primary Adv.: Prof. Arie Feuer);
- 2007 Michael Kolomenkin, *Image matching using photometric information*.
(Primary Adv.: Dr. Ilan Shimshoni);
- 2007 Netanel Ratner, *Optimal multiplexing for imaging*.
- 2008 Yaron Diamant, *Overcoming secondary reflections*.
- 2008 Zohar Barzilay, *Relating audio and video of multiple simultaneous events*.
- 2009 Fima Koreban, *Geometry by Deflating*.

Theses in Progress

- Ms. Tali Treibitz, expected in 2010.
- Mr. Ron Schneider, expected in 2010.
- Ms. Marina Alterman, expected in 2010.
- Ms. Dana Segev, expected in 2010.
(Secondary Adv.: Prof. Michael Elad).
- Mr. Yohay Swirski, expected in 2010.
- Mr. Amit Aides, expected in 2011.
- Mr. Meir Har-Zvi, expected in 2011.

Research Grants

- 2009–2010 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.”
- 2007–2010 BSF (The US-Israel Binational Science Foundation), \$ 106,000,
Principal Investigators: Yoav Y. Schechner, Srinivasa Narasimhan , Shahriar Negahdaripour , “Sensing fusion for underwater scene recovery.”
- 2007–2009 Philips, 82,000 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.”
- 2003-2009 MAFA”T (Ministry of Defense), 444,250 NIS.
Principal Investigator: Yoav Y. Schechner, “Compensation of haze in images.”
- 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*,” Accepted to IEEE Transactions on Multimedia (2010).

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).

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

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).

Refereed Conference Papers

The footnote¹ below refers to selectivity aspects in major Computer Vision conferences such as ICCV/CVPR. Within the fully refereed papers of this section:

Papers # 2, 3, 5, 9, 10, 11, 13, 15, 20, 22, 23, 24, 27, 28, 29, 30 were *Orals*

Papers # 1, 4, 8, 12, 14, 16, 17, 18, 19, 21, 25, 26, 31 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).

¹In major competitive computer vision conferences, full-length papers undergo a rigorous review process, which is double-blind (the authors are anonymous at submission). Acceptance is typically tougher than in journals, particularly for Oral presentation. Acceptance ratios in recent CVPR and ICCV conferences in which my papers appeared are: CVPR’06: Orals: 5% Posters: 23% Rejected \approx 72% ; CVPR’05: Orals: 6.5% Posters: 21.5% Rejected \approx 72% CVPR’04: Orals: 5% Posters: 21% Rejected \approx 74% ; ICCV’03: Orals: 4.4% Posters: 16 % Rejected \approx 79% This selectivity permeates to other conferences in the field, e.g., DAGM’06 (Oral 18%, Reject 56%), where the full papers underwent double-blind review.

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 3Descatter,*” 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).

Other Conference Papers

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).
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