

# Ashok Narayanan Veeraraghavan

## List of Publications by Year in descending order

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Version: 2024-02-01

85  
papers

4,503  
citations

172457

29  
h-index

138484

58  
g-index

88  
all docs

88  
docs citations

88  
times ranked

3525  
citing authors

#	ARTICLE	IF	CITATIONS
1	Recovering three-dimensional shape around a corner using ultrafast time-of-flight imaging. Nature Communications, 2012, 3, 745.	12.8	510
2	Dappled photography. ACM Transactions on Graphics, 2007, 26, 69.	7.2	410
3	DistancePPG: Robust non-contact vital signs monitoring using a camera. Biomedical Optics Express, 2015, 6, 1565.	2.9	334
4	FlatCam: Thin, Lensless Cameras Using Coded Aperture and Computation. IEEE Transactions on Computational Imaging, 2017, 3, 384-397.	4.4	160
5	P2C2: Programmable pixel compressive camera for high speed imaging. , 2011, , .		159
6	Fast object localization and pose estimation in heavy clutter for robotic bin picking. International Journal of Robotics Research, 2012, 31, 951-973.	8.5	154
7	Single-frame 3D fluorescence microscopy with ultraminiature lensless FlatScope. Science Advances, 2017, 3, e1701548.	10.3	149
8	Light field denoising, light field superresolution and stereo camera based refocussing using a GMM light field patch prior. , 2012, , .		126
9	Evaluation of tumor-derived MRI texture features for discrimination of molecular subtypes and prediction of 12-month survival status in glioblastoma. Medical Physics, 2015, 42, 6725-6735.	3.0	123
10	Compressive Video Sensing: Algorithms, architectures, and applications. IEEE Signal Processing Magazine, 2017, 34, 52-66.	5.6	122
11	TabletGaze: dataset and analysis for unconstrained appearance-based gaze estimation in mobile tablets. Machine Vision and Applications, 2017, 28, 445-461.	2.7	118
12	Reconstruction of hidden 3D shapes using diffuse reflections. Optics Express, 2012, 20, 19096.	3.4	111
13	Lensless Imaging: A computational renaissance. IEEE Signal Processing Magazine, 2016, 33, 23-35.	5.6	102
14	A Practical Approach to 3D Scanning in the Presence of Interreflections, Subsurface Scattering and Defocus. International Journal of Computer Vision, 2013, 102, 33-55.	15.6	96
15	Rate-Invariant Recognition of Humans and Their Activities. IEEE Transactions on Image Processing, 2009, 18, 1326-1339.	9.8	89
16	SparsePPG: Towards Driver Monitoring Using Camera-Based Vital Signs Estimation in Near-Infrared. , 2018, , .		85
17	Shape-and-Behavior Encoded Tracking of Bee Dances. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2008, 30, 463-476.	13.9	84
18	Deep-inverse correlography: towards real-time high-resolution non-line-of-sight imaging. Optica, 2020, 7, 63.	9.3	82

#	ARTICLE	IF	CITATIONS
19	SAVI: Synthetic apertures for long-range, subdiffraction-limited visible imaging using Fourier ptychography. <i>Science Advances</i> , 2017, 3, e1602564.	10.3	77
20	PhaseCam3D – Learning Phase Masks for Passive Single View Depth Estimation. , 2019, , .		72
21	PhlatCam: Designed Phase-Mask Based Thin Lensless Camera. <i>IEEE Transactions on Pattern Analysis and Machine Intelligence</i> , 2020, 42, 1618-1629.	13.9	72
22	Toward Long-Distance Subdiffraction Imaging Using Coherent Camera Arrays. <i>IEEE Transactions on Computational Imaging</i> , 2016, 2, 251-265.	4.4	70
23	Recent advances in lensless imaging. <i>Optica</i> , 2022, 9, 1.	9.3	67
24	WISH: wavefront imaging sensor with high resolution. <i>Light: Science and Applications</i> , 2019, 8, 44.	16.6	61
25	Vision and Deep Learning-Based Algorithms to Detect and Quantify Cracks on Concrete Surfaces from UAV Videos. <i>Sensors</i> , 2020, 20, 6299.	3.8	58
26	Glare aware photography. <i>ACM Transactions on Graphics</i> , 2008, 27, 1-10.	7.2	51
27	PPGSecure: Biometric Presentation Attack Detection Using Photoplethysmograms. , 2017, , .		46
28	Deep learning extended depth-of-field microscope for fast and slide-free histology. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 33051-33060.	7.1	42
29	CS-ToF: High-resolution compressive time-of-flight imaging. <i>Optics Express</i> , 2017, 25, 31096.	3.4	40
30	Face Detection and Verification Using Lensless Cameras. <i>IEEE Transactions on Computational Imaging</i> , 2019, 5, 180-194.	4.4	40
31	Unsupervised view and rate invariant clustering of video sequences. <i>Computer Vision and Image Understanding</i> , 2009, 113, 353-371.	4.7	39
32	Axial-cones. <i>ACM Transactions on Graphics</i> , 2010, 29, 1-8.	7.2	37
33	Flexible Voxels for Motion-Aware Videography. <i>Lecture Notes in Computer Science</i> , 2010, , 100-114.	1.3	37
34	Coherent inverse scattering via transmission matrices: Efficient phase retrieval algorithms and a public dataset. , 2017, , .		36
35	In vivo lensless microscopy via a phase mask generating diffraction patterns with high-contrast contours. <i>Nature Biomedical Engineering</i> , 2022, 6, 617-628.	22.5	35
36	Convolutional Approximations to the General Non-Line-of-Sight Imaging Operator. , 2019, , .		34

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37	FlatNet: Towards Photorealistic Scene Reconstruction from Lensless Measurements. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2020, PP, 1-1.	13.9	33
38	3D Imaging Using Extreme Dispersion in Optical Metasurfaces. ACS Photonics, 2021, 8, 1421-1429.	6.6	31
39	Imaging through plasmonic nanoparticles. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 5558-5563.	7.1	27
40	Advances in Video-Based Human Activity Analysis. Advances in Computers, 2010, 80, 237-290.	1.6	26
41	A Framework for Analysis of Computational Imaging Systems: Role of Signal Prior, Sensor Noise and Multiplexing. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2014, 36, 1909-1921.	13.9	26
42	Near-Infrared Imaging Photoplethysmography During Driving. IEEE Transactions on Intelligent Transportation Systems, 2022, 23, 3589-3600.	8.0	26
43	Towards Motion Aware Light Field Video for Dynamic Scenes. , 2013, , .		25
44	Absorption-Induced Image Resolution Enhancement in Scattering Media. ACS Photonics, 2016, 3, 1787-1793.	6.6	24
45	A Survey on Smart Homes for Aging in Place: Toward Solutions to the Specific Needs of the Elderly. IEEE Signal Processing Magazine, 2018, 35, 111-119.	5.6	24
46	Axial light field for curved mirrors: Reflect your perspective, widen your view. , 2010, , .		21
47	SNLOS: Non-line-of-sight Scanning through Temporal Focusing. , 2019, , .		21
48	High Resolution, Deep Imaging Using Confocal Time-of-Flight Diffuse Optical Tomography. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2021, 43, 2206-2219.	13.9	21
49	Bioluminescent flashes drive nighttime schooling behavior and synchronized swimming dynamics in flashlight fish. PLoS ONE, 2019, 14, e0219852.	2.5	20
50	PulseCam: a camera-based, motion-robust and highly sensitive blood perfusion imaging modality. Scientific Reports, 2020, 10, 4825.	3.3	19
51	HRVCam: robust camera-based measurement of heart rate variability. Journal of Biomedical Optics, 2021, 26, .	2.6	19
52	Reinterpretable Imager: Towards Variable Post-capture Space, Angle and Time Resolution in Photography. Computer Graphics Forum, 2010, 29, 763-772.	3.0	16
53	Learning from Noisy Web Data with Category-Level Supervision. , 2018, , .		16
54	Inverse Scattering via Transmission Matrices: Broadband Illumination and Fast Phase Retrieval Algorithms. IEEE Transactions on Computational Imaging, 2020, 6, 95-108.	4.4	14

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55	Variable focus video: Reconstructing depth and video for dynamic scenes. , 2012, , .		13
56	Deep imaging in scattering media with selective plane illumination microscopy. Journal of Biomedical Optics, 2016, 21, 126009.	2.6	13
57	Depth Fields: Extending Light Field Techniques to Time-of-Flight Imaging. , 2015, , .		12
58	FaceEngage: Robust Estimation of Gameplay Engagement from User-Contributed (YouTube) Videos. IEEE Transactions on Affective Computing, 2022, 13, 651-665.	8.3	12
59	SASSI " Super-Pixelated Adaptive Spatio-Spectral Imaging. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2021, 43, 2233-2244.	13.9	11
60	Non-refractive modulators for encoding and capturing scene appearance and depth. , 2008, , .		10
61	What does a single light-ray reveal about a transparent object?. , 2015, , .		8
62	Systematic analysis of video-based pulse measurement from compressed videos. Biomedical Optics Express, 2021, 12, 494.	2.9	8
63	Ultrafast and Ultrahigh-Resolution Diffuse Optical Tomography for Brain Imaging with Sensitivity Equation based Noniterative Sparse Optical Reconstruction (SENSOR). Journal of Quantitative Spectroscopy and Radiative Transfer, 2021, 276, 107939.	2.3	7
64	CodedStereo: Learned Phase Masks for Large Depth-of-field Stereo. , 2021, , .		7
65	A Mechanically Flexible, Implantable Neural Interface for Computational Imaging and Optogenetic Stimulation Over 5.4Å—5.4mm <sup>2</sup> FoV. IEEE Transactions on Biomedical Circuits and Systems, 2021, 15, 1295-1305.	4.0	7
66	FreeCam3D: Snapshot Structured Light 3D with Freely-Moving Cameras. Lecture Notes in Computer Science, 2020, , 309-325.	1.3	6
67	An Objective System for Quantitative Assessment of Television Viewing Among Children (Family Level) Tj ETQq1 1 0.784314 rgBT /Over Parenting, 2022, 5, e33569.	1.6	6
68	PPGMotion: Model-based detection of motion artifacts in photoplethysmography signals. Biomedical Signal Processing and Control, 2022, 75, 103632.	5.7	6
69	mobileVision. , 2014, , .		5
70	Integrated light-sheet illumination using metallic slit microlenses. Optics Express, 2018, 26, 27326.	3.4	5
71	Deep-3D microscope: 3D volumetric microscopy of thick scattering samples using a wide-field microscope and machine learning. Biomedical Optics Express, 2022, 13, 284.	2.9	5
72	19.2 A Mechanically Flexible Implantable Neural Interface for Computational Imaging and Optogenetic Stimulation over 5.4Å—5.4 mm <sup>2</sup> FoV. , 2021, , .		4

#	ARTICLE	IF	CITATIONS
73	High coupling efficiency, passive alignment setup for visible-range fiber-to-waveguide edge coupling. Journal of Nanophotonics, 2020, 14, .	1.0	4
74	Combining Magnification and Measurement for Non-Contact Cardiac Monitoring. , 2021, , .		3
75	Deep optics. , 2020, , .		3
76	Fast Retinomorphing Event-Driven Representations for Video Gameplay and Action Recognition. IEEE Transactions on Computational Imaging, 2020, 6, 276-290.	4.4	2
77	3PointTM: Faster Measurement of High-Dimensional Transmission Matrices. Lecture Notes in Computer Science, 2020, , 310-326.	1.3	2
78	SACoD: Sensor Algorithm Co-Design Towards Efficient CNN-powered Intelligent PhlatCam. , 2021, , .		2
79	EDoF-ToF: extended depth of field time-of-flight imaging. Optics Express, 2021, 29, 38540-38556.	3.4	1
80	Compressive Sensing for Video Applications. Academic Press Library in Signal Processing, 2014, 4, 583-607.	0.8	0
81	Computational photography. , 2018, , 213-235.		0
82	Wavefront sensing based depth sensor for macroscopic objects. , 2020, , .		0
83	Bio-FlatScope: a flat, lensless microscope for fluorescence imaging. , 2021, , .		0
84	On-Chip Optical and Analog Processing in 180nm CMOS for Holography. , 2020, , .		0
85	Measuring physiological parameters under the skin using visible/NIR light. , 2022, , .		0