Nassir Navab

List of Publications by Citations

429 papers	12,481 citations	52 h-index	99 g-index
482 ext. papers	15,871 ext. citations	5.9 avg, IF	6.72 L-index

#	Paper	IF	Citations
429	Diagnostic Assessment of Deep Learning Algorithms for Detection of Lymph Node Metastases in Women With Breast Cancer. *JAMA - Journal of the American Medical Association*, **2017**, 318, 2199-2210	27.4	1165
428	Tissue classification as a potential approach for attenuation correction in whole-body PET/MRI: evaluation with PET/CT data. *Journal of Nuclear Medicine*, **2009**, 50, 520-6	8.9	580
427	Model globally, match locally: Efficient and robust 3D object recognition **2010**,		397
426	Evaluation of registration methods on thoracic CT: the EMPIRE10 challenge. *IEEE Transactions on Medical Imaging*, **2011**, 30, 1901-20	11.7	311
425	AggNet: Deep Learning From Crowds for Mitosis Detection in Breast Cancer Histology Images. *IEEE Transactions on Medical Imaging*, **2016**, 35, 1313-21	11.7	310
424	Dense image registration through MRFs and efficient linear programming. *Medical Image Analysis*, **2008**, 12, 731-41	15.4	287
423	ReLayNet: retinal layer and fluid segmentation of macular optical coherence tomography using fully convolutional networks. *Biomedical Optics Express*, **2017**, 8, 3627-3642	3.5	277
422	Automatic CT-ultrasound registration for diagnostic imaging and image-guided intervention. *Medical Image Analysis*, **2008**, 12, 577-85	15.4	241
421	Structure-Preserving Color Normalization and Sparse Stain Separation for Histological Images. *IEEE Transactions on Medical Imaging*, **2016**, 35, 1962-71	11.7	230
420	Multimodal templates for real-time detection of texture-less objects in heavily cluttered scenes **2011**,		219
419	Hough-CNN: Deep learning for segmentation of deep brain regions in MRI and ultrasound. *Computer Vision and Image Understanding*, **2017**, 164, 92-102	4.3	196
418	Advanced Medical Displays: A Literature Review of Augmented Reality. *Journal of Display Technology*, **2008**, 4, 451-467		183
417	Statistical modeling and recognition of surgical workflow. *Medical Image Analysis*, **2012**, 16, 632-41	15.4	163
416	Surgical data science for next-generation interventions. *Nature Biomedical Engineering*, **2017**, 1, 691-696	19	162
415	Patient-specific modeling and quantification of the aortic and mitral valves from 4-D cardiac CT and TEE. *IEEE Transactions on Medical Imaging*, **2010**, 29, 1636-51	11.7	147
414	Prostate-specific membrane antigen-radioguided surgery for metastatic lymph nodes in prostate cancer. *European Urology*, **2015**, 68, 530-4	10.2	143
413	Human skeleton tracking from depth data using geodesic distances and optical flow. *Image and Vision Computing*, **2012**, 30, 217-226	3.7	141

412	First demonstration of 3-D lymphatic mapping in breast cancer using freehand SPECT. *European Journal of Nuclear Medicine and Molecular Imaging*, **2010**, 37, 1452-61	8.8	134
411	Enhanced 3-D-reconstruction algorithm for C-arm systems suitable for interventional procedures. *IEEE Transactions on Medical Imaging*, **2000**, 19, 391-403	11.7	129
410	Dominant orientation templates for real-time detection of texture-less objects **2010**,		118
409	Camera augmented mobile C-arm (CAMC): calibration, accuracy study, and clinical applications. *IEEE Transactions on Medical Imaging*, **2010**, 29, 1412-23	11.7	109
408	Entropy and Laplacian images: structural representations for multi-modal registration. *Medical Image Analysis*, **2012**, 16, 1-17	15.4	108
407	Artifacts from misaligned CT in cardiac perfusion PET/CT studies: frequency, effects, and potential solutions. *Journal of Nuclear Medicine*, **2007**, 48, 188-93	8.9	100
406	A BaSiC tool for background and shading correction of optical microscopy images. *Nature Communications*, **2017**, 8, 14836	17.4	99
405	3D Pictorial Structures for Multiple Human Pose Estimation **2014**,		96
404	mirracle: An augmented reality magic mirror system for anatomy education **2012**,		94
403	Motor Rehabilitation Using Kinect: A Systematic Review. *Games for Health Journal*, **2015**, 4, 123-35	4.2	93
402	Prediction of overall survival for patients with metastatic castration-resistant prostate cancer: development of a prognostic model through a crowdsourced challenge with open clinical trial data. *Lancet Oncology, The*, **2017**, 18, 132-142	21.7	90
401	QuickNAT: A fully convolutional network for quick and accurate segmentation of neuroanatomy. *NeuroImage*, **2019**, 186, 713-727	7.9	90
400	A state-of-the-art review on segmentation algorithms in intravascular ultrasound (IVUS) images. *IEEE Transactions on Information Technology in Biomedicine*, **2012**, 16, 823-34		89
399	Staingan: Stain Style Transfer for Digital Histological Images **2019**,		87
398	Intraoperative laparoscope augmentation for port placement and resection planning in minimally invasive liver resection. *IEEE Transactions on Medical Imaging*, **2008**, 27, 355-69	11.7	87
397	Personalized augmented reality for anatomy education. *Clinical Anatomy*, **2016**, 29, 446-53	2.5	85
396	Ultrasound confidence maps using random walks. *Medical Image Analysis*, **2012**, 16, 1101-12	15.4	82
395	Towards MRI-Based Autonomous Robotic US Acquisitions: A First Feasibility Study. *IEEE Transactions on Medical Imaging*, **2017**, 36, 538-548	11.7	77

394	Adaptive neighborhood selection for real-time surface normal estimation from organized point cloud data using integral images **2012**,		75
393	Joint reconstruction of image and motion in gated positron emission tomography. *IEEE Transactions on Medical Imaging*, **2010**, 29, 1892-906	11.7	73
392	Automatic Segmentation of Kidneys using Deep Learning for Total Kidney Volume Quantification in Autosomal Dominant Polycystic Kidney Disease. *Scientific Reports*, **2017**, 7, 2049	4.9	72
391	Developing killer apps for industrial augmented reality. *IEEE Computer Graphics and Applications*, **2004**, 24, 16-20	1.7	71
390	GANs for medical image analysis. *Artificial Intelligence in Medicine*, **2020**, 109, 101938	7.4	67
389	Automatic ultrasound-MRI registration for neurosurgery using the 2D and 3D LC(2) Metric. *Medical Image Analysis*, **2014**, 18, 1312-9	15.4	65
388	Manifold learning for image-based breathing gating in ultrasound and MRI. *Medical Image Analysis*, **2012**, 16, 806-18	15.4	65
387	Relative affine structure: canonical model for 3D from 2D geometry and applications. *IEEE Transactions on Pattern Analysis and Machine Intelligence*, **1996**, 18, 873-883	13.3	65
386	First Deployments of Augmented Reality in Operating Rooms. *Computer*, **2012**, 45, 48-55	1.6	64
385	The virtual mirror: a new interaction paradigm for augmented reality environments. *IEEE Transactions on Medical Imaging*, **2009**, 28, 1498-510	11.7	64
384	Single-Point Active Alignment Method (SPAAM) for Optical See-Through HMD Calibration for Augmented Reality. *Presence: Teleoperators and Virtual Environments*, **2002**, 11, 259-276	2.9	63
383	Automatic segmentation of calcified plaques and vessel borders in IVUS images. *International Journal of Computer Assisted Radiology and Surgery*, **2008**, 3, 347-354	3.9	61
382	Deformable 2D-3D registration of vascular structures in a one view scenario. *IEEE Transactions on Medical Imaging*, **2009**, 28, 847-60	11.7	60
381	Visualization and GPU-accelerated simulation of medical ultrasound from CT images. *Computer Methods and Programs in Biomedicine*, **2009**, 94, 250-66	6.9	60
380	Segmentation by retrieval with guided random walks: application to left ventricle segmentation in MRI. *Medical Image Analysis*, **2013**, 17, 236-53	15.4	56
379	An Augmented Reality magic mirror as additive teaching device for gross anatomy. *Annals of Anatomy*, **2018**, 215, 71-77	2.9	54
378	Workflow mining for visualization and analysis of surgeries. *International Journal of Computer Assisted Radiology and Surgery*, **2008**, 3, 379-386	3.9	53
377	Comparison of optical see-through head-mounted displays for surgical interventions with object-anchored 2D-display. *International Journal of Computer Assisted Radiology and Surgery*, **2017**, 12, 901-910	3.9	51

376	Magneto-optical tracking of flexible laparoscopic ultrasound: model-based online detection and correction of magnetic tracking errors. *IEEE Transactions on Medical Imaging*, **2009**, 28, 951-67	11.7	51
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374	CAI4CAI: The Rise of Contextual Artificial Intelligence in Computer Assisted Interventions. *Proceedings of the IEEE*, **2020**, 108, 198-214	14.3	50
373	Complete valvular heart apparatus model from 4D cardiac CT. *Medical Image Analysis*, **2012**, 16, 1003-14	15.4	49
372	Action- and workflow-driven augmented reality for computer-aided medical procedures. *IEEE Computer Graphics and Applications*, **2007**, 27, 10-4	1.7	49
371	Multimodal image-guided prostate fusion biopsy based on automatic deformable registration. *International Journal of Computer Assisted Radiology and Surgery*, **2015**, 10, 1997-2007	3.9	48
370	The Benefits of an Augmented Reality Magic Mirror System for Integrated Radiology Teaching in Gross Anatomy. *Anatomical Sciences Education*, **2019**, 12, 585-598	6.8	45
369	Simulation and fully automatic multimodal registration of medical ultrasound. *Lecture Notes in Computer Science*, **2007**, 10, 136-43	0.9	45
368	Computer-assisted surgery: virtual- and augmented-reality displays for navigation during urological interventions. *Current Opinion in Urology*, **2018**, 28, 205-213	2.8	44
367	When 2.5D is not enough: Simultaneous reconstruction, segmentation and recognition on dense SLAM **2016**,		44
366	Image guided percutaneous spine procedures using an optical see-through head mounted display: proof of concept and rationale. *Journal of NeuroInterventional Surgery*, **2018**, 10, 1187-1191	7.8	43
365	Bayesian QuickNAT: Model uncertainty in deep whole-brain segmentation for structure-wise quality control. *NeuroImage*, **2019**, 195, 11-22	7.9	41
364	Applicability of augmented reality in orthopedic surgery - A systematic review. *BMC Musculoskeletal Disorders*, **2020**, 21, 103	2.8	41
363	Semi-supervised Deep Learning for Fully Convolutional Networks. *Lecture Notes in Computer Science*, **2017**, 311-319	0.9	41
362	MirrARbilitation: A clinically-related gesture recognition interactive tool for an AR rehabilitation system. *Computer Methods and Programs in Biomedicine*, **2016**, 135, 105-14	6.9	40
361	Efficient visual hull computation for real-time 3D reconstruction using CUDA **2008**,		40
360	Estimating human 3D pose from Time-of-Flight images based on geodesic distances and optical flow **2011**,		37
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355	. *IEEE Pervasive Computing*, **2003**, 2, 65-70	1.3	35
354	Automatic force-compliant robotic ultrasound screening of abdominal aortic aneurysms **2016**,		35
353	Preclinical usability study of multiple augmented reality concepts for K-wire placement. *International Journal of Computer Assisted Radiology and Surgery*, **2016**, 11, 1007-14	3.9	34
352	Optical flow estimation with uncertainties through dynamic MRFs **2008**,		34
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350	On-the-fly augmented reality for orthopedic surgery using a multimodal fiducial. *Journal of Medical Imaging*, **2018**, 5, 021209	2.6	34
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348	'Squeeze & excite' guided few-shot segmentation of volumetric images. *Medical Image Analysis*, **2020**, 59, 101587	15.4	34
347	Linear intensity-based image registration by Markov random fields and discrete optimization. *Medical Image Analysis*, **2010**, 14, 550-62	15.4	33
346	Parallax-free intra-operative X-ray image stitching. *Medical Image Analysis*, **2010**, 14, 674-86	15.4	32
345	A new approach for improving coronary plaque component analysis based on intravascular ultrasound images. *Ultrasound in Medicine and Biology*, **2010**, 36, 1245-58	3.5	30
344	Electromagnetic servoing-a new tracking paradigm. *IEEE Transactions on Medical Imaging*, **2013**, 32, 1526-35	11.7	29
343	Kinect for interactive AR anatomy learning **2013**,		28
342	Recovering the X-ray projection geometry for three-dimensional tomographic reconstruction with additional sensors: attached camera versus external navigation system. *Medical Image Analysis*, **2003**, 7, 65-78	15.4	28
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339	3D intra-operative ultrasound and MR image guidance: pursuing an ultrasound-based management of brainshift to enhance neuronavigation. *International Journal of Computer Assisted Radiology and Surgery*, **2017**, 12, 1711-1725	3.9	27
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337	Real-time localization of articulated surgical instruments in retinal microsurgery. *Medical Image Analysis*, **2016**, 34, 82-100	15.4	27
336	Sampling-Free Epistemic Uncertainty Estimation Using Approximated Variance Propagation **2019**,		27
335	Enhancement of Anatomical Education Using Augmented Reality: An Empirical Study of Body Painting. *Anatomical Sciences Education*, **2019**, 12, 599-609	6.8	27
334	Convolutional neural networks for real-time epileptic seizure detection. *Computer Methods in Biomechanics and Biomedical Engineering: Imaging and Visualization*, **2018**, 6, 264-269	0.9	26
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325	Three-dimensional sonographic examination of the midbrain for computer-aided diagnosis of movement disorders. *Ultrasound in Medicine and Biology*, **2012**, 38, 2041-50	3.5	24
324	Online learning of patch perspective rectification for efficient object detection **2008**,		24
323	N3M: Natural 3D Markers for Real-Time Object Detection and Pose Estimation **2007**,		24

322	Multi-modal imaging, model-based tracking, and mixed reality visualisation for orthopaedic surgery. *Healthcare Technology Letters*, **2017**, 4, 168-173	1.9	23
321	Calibration of RGBD camera and cone-beam CT for 3D intra-operative mixed reality visualization. *International Journal of Computer Assisted Radiology and Surgery*, **2016**, 11, 967-75	3.9	23
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315	Closed-form inverse kinematics for interventional C-arm X-ray imaging with six degrees of freedom: modeling and application. *IEEE Transactions on Medical Imaging*, **2012**, 31, 1086-99	11.7	21
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309	Peeking behind objects: Layered depth prediction from a single image. *Pattern Recognition Letters*, **2019**, 125, 333-340	4.7	20
308	Direct Parametric Image Reconstruction in Reduced Parameter Space for Rapid Multi-Tracer PET Imaging. *IEEE Transactions on Medical Imaging*, **2015**, 34, 1498-1512	11.7	20
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306	Optimization of ultrasound image quality via visual servoing **2015**,		20
305	EndoTOFPET-US: a novel multimodal tool for endoscopy and positron emission tomography. *Journal of Instrumentation*, **2013**, 8, C04002-C04002	1	20

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303	Closing the Calibration Loop: An Inside-Out-Tracking Paradigm for Augmented Reality in Orthopedic Surgery. *Lecture Notes in Computer Science*, **2018**, 299-306	0.9	20
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295	Patient 3D body pose estimation from pressure imaging. *International Journal of Computer Assisted Radiology and Surgery*, **2019**, 14, 517-524	3.9	19
294	Augmented reality-based feedback for technician-in-the-loop C-arm repositioning. *Healthcare Technology Letters*, **2018**, 5, 143-147	1.9	19
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278	Trajectory planning with Augmented Reality for improved risk assessment in image-guided keyhole neurosurgery **2011**,		16
277	Simultaneous categorical and spatio-temporal 3D gestures using Kinect **2012**,		16
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