Elvis C S Chen

List of Publications by Year
in descending order

95 papers	643 citations	623188 14 h-index	713013 21 g-index
98 all docs	98 docs citations	98 times ranked	659 citing authors

#	Article	IF	Citations
1	Training for Planning Tumour Resection: Augmented Reality and Human Factors. IEEE Transactions on Biomedical Engineering, 2015, 62, 1466-1477.	2.5	65
2	Hologram stability evaluation for Microsoft HoloLens. Proceedings of SPIE, 2017, , .	0.8	36
3	Registration of 3D shapes under anisotropic scaling. International Journal of Computer Assisted Radiology and Surgery, 2015, 10, 867-878.	1.7	26
4	First Prize: A Phantom Model as a Teaching Modality for Laparoscopic Partial Nephrectomy. Journal of Endourology, 2012, 26, 1-5.	1.1	25
5	Guided ultrasound calibration: where, how, and how many calibration fiducials. International Journal of Computer Assisted Radiology and Surgery, 2016, 11, 889-898.	1.7	25
6	Mixed reality ultrasound guidance system: a case study in system development and a cautionary tale. International Journal of Computer Assisted Radiology and Surgery, 2018, 13, 495-505.	1.7	23
7	Automatic segmentation of the carotid artery and internal jugular vein from 2D ultrasound images for 3D vascular reconstruction. International Journal of Computer Assisted Radiology and Surgery, 2020, 15, 1835-1846.	1.7	22
8	Feasibility of Real-Time Workflow Segmentation for Tracked Needle Interventions. IEEE Transactions on Biomedical Engineering, 2014, 61, 1720-1728.	2.5	20
9	A Global Optimization Method for Specular Highlight Removal From a Single Image. IEEE Access, 2019, 7, 125976-125990.	2.6	20
10	Hand-eye calibration for surgical cameras: a Procrustean Perspective-n-Point solution. International Journal of Computer Assisted Radiology and Surgery, 2017, 12, 1141-1149.	1.7	17
11	Endoscopic image enhancement with noise suppression. Healthcare Technology Letters, 2018, 5, 154-157.	1.9	17
12	A computational model of postoperative knee kinematics. Medical Image Analysis, 2001, 5, 317-330.	7.0	15
13	Ultrasound guided spine needle insertion. Proceedings of SPIE, 2010, , .	0.8	15
14	Development and Evaluation of an Augmented Reality Ultrasound Guidance System for Spinal Anesthesia: Preliminary Results. Ultrasound in Medicine and Biology, 2019, 45, 2736-2746.	0.7	15
15	Accuracy assessment for the co-registration between optical and VIVE head-mounted display tracking. International Journal of Computer Assisted Radiology and Surgery, 2019, 14, 1207-1215.	1.7	15
16	Robust Intraoperative US Probe Tracking Using a Monocular Endoscopic Camera. Lecture Notes in Computer Science, 2013, 16, 363-370.	1.0	15
17	Using Registration Uncertainty Visualization in a User Study of a Simple Surgical Task. Lecture Notes in Computer Science, 2006, 9, 397-404.	1.0	12
18	Biomechanically Constrained Groupwise US to CT Registration of the Lumbar Spine. Lecture Notes in Computer Science, 2009, 12, 803-810.	1.0	12

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19	Towards real-time 3D US-CT registration on the beating heart for guidance of minimally invasive cardiac interventions. Proceedings of SPIE, 2012, , .	0.8	11
20	Detection and visualization of dural pulsation for spine needle interventions. International Journal of Computer Assisted Radiology and Surgery, 2015, 10, 947-958.	1.7	11
21	Handâ€“eye calibration using a target registration error model. Healthcare Technology Letters, 2017, 4, 157-162.	1.9	11
22	A Robust Edge-Preserving Stereo Matching Method for Laparoscopic Images. IEEE Transactions on Medical Imaging, 2022, 41, 1651-1664.	5.4	11
23	A simple, realistic walled phantom for intravascular and intracardiac applications. International Journal of Computer Assisted Radiology and Surgery, 2020, 15, 1513-1523.	1.7	10
24	The Role of Augmented Reality in Training the Planning of Brain Tumor Resection. Lecture Notes in Computer Science, 2013, , 241-248.	1.0	10
25	Deep learning approach for automatic outâ€ofâ€plane needle localisation for semiâ€automatic ultrasound probe calibration. Healthcare Technology Letters, 2019, 6, 204-209.	1.9	10
26	A prospective, randomized assessment of a spatial orientation device in natural orifice transluminal endoscopic surgery. Gastrointestinal Endoscopy, 2011, 73, 123-127.	0.5	9
27	Contact-less stylus for surgical navigation: registration without digitization. International Journal of Computer Assisted Radiology and Surgery, 2017, 12, 1231-1241.	1.7	9
28	Robust, Intrinsic Tracking of a Laparoscopic Ultrasound Probe for Ultrasound-Augmented Laparoscopy. IEEE Transactions on Medical Imaging, 2019, 38, 460-469.	5.4	9
29	Towards a First-Person Perspective Mixed Reality Guidance System for Needle Interventions. Journal of Imaging, 2022, 8, 7.	1.7	9
30	Endoscopic Laser Surface Scanner for Minimally Invasive Abdominal Surgeries. Lecture Notes in Computer Science, 2018, , 143-150.	1.0	8
31	An augmented reality platform for planning of minimally invasive cardiac surgeries. , 2012, , .		7
32	Line fiducial material and thickness considerations for ultrasound calibration. , 2015, , .		6
33	The Effects of Positioning on the Volume/Location of the Internal Jugular Vein Using 2-Dimensional Tracked Ultrasound. Journal of Cardiothoracic and Vascular Anesthesia, 2020, 34, 920-925.	0.6	6
34	Feature-based US to CT registration of the aortic root. Proceedings of SPIE, 2011, , .	0.8	5
35	Predicting Target Vessel Location for Improved Planning of Robot-Assisted CABG Procedures. Lecture Notes in Computer Science, 2010, 13, 205-212.	1.0	5
36	Acoustic characterization of polyvinyl chloride and self-healing silicone as phantom materials. Proceedings of SPIE, 2015, , .	0.8	4

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37	Optimization-based interactive segmentation interface for multiregion problems. Journal of Medical Imaging, 2016, 3, 024003.	0.8	4
38	Image-Guided Procedures. , 2016, , 59-90.		4
39	Which point-line registration?. , 2017, , .		4
40	DeepMitral: Fully Automatic 3D Echocardiography Segmentation for Patient Specific Mitral Valve Modelling. Lecture Notes in Computer Science, 2021, , 459-468.	1.0	4
41	Towards a Mixed-Reality First Person Point of View Needle Navigation System. Lecture Notes in Computer Science, 2019, , 245-253.	1.0	4
42	Is pose-based pivot calibration superior to sphere fitting?. Proceedings of SPIE, 2017, , .	0.8	4
43	Representing flexible endoscope shapes with hermite splines. Proceedings of SPIE, 2010, , .	0.8	3
44	Preliminary Assessment of a Renal Tumor Materials Model. Journal of Endourology, 2011, 25, 1371-1375.	1.1	3
45	GPU accelerated registration of a statistical shape model of the lumbar spine to 3D ultrasound images. Proceedings of SPIE, 2011, , .	0.8	3
46	Predicting target vessel location on robot-assisted coronary artery bypass graft using CT to ultrasound registration. Medical Physics, 2012, 39, 1579-1587.	1.6	3
47	Use of a Mixed-Reality System to Improve the Planning of Brain Tumour Resections: Preliminary Results. Lecture Notes in Computer Science, 2013, , 55-66.	1.0	3
48	Solving for free-hand and real-time 3D ultrasound calibration with anisotropic orthogonal Procrustes analysis. , 2014, , .		3
49	Characterization of various tissue mimicking materials for medical ultrasound imaging. Proceedings of SPIE, 2016, , .	0.8	3
50	External tracking devices and tracked tool calibration. , 2020, , 777-794.		3
51	Ligament Strains Predict Knee Motion After Total Joint Replacement. Lecture Notes in Computer Science, 2005, 8, 770-777.	1.0	3
52	Simultaneous Estimation of Feature Correspondence and Stereo Object Pose with Application to Ultrasound Augmented Robotic Laparoscopy. Lecture Notes in Computer Science, 2015, , 134-144.	1.0	3
53	Augmented Reality Ultrasound Guidance for Central Line Procedures: Preliminary Results. Lecture Notes in Computer Science, 2015, , 11-20.	1.0	3
54	Laparoscopic image enhancement based on distributed retinex optimization with refined information fusion. Neurocomputing, 2022, 483, 460-473.	3.5	3

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55	Patient-specific, dynamic models of hypoplastic left heart syndrome tricuspid valves for simulation and planning. , 2020, , .		3
56	Navigated simulator for spinal needle interventions. Studies in Health Technology and Informatics, 2014, 196, 56-60.	0.2	3
57	Computation and Validation of Intra- operative Camera Uncertainty. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2007, 2007, 479-82.	0.5	2
58	A unified framework for voxel classification and triangulation. , 2011, , .		2
59	Synthetic aperture imaging in ultrasound calibration. Proceedings of SPIE, 2014, , .	0.8	2
60	Optimization-based interactive segmentation interface for multi-region problems. , 2015, , .		2
61	Estimation of line-based target registration error. , 2016, , .		2
62	Multi-view 3D echocardiography volume compounding for mitral valve procedure planning. , 2020, , .		2
63	Signal dropout correction-based ultrasound segmentation for diastolic mitral valve modeling. Journal of Medical Imaging, 2018, 5, 1.	0.8	2
64	The effect of imaging and tracking parameters on ultrasound probe calibration robustness. , 2019, , .		2
65	Towards electromagnetic tracking of J-tip guidewire: precision assessment of sensors during bending tests. , 2020, , .		2
66	3D US-Based Evaluation and Optimization of Tumor Coverage for US-Guided Percutaneous Liver Thermal Ablation. IEEE Transactions on Medical Imaging, 2022, 41, 3344-3356.	5.4	2
67	Investigating Perioperative Heart Migration during Robot-Assisted Coronary Artery Bypass Grafting Interventions. Innovations: Technology and Techniques in Cardiothoracic and Vascular Surgery, 2011, 6, 323-330.	0.4	1
68	Quantitative Analysis of Needle Navigation under Ultrasound Guidance in s Simulated Central Venous Line Procedure. Ultrasound in Medicine and Biology, 2018, 44, 1891-1900.	0.7	1
69	Quantitative Assessments for Ultrasound Probe Calibration. Lecture Notes in Computer Science, 2021, , 363-372.	1.0	1
70	An Iterative Closest Point Framework for Ultrasound Calibration. Lecture Notes in Computer Science, 2015, , 69-79.	1.0	1
71	Applications of VR medical image visualization to chordal length measurements for cardiac procedures. , 2020, , .		1
72	Ultrasound calibration for unique 2.5D conical images. , 2019, , .		1

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73	Miniature C-arm simulator using wireless accelerometer based tracking. , 2020, , .		1
74	A co-calibration framework for the accuracy assessment of vision-based tracking systems. , 2022, , .		1
75	Toward Fluoro-Free Interventions: Using Radial Intracardiac Ultrasound for Vascular Navigation. Ultrasound in Medicine and Biology, 2022, 48, 1290-1298.	0.7	1
76	Multi-View 3D Transesophageal Echocardiography Registration and Volume Compounding for Mitral Valve Procedure Planning. Applied Sciences (Switzerland), 2022, 12, 4562.	1.3	1
77	3D localization of vena contracta using Doppler ICE imaging in tricuspid valve interventions. International Journal of Computer Assisted Radiology and Surgery, 2022, 17, 1569-1577.	1.7	1
78	Intra-operative prostate motion tracking using surface markers for robot-assisted laparoscopic radical prostatectomy. Proceedings of SPIE, 2012, , .	0.8	0
79	P.012 Spinal durotomy repair simulator for deliberate microsurgical practice: integration into a residency training module. Canadian Journal of Neurological Sciences, 2016, 43, S24-S24.	0.3	0
80	Freehand 3D-US reconstruction with robust visual tracking with application to ultrasound-augmented laparoscopy. Proceedings of SPIE, 2016, , .	0.8	0
81	Effects of line fiducial parameters and beamforming on ultrasound calibration. Journal of Medical Imaging, 2017, 4, 015002.	0.8	0
82	IJCARSâ€"IPCAI 2019 special issue: conference information processing for computer-assisted interventions, 10th international conference 2019â€"part 1. International Journal of Computer Assisted Radiology and Surgery, 2019, 14, 911-912.	1.7	0
83	Interventional imaging: Ultrasound. , 2020, , 701-720.		0
84	Improving central line needle insertions using in-situ vascular reconstructions. Computer Methods in Biomechanics and Biomedical Engineering: Imaging and Visualization, 2021, 9, 363-369.	1.3	0
85	Special issue on 2020 augmented environments for computer-assisted interventions (AE-CAI): guest editorsâ€™ foreword. Computer Methods in Biomechanics and Biomedical Engineering: Imaging and Visualization, 2021, 9, 217-218.	1.3	0
86	An Inverse Kinematics Model For Post-operative Knee. Lecture Notes in Computer Science, 2006, 9, 313-320.	1.0	0
87	A Prospective Randomized Assessment of a Spatial Orientation Device in Natural Orifice Translumenal Endoscopic Surgery (NOTES). American Journal of Gastroenterology, 2009, 104, S534.	0.2	0
88	Augmented Environments for Computer-Assisted Interventions. Lecture Notes in Computer Science, 2012, , .	1.0	0
89	CT-US Registration for Guidance of Transcatheter Aortic Valve Implantation. Lecture Notes in Computer Science, 2012, , 85-92.	1.0	0
90	Real-Time 3D Ultrasound Reconstruction and Visualization in the Context of Laparoscopy. Lecture Notes in Computer Science, 2017, , 602-609.	1.0	0

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91	Special issue on 2021 augmented environments for computer-assisted interventions (AE-CAI): guest editorsâ€™ foreword. Computer Methods in Biomechanics and Biomedical Engineering: Imaging and Visualization, 0, , 1-2.	1.3	0
92	Flexible architecture and modularity requirements for image guided cardiovascular surgeries. , 2010, , .		0
93	Cubic and Hermite splines for VTK. , 2016, , .		0
94	Towards ultrasound-based navigation: deep learning based IVC lumen segmentation from intracardiac echocardiography. , 2022, , .		0
95	Development of a multi-modal liver phantom with flow for the validation and training of focal ablation procedures. , 2022, , .		0