Vincenzo Ferrari

List of Publications by Year in Descending Order

121 papers	1,967 citations	22 h-index	39 g-index
132 ext. papers	2,574 ext. citations	2.6 avg, IF	5.2 L-index

#	Paper	IF	Citations
121	Key Ergonomics Requirements and Possible Mechanical Solutions for Augmented Reality Head-Mounted Displays in Surgery. *Multimodal Technologies and Interaction*, **2022**, 6, 15	1.7	0
120	Architecture of a Hybrid Video/Optical See-through Head-Mounted Display-Based Augmented Reality Surgical Navigation Platform. *Information (Switzerland)*, **2022**, 13, 81	2.6	1
119	Wearable AR and 3D Ultrasound: Towards a Novel Way to Guide Surgical Dissections. *IEEE Access*, **2021**, 9, 156746-156757	3.5	1
118	Projected Augmented Reality to Guide Manual Precision Tasks: An Alternative to Head Mounted Displays. *IEEE Transactions on Human-Machine Systems*, **2021**, 1-11	4.1	0
117	Augmented Reality, Mixed Reality, and Hybrid Approach in Healthcare Simulation: A Systematic Review. *Applied Sciences (Switzerland)*, **2021**, 11, 2338	2.6	11
116	Hybrid Simulation and Planning Platform for Cryosurgery with Microsoft HoloLens. *Sensors*, **2021**, 21,	3.8	4
115	ValveTech: A Novel Robotic Approach for Minimally Invasive Aortic Valve Replacement. *IEEE Transactions on Biomedical Engineering*, **2021**, 68, 1238-1249	5	0
114	Evaluation of a Wearable AR Platform for Guiding Complex Craniotomies in Neurosurgery. *Annals of Biomedical Engineering*, **2021**, 49, 2590-2605	4.7	14
113	Can Liquid Lenses Increase Depth of Field in Head Mounted Video See-Through Devices?. *Journal of Imaging*, **2021**, 7,	3.1	1
112	In Situ Visualization for 3D Ultrasound-Guided Interventions with Augmented Reality Headset. *Bioengineering*, **2021**, 8,	5.3	5
111	Augmented Reality-Assisted Craniotomy for Parasagittal and Convexity En Plaque Meningiomas and Custom-Made Cranio-Plasty: A Preliminary Laboratory Report. *International Journal of Environmental Research and Public Health*, **2021**, 18,	4.6	11
110	Hybrid Spine Simulator Prototype for X-ray Free Pedicle Screws Fixation Training. *Applied Sciences (Switzerland)*, **2021**, 11, 1038	2.6	4
109	Wearable Augmented Reality Platform for Aiding Complex 3D Trajectory Tracing. *Sensors*, **2020**, 20,	3.8	17
108	Monitoring Wound Healing With Contactless Measurements and Augmented Reality. *IEEE Journal of Translational Engineering in Health and Medicine*, **2020**, 8, 2700412	3	6
107	Ambiguity-Free Optical-Inertial Tracking for Augmented Reality Headsets. *Sensors*, **2020**, 20,	3.8	9
106	Off-Line Camera-Based Calibration for Optical See-Through Head-Mounted Displays. *Applied Sciences (Switzerland)*, **2020**, 10, 193	2.6	5
105	. *IEEE Access*, **2020**, 8, 59015-59028	3.5	18

104	Bioreactor With Electrically Deformable Curved Membranes for Mechanical Stimulation of Cell Cultures. *Frontiers in Bioengineering and Biotechnology*, **2020**, 8, 22	5.8	10
103	Novel EM Guided Endovascular Instrumentation for In Situ Endograft Fenestration. *IEEE Journal of Translational Engineering in Health and Medicine*, **2020**, 8, 1900208	3	1
102	Parallax Free Registration for Augmented Reality OpticalSee-through Displays in the Peripersonal Space. *IEEE Transactions on Visualization and Computer Graphics*, **2020**, PP,	4	3
101	Interactive serious game for shoulder rehabilitation based on real-time hand tracking. *Technology and Health Care*, **2020**, 28, 403-414	1.1	2
100	SK-MOEFS: A Library in Python for Designing Accurate and Explainable Fuzzy Models. *Communications in Computer and Information Science*, **2020**, 68-81	0.3	0
99	. *IEEE Access*, **2020**, 8, 706-720	3.5	23
98	A preliminary quantitative EEG study on Augmented Reality Guidance of Manual Tasks **2020**,		2
97	The Wearable VOSTARS System for Augmented Reality-Guided Surgery: Preclinical Phantom Evaluation for High-Precision Maxillofacial Tasks. *Journal of Clinical Medicine*, **2020**, 9,	5.1	16
96	Definition of Proficiency Level by a Virtual Simulator as a First Step Toward a Curriculum on Fundamental Skills for Endovascular Aneurysm Repair (EVAR). *Journal of Surgical Education*, **2020**, 77, 1592-1597	3.4	3
95	Projected Augmented Reality to Drive Osteotomy Surgery: Implementation and Comparison With Video See-Through Technology. *IEEE Access*, **2020**, 8, 169024-169035	3.5	7
94	Optical See-Through Head-Mounted Displays With Short Focal Distance: Conditions for Mitigating Parallax-Related Registration Error. *Frontiers in Robotics and AI*, **2020**, 7, 572001	2.8	6
93	Perceptual Limits of Optical See-Through Visors for Augmented Reality Guidance of Manual Tasks. *IEEE Transactions on Biomedical Engineering*, **2020**, 67, 411-419	5	52
92	Review of the Augmented Reality Systems for Shoulder Rehabilitation. *Information (Switzerland)*, **2019**, 10, 154	2.6	15
91	In situ diode laser fenestration: An ex-vivo evaluation of irradiation effects on human aortic tissue. *Journal of Biophotonics*, **2019**, 12, e201900032	3.1	1
90	Computed-tomography image segmentation and 3D-reconstruction of the female pelvis for the preoperative planning of sacrocolpopexy: preliminary data. *International Urogynecology Journal*, **2019**, 30, 725-731	2	7
89	Proof of Concept: VR Rehabilitation Game for People with Shoulder Disorders. *Lecture Notes in Computer Science*, **2019**, 344-350	0.9	2
88	Low-Computational Cost Stitching Method in a Three-Eyed Endoscope. *Journal of Healthcare Engineering*, **2019**, 2019, 5613931	3.7	7
87	Towards the Development of a Quasi-Orthoscopic Hybrid Video/Optical See-Through HMD for Manual Tasks. *Lecture Notes in Computer Science*, **2019**, 170-178	0.9	

86	Software Framework for VR-Enabled Transcatheter Valve Implantation in Unity. *Lecture Notes in Computer Science*, **2019**, 376-384	0.9	2
85	The vostars project: a new wearable hybrid video and optical see-through augmented reality surgical system for maxillofacial surgery. *International Journal of Oral and Maxillofacial Surgery*, **2019**, 48, 153	2.9	4
84	Toed-in vs Parallel Displays in Video See-Through Head-Mounted Displays for Close-Up View. *IEEE Access*, **2019**, 7, 159698-159711	3.5	14
83	Wearable Augmented Reality Application for Shoulder Rehabilitation. *Electronics (Switzerland)*, **2019**, 8, 1178	2.6	13
82	Face, content, and construct validity of a simulator for training in endovascular procedures. *Minimally Invasive Therapy and Allied Technologies*, **2018**, 27, 315-320	2.1	6
81	Distribution of innate psychomotor skills recognized as important for surgical specialization in unconditioned medical undergraduates. *Surgical Endoscopy and Other Interventional Techniques*, **2018**, 32, 4087-4095	5.2	18
80	A Microsoft HoloLens Mixed Reality Surgical Simulator for Patient-Specific Hip Arthroplasty Training. *Lecture Notes in Computer Science*, **2018**, 201-210	0.9	11
79	Proof of Concept: Wearable Augmented Reality Video See-Through Display for Neuro-Endoscopy. *Lecture Notes in Computer Science*, **2018**, 95-104	0.9	1
78	Augmented reality in open surgery. *Updates in Surgery*, **2018**, 70, 389-400	2.9	49
77	Perspective Preserving Solution for Quasi-Orthoscopic Video See-Through HMDs. *Technologies*, **2018**, 6, 9	2.4	16
76	Proficiency-based training of medical students using virtual simulators for laparoscopy and robot-assisted surgery: results of a pilot study. *Updates in Surgery*, **2018**, 70, 401-405	2.9	10
75	A tele-ultrasonographic platform to collect specialist second opinion in less specialized hospitals. *Updates in Surgery*, **2018**, 70, 407-413	2.9	7
74	The Role of Camera Convergence in Stereoscopic Video See-through Augmented Reality Displays. *International Journal of Advanced Computer Science and Applications*, **2018**, 9,	1.7	5
73	Augmented Reality to Improve Surgical Simulation. Lessons Learned Towards the Design of a Hybrid Laparoscopic Simulator for Cholecystectomy. *IEEE Transactions on Biomedical Engineering*, **2018**,	5	17
72	Performances on simulator and da Vinci robot on subjects with and without surgical background. *Minimally Invasive Therapy and Allied Technologies*, **2018**, 27, 309-314	2.1	5
71	Closed Loop Calibration for Optical See-Through Near Eye Display with Infinity Focus **2018**,		7
70	How to Build a Patient-Specific Hybrid Simulator for Orthopaedic Open Surgery: Benefits and Limits of Mixed-Reality Using the Microsoft HoloLens. *Journal of Healthcare Engineering*, **2018**, 2018, 5435097	3.7	57
69	Comparative health technology assessment of robotic-assisted, direct manual laparoscopic and open surgery: a prospective study. *Surgical Endoscopy and Other Interventional Techniques*, **2017**, 31, 543-551	5.2	12

68	Augmented reality in neurosurgery: a systematic review. *Neurosurgical Review*, **2017**, 40, 537-548	3.9	148
67	Full Robotic Colorectal Resections for Cancer Combined With Other Major Surgical Procedures: Early Experience With the da Vinci Xi. *Surgical Innovation*, **2017**, 24, 321-327	2	12
66	Influence of videogames and musical instruments on performances at a simulator for robotic surgery. *Minimally Invasive Therapy and Allied Technologies*, **2017**, 26, 129-134	2.1	14
65	A new head-mounted display-based augmented reality system in neurosurgical oncology: a study on phantom. *Computer Assisted Surgery*, **2017**, 22, 39-53	1.8	49
64	Design of a sensorized guiding catheter for in situ laser fenestration of endovascular stent. *Computer Assisted Surgery*, **2017**, 22, 27-38	1.8	5
63	Magnetic Resonance Imaging Based Three Dimensional Patient-Specific Reconstruction of Uterine Fibromatosis: Impact on Surgery. *Journal of Gynecologic Surgery*, **2017**, 33, 138-144	0.4	2
62	[POSTER] Hybrid Video/Optical See-Through HMD **2017**,		13
61	Wearable Augmented Reality Optical See Through Displays Based on Integral Imaging. *Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering*, **2017**, 345-356	0.2	3
60	Robust Laparoscopic Instruments Tracking Using Colored Strips. *Lecture Notes in Computer Science*, **2017**, 129-143	0.9	5
59	Using of 3D Virtual Reality Electromagnetic Navigation for Challenging Cannulation in FEVAR Procedure. *Lecture Notes in Computer Science*, **2017**, 221-229	0.9	3
58	Patient Specific Virtual and Physical Simulation Platform for Surgical Robot Movability Evaluation in Single-Access Robot-Assisted Minimally-Invasive Cardiothoracic Surgery. *Lecture Notes in Computer Science*, **2017**, 211-220	0.9	1
57	A Systematic Review of Virtual Reality Simulators for Robot-assisted Surgery. *European Urology*, **2016**, 69, 1065-80	10.2	167
56	Robot-assisted versus laparoscopic rectal resection for cancer in a single surgeon's experience: a cost analysis covering the initial 50 robotic cases with the da Vinci Si. *International Journal of Colorectal Disease*, **2016**, 31, 1639-48	3	47
55	Robotic assisted versus pure laparoscopic surgery of the adrenal glands: a case-control study comparing surgical techniques. *Langenbeck's Archives of Surgery*, **2016**, 401, 999-1006	3.4	31
54	Tactile Augmented Reality for Arteries Palpation in Open Surgery Training. *Lecture Notes in Computer Science*, **2016**, 186-197	0.9	9
53	Electromagnetic Guided In-Situ Laser Fenestration of Endovascular Stent-Graft: Endovascular Tools Sensorization Strategy and Preliminary Laser Testing. *Lecture Notes in Computer Science*, **2016**, 72-83	0.9	6
52	AR interaction paradigm for closed reduction of long-bone fractures via external fixation **2016**,		2
51	Configurable Software Framework for 2D/3D Video See-Through Displays in Medical Applications. *Lecture Notes in Computer Science*, **2016**, 30-42	0.9	2

50	Application of a New Wearable Augmented Reality Video See-Through Display to Aid Percutaneous Procedures in Spine Surgery. *Lecture Notes in Computer Science*, **2016**, 43-54	0.9	18
49	Patient Specific Template for Spine Surgery **2016**, 199-215		2
48	AR Visualization of "Synthetic Calot's Triangle" for Training in Cholecystectomy **2016**,		6
47	Improving Endovascular Intraoperative Navigation with Real-Time Skeleton-Based Deformation of Virtual Vascular Structures. *Lecture Notes in Computer Science*, **2016**, 82-91	0.9	4
46	A Wearable Augmented Reality Platform for Telemedicine. *Lecture Notes in Computer Science*, **2016**, 92-100	0.9	4
45	Robust and Accurate Algorithm for Wearable Stereoscopic Augmented Reality with Three Indistinguishable Markers. *Electronics (Switzerland)*, **2016**, 5, 59	2.6	25
44	Use of a new integrated table motion for the da Vinci Xi in colorectal surgery. *International Journal of Colorectal Disease*, **2016**, 31, 1671-3	3	17
43	Letter to the Editor: Augmented reality-guided neurosurgery. *Journal of Neurosurgery*, **2016**, 125, 235-7	3.2	7
42	Augmented reality visualization of deformable tubular structures for surgical simulation. *International Journal of Medical Robotics and Computer Assisted Surgery*, **2016**, 12, 231-40	2.9	24
41	A computer-assisted robotic platform for vascular procedures exploiting 3D US-based tracking. *Computer Assisted Surgery*, **2016**, 21, 63-79	1.8	5
40	Wearable light field optical see-through display to avoid user dependent calibrations: A feasibility study **2016**,		1
39	Patient-specific ultrasound liver phantom: materials and fabrication method. *International Journal of Computer Assisted Radiology and Surgery*, **2015**, 10, 1065-75	3.9	23
38	Hybrid simulation using mixed reality for interventional ultrasound imaging training. *International Journal of Computer Assisted Radiology and Surgery*, **2015**, 10, 1109-15	3.9	14
37	Assessment of DICOM Viewers Capable of Loading Patient-specific 3D Models Obtained by Different Segmentation Platforms in the Operating Room. *Journal of Digital Imaging*, **2015**, 28, 518-27	5.3	14
36	A semiautomatic method for in vivo three-dimensional quantitative analysis of fascial layers mobility based on 3D ultrasound scans. *International Journal of Computer Assisted Radiology and Surgery*, **2015**, 10, 1721-35	3.9	8
35	Use of the new Da Vinci Xi during robotic rectal resection for cancer: technical considerations and early experience. *International Journal of Colorectal Disease*, **2015**, 30, 1281-3	3	24
34	Basic Endovascular Skills Trainer: A surgical simulator for the training of novice practitioners of endovascular procedures. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference*, **2015**, 2015, 5102-5	0.9	3
33	Ultrasound-based tracking strategy for endoluminal devices in cardiovascular surgery. *International Journal of Medical Robotics and Computer Assisted Surgery*, **2015**, 11, 319-330	2.9	3

32	Analytic description of the image to patient torso registration problem in image guided interventions. *Journal of Biomedical Engineering and Informatics*, **2015**, 1, 35		
31	New training methods based on mixed reality for interventional ultrasound: Design and validation. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference*, **2015**, 2015, 5098-101	0.9	3
30	A 3D sparse motion field filtering for quantitative analysis of fascial layers mobility based on 3D ultrasound scans. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference*, **2015**, 2015, 775-80	0.9	1
29	Human-PnP: Ergonomic AR Interaction Paradigm for Manual Placement of Rigid Bodies. *Lecture Notes in Computer Science*, **2015**, 50-60	0.9	11
28	3D ultrasound centerline tracking of abdominal vessels for endovascular navigation. *International Journal of Computer Assisted Radiology and Surgery*, **2014**, 9, 127-35	3.9	10
27	Letter to the editor on "designing a wearable navigation system for image-guided cancer resection surgery". *Annals of Biomedical Engineering*, **2014**, 42, 2600-1	4.7	1
26	Automatic carotid centerline extraction from three-dimensional ultrasound Doppler images. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference*, **2014**, 2014, 5089-92	0.9	3
25	[Poster] HMD Video see though AR with unfixed cameras vergence **2014**,		10
24	Video see through AR head-mounted display for medical procedures **2014**,		22
23	Augmented reality system for freehand guide of magnetic endovascular devices. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference*, **2014**, 2014, 490-3	0.9	6
22	Augmented reality as an aid in maxillofacial surgery: validation of a wearable system allowing maxillary repositioning. *Journal of Cranio-Maxillo-Facial Surgery*, **2014**, 42, 1970-6	3.6	124
21	Virtual Reality Surgical Navigation System for Holmium Laser Enucleation of the Prostate. *Lecture Notes in Computer Science*, **2014**, 79-89	0.9	3
20	Simultaneous tracking of catheters and guidewires: comparison to standard fluoroscopic guidance for arterial cannulation. *European Journal of Vascular and Endovascular Surgery*, **2014**, 47, 53-60	2.3	27
19	Distribution of innate ability for surgery amongst medical students assessed by an advanced virtual reality surgical simulator. *Surgical Endoscopy and Other Interventional Techniques*, **2014**, 28, 1830-7	5.2	34
18	Augmented Reality Simulator for Laparoscopic Cholecystectomy Training. *Lecture Notes in Computer Science*, **2014**, 428-433	0.9	8
17	An optimal design for patient-specific templates for pedicle spine screws placement. *International Journal of Medical Robotics and Computer Assisted Surgery*, **2013**, 9, 298-304	2.9	22
16	Technical review of the da Vinci surgical telemanipulator. *International Journal of Medical Robotics and Computer Assisted Surgery*, **2013**, 9, 396-406	2.9	117
15	Value of multidetector computed tomography image segmentation for preoperative planning in general surgery. *Surgical Endoscopy and Other Interventional Techniques*, **2012**, 26, 616-26	5.2	32

No.	Reference	IF	Cit.
14	Anatomical localization of deep infiltrating endometriosis: 3D MRI reconstructions. *Abdominal Imaging*, **2012**, 37, 1110-21		9
13	Electromagnetic navigation platform for endovascular surgery: how to develop sensorized catheters and guidewires. *International Journal of Medical Robotics and Computer Assisted Surgery*, **2012**, 8, 300-10	2.9	30
12	Patient-specific surgical simulator for the pre-operative planning of single-incision laparoscopic surgery with bimanual robots. *Computer Aided Surgery*, **2012**, 17, 103-12		8
11	Computer guidance system for single-incision bimanual robotic surgery. *Computer Aided Surgery*, **2012**, 17, 161-71		6
10	Anthropomorphic ultrasound elastography phantoms - characterization of silicone materials to build breast elastography phantoms. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference*, **2012**, 2012, 492-4	0.9	11
9	How to build patient-specific synthetic abdominal anatomies. An innovative approach from physical toward hybrid surgical simulators. *International Journal of Medical Robotics and Computer Assisted Surgery*, **2011**, 7, 202-13	2.9	31
8	Integration of biomechanical parameters in tetrahedral mass-spring models for virtual surgery simulation. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference*, **2011**, 2011, 4550-4	0.9	2
7	Autostereoscopic three-dimensional viewer evaluation through comparison with conventional interfaces in laparoscopic surgery. *Surgical Innovation*, **2011**, 18, 223-30	2	18
6	Patient specific surgical simulator for the evaluation of the movability of bimanual robotic arms. *Studies in Health Technology and Informatics*, **2011**, 163, 379-85	0.5	5
5	Mixed reality for robotic treatment of a splenic artery aneurysm. *Surgical Endoscopy and Other Interventional Techniques*, **2010**, 24, 1204	5.2	19
4	Ultrasound guided robotic biopsy using augmented reality and human-robot cooperative control. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference*, **2009**, 2009, 5110-3	0.9	7
3	Laparoscopic treatment of splenic artery aneurysms. *Journal of Vascular Surgery*, **2009**, 50, 275-9	3.5	49
2	A 3-D mixed-reality system for stereoscopic visualization of medical dataset. *IEEE Transactions on Biomedical Engineering*, **2009**, 56, 2627-33	5	50
1	EndoCAS navigator platform: a common platform for computer and robotic assistance in minimally invasive surgery. *International Journal of Medical Robotics and Computer Assisted Surgery*, **2008**, 4, 242-51	2.9	20