

# Marco A Zenati

## List of Publications by Citations

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112  
papers

1,190  
citations

20  
h-index

31  
g-index

125  
ext. papers

1,433  
ext. citations

4  
avg, IF

4.32  
L-index

#	Paper	IF	Citations
112	Impact of endoscopic versus open saphenous vein harvest technique on late coronary artery bypass grafting patient outcomes in the ROOBY (Randomized On/Off Bypass) Trial. <i>Journal of Thoracic and Cardiovascular Surgery</i> , <b>2011</b> , 141, 338-44	1.5	103
111	A highly articulated robotic surgical system for minimally invasive surgery. <i>Annals of Thoracic Surgery</i> , <b>2009</b> , 87, 1253-6	2.7	91
110	A fusion protein of hepatocyte growth factor enhances reconstruction of myocardium in a cardiac patch derived from porcine urinary bladder matrix. <i>Journal of Thoracic and Cardiovascular Surgery</i> , <b>2008</b> , 136, 1309-17	1.5	57
109	Predictors and impact of postoperative atrial fibrillation on patients' outcomes: a report from the Randomized On Versus Off Bypass trial. <i>Journal of Thoracic and Cardiovascular Surgery</i> , <b>2012</b> , 143, 93-102	1.5	51
108	Randomized Trial of Endoscopic or Open Vein-Graft Harvesting for Coronary-Artery Bypass. <i>New England Journal of Medicine</i> , <b>2019</b> , 380, 132-141	59.2	51
107	A Miniature Mobile Robot for Navigation and Positioning on the Beating Heart. <i>IEEE Transactions on Robotics</i> , <b>2009</b> , 25, 1109-1124	6.5	49
106	Lung transplantation for respiratory failure resulting from systemic disease. <i>Annals of Thoracic Surgery</i> , <b>1997</b> , 64, 1630-4	2.7	46
105	Left heart pacing lead implantation using subxiphoid videopericardioscopy. <i>Journal of Cardiovascular Electrophysiology</i> , <b>2003</b> , 14, 949-53	2.7	46
104	Minimally invasive epicardial injections using a novel semiautonomous robotic device. <i>Circulation</i> , <b>2008</b> , 118, S115-20	16.7	38
103	Electromechanical characterization of a tissue-engineered myocardial patch derived from extracellular matrix. <i>Journal of Thoracic and Cardiovascular Surgery</i> , <b>2007</b> , 133, 979-85	1.5	37
102	Transmyocardial laser revascularization in the patient with unmanageable unstable angina. <i>Annals of Thoracic Surgery</i> , <b>1999</b> , 68, 1203-9	2.7	35
101	Outcomes of coronary artery bypass grafting and reduction annuloplasty for functional ischemic mitral regurgitation: a prospective multicenter study (Randomized Evaluation of a Surgical Treatment for Off-Pump Repair of the Mitral Valve). <i>Journal of Thoracic and Cardiovascular Surgery</i> , <b>2011</b> , 141, 91-7	1.5	33
100	Off-Pump Coronary Artery Bypass Grafting: 30 Years of Debate. <i>Journal of the American Heart Association</i> , <b>2018</b> , 7, e009934	6	33
99	Outcomes of lung volume reduction surgery followed by lung transplantation: a matched cohort study. <i>Annals of Thoracic Surgery</i> , <b>2002</b> , 73, 1587-93	2.7	31
98	Shape estimation for image-guided surgery with a highly articulated snake robot <b>2011</b> ,		27
97	Robotic heart surgery. <i>Cardiology in Review</i> , <b>2001</b> , 9, 287-94	3.2	26
96	Epicardial left ventricular mapping using subxiphoid video pericardioscopy. <i>Annals of Thoracic Surgery</i> , <b>2007</b> , 84, 2106-7	2.7	22

95	A new device for beating heart bipolar radiofrequency atrial ablation. <i>Journal of Thoracic and Cardiovascular Surgery</i> , <b>2003</b> , 126, 1859-66	1.5	22
94	Severe functional mitral regurgitation arising from isolated annular dilatation. <i>Annals of Thoracic Surgery</i> , <b>2010</b> , 90, 1343-5	2.7	20
93	Epicardial Atrial Ablation Using a Novel Articulated Robotic Medical Probe Via a Percutaneous Subxiphoid Approach. <i>Innovations: Technology and Techniques in Cardiothoracic and Vascular Surgery</i> , <b>2006</b> , 1, 335-340	1.5	20
92	Prototype epicardial crawling device for intrapericardial intervention on the beating heart. <i>Heart Surgery Forum</i> , <b>2004</b> , 7, E639-43	0.7	18
91	Design of a Coupled Thermoresponsive Hydrogel and Robotic System for Postinfarct Biomaterial Injection Therapy. <i>Annals of Thoracic Surgery</i> , <b>2016</b> , 102, 780-786	2.7	18
90	Physiological synchronization and entropy as measures of team cognitive load. <i>Journal of Biomedical Informatics</i> , <b>2019</b> , 96, 103250	10.2	17
89	Cognitive Engineering to Improve Patient Safety and Outcomes in Cardiothoracic Surgery. <i>Seminars in Thoracic and Cardiovascular Surgery</i> , <b>2020</b> , 32, 1-7	1.7	16
88	Randomized Trials in Cardiac Surgery: JACC Review Topic of the Week. <i>Journal of the American College of Cardiology</i> , <b>2020</b> , 75, 1593-1604	15.1	15
87	Mitral valve surgery in the US Veterans Administration health system: 10-year outcomes and trends. <i>Journal of Thoracic and Cardiovascular Surgery</i> , <b>2018</b> , 155, 105-117.e5	1.5	15
86	A novel highly articulated robotic surgical system for epicardial ablation. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , <b>2008</b> , 2008, 250-3	0.9	15
85	Choice of vein-harvest technique for coronary artery bypass grafting: rationale and design of the REGROUP trial. <i>Clinical Cardiology</i> , <b>2014</b> , 37, 325-30	3.3	14
84	Synchronization of epicardial crawling robot with heartbeat and respiration for improved safety and efficiency of locomotion. <i>International Journal of Medical Robotics and Computer Assisted Surgery</i> , <b>2012</b> , 8, 97-106	2.9	11
83	Minimally invasive direct coronary artery bypass surgery under high thoracic epidural. <i>Anesthesia and Analgesia</i> , <b>2001</b> , 93, 1486-8, table of contents	3.9	11
82	Images in cardiovascular medicine. Fulminant Clostridium septicum aortitis. <i>Circulation</i> , <b>2002</b> , 105, 1871	16.7	10
81	Crawling on the Heart: A Mobile Robotic Device for Minimally Invasive Cardiac Interventions. <i>Lecture Notes in Computer Science</i> , <b>2004</b> , 9-16	0.9	10
80	Minimally invasive coronary bypass without general endotracheal anesthesia. <i>Annals of Thoracic Surgery</i> , <b>2001</b> , 72, 1380-2	2.7	9
79	Development of an Interactive Dashboard to Analyze Cognitive Workload of Surgical Teams During Complex Procedural Care <b>2018</b> , 2018, 77-82		8
78	Percutaneous subxiphoid access to the epicardium using a miniature crawling robotic device. <i>Innovations: Technology and Techniques in Cardiothoracic and Vascular Surgery</i> , <b>2006</b> , 1, 227-31	1.5	8

77	Robotic implantation of a multichamber cardiac resynchronization therapy defibrillator. <i>PACE - Pacing and Clinical Electrophysiology</i> , <b>2006</b> , 29, 906-9	1.6	8
76	Microelectromechanical systems for endoscopic cardiac surgery. <i>Journal of Thoracic and Cardiovascular Surgery</i> , <b>2003</b> , 126, 851-2	1.5	8
75	Dissecting Cardiac Surgery: A Video-based Recall Protocol to Elucidate Team Cognitive Processes in the Operating Room. <i>Annals of Surgery</i> , <b>2021</b> , 274, e181-e186	7.8	8
74	First Reported Use of Team Cognitive Workload for Root Cause Analysis in Cardiac Surgery. <i>Seminars in Thoracic and Cardiovascular Surgery</i> , <b>2019</b> , 31, 394-396	1.7	8
73	Cognitive Support to Promote Shared Mental Models during Safety-Critical Situations in Cardiac Surgery (Late Breaking Report) <b>2018</b> , 2018, 165-167		7
72	Analysis of Mirrored Psychophysiological Change of Cardiac Surgery Team Members During Open Surgery. <i>Journal of Surgical Education</i> , <b>2021</b> , 78, 622-629	3.4	7
71	Cognitive Support During High-Consequence Episodes of Care in Cardiovascular Surgery <b>2017</b> , 2017,		6
70	Artificial intelligence in cardiothoracic surgery. <i>Minerva Cardioangiologica</i> , <b>2020</b> , 68, 532-538	1.1	6
69	Intelligent Interruption Management System to Enhance Safety and Performance in Complex Surgical and Robotic Procedures. <i>Lecture Notes in Computer Science</i> , <b>2018</b> , 11041, 62-68	0.9	6
68	Impact of Subxiphoid Video Pericardioscopy with a Rigid Shaft on Cardiac Hemodynamics in a Porcine Model. <i>Innovations: Technology and Techniques in Cardiothoracic and Vascular Surgery</i> , <b>2010</b> , 5, 51-54	1.5	5
67	Minimally invasive epicardial left atrial ablation and appendectomy for refractory atrial tachycardia. <i>Annals of Thoracic Surgery</i> , <b>2008</b> , 86, 1375-7	2.7	5
66	Epicardium-based left atrial ablation: impact on electromechanical properties. <i>Journal of Cardiovascular Electrophysiology</i> , <b>2003</b> , 14, 1087-92	2.7	5
65	Computer Vision in the Operating Room: Opportunities and Caveats. <i>IEEE Transactions on Medical Robotics and Bionics</i> , <b>2021</b> , 3, 2-10	3.1	5
64	Toward Improving Surgical Outcomes by Incorporating Cognitive Load Measurement into Process-Driven Guidance <b>2018</b> , 2018, 2-9		5
63	Evaluation and management of the atrial fibrillation patient: a report from the Society of Cardiovascular Patient Care. <i>Critical Pathways in Cardiology</i> , <b>2013</b> , 12, 107-15	1.3	4
62	Process Driven Guidance for Complex Surgical Procedures <b>2018</b> , 2018, 175-184	0.7	4
61	Epi-aortic Ultrasound for Assessment of Intraluminal Atheroma; Insights from the REGROUP Trial. <i>Journal of Cardiothoracic and Vascular Anesthesia</i> , <b>2020</b> , 34, 726-732	2.1	4
60	Physiological motion modeling for organ-mounted robots. <i>International Journal of Medical Robotics and Computer Assisted Surgery</i> , <b>2017</b> , 13, e1805	2.9	3

59	Cutting off the lizard's tail in surgery. <i>Journal of Thoracic and Cardiovascular Surgery</i> , <b>2018</b> , 156, 1220-1221	1.5	3
58	Conduits in coronary artery bypass grafting. <i>Seminars in Thoracic and Cardiovascular Surgery</i> , <b>2013</b> , 25, 273-9	1.7	3
57	Application of the HeartLander crawling robot for injection of a thermally sensitive anti-remodeling agent for myocardial infarction therapy. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , <b>2010</b> , 2010, 5428-31	0.9	3
56	Position Estimation of an Epicardial Crawling Robot on the Beating Heart by Modeling of Physiological Motion. <i>IEEE International Conference on Intelligent Robots and Systems</i> , <b>2011</b> , 2011, 4522-4527	0.6	3
55	Highly fenestrated septum primum leads to failure of Amplatzer septal defect closure. <i>Annals of Thoracic Surgery</i> , <b>2008</b> , 86, 998-1000	2.7	3
54	Impact of beating heart left atrial ablation on left-sided heart mechanics. <i>Journal of Thoracic and Cardiovascular Surgery</i> , <b>2007</b> , 134, 982-8	1.5	3
53	Sensors for Continuous Monitoring of Surgeon's Cognitive Workload in the Cardiac Operating Room. <i>Sensors</i> , <b>2020</b> , 20,	3.8	3
52	Towards an AI Coach to Infer Team Mental Model Alignment in Healthcare. <b>2021</b> , 2021, 39-44		3
51	Beating-heart registration for organ-mounted robots. <i>International Journal of Medical Robotics and Computer Assisted Surgery</i> , <b>2018</b> , 14, e1905	2.9	2
50	Measurement and Optimization of Minimally Invasive Intervention Device Design Fitness Using a Multiobjective Weighted Isotropy Index. <i>Journal of Medical Devices, Transactions of the ASME</i> , <b>2010</b> , 4,	1.3	2
49	Subxiphoid epicardial left ventricular pacing lead placement is feasible. <i>Journal of Thoracic and Cardiovascular Surgery</i> , <b>2010</b> , 139, 1661-2	1.5	2
48	Serial dobutamine stress echocardiography with Doppler assessment of the left internal thoracic artery graft after minimally invasive bypass for a patient with an orthotopic heart transplant. <i>Journal of Heart and Lung Transplantation</i> , <b>2004</b> , 23, 256-9	5.8	2
47	Augmented Cognition in the Operating Room <b>2021</b> , 261-268		2
46	A Novel Interoperable Safety System for Improved Coordination and Communication in Cardiac Surgery. <i>Lecture Notes in Computer Science</i> , <b>2018</b> , 11041, 39-45	0.9	2
45	A new live animal training model for off-pump coronary bypass surgery. <i>Heart Surgery Forum</i> , <b>2002</b> , 5, 150-1	0.7	2
44	Endoscopic versus Open Vein-Graft Harvesting for CABG. Reply. <i>New England Journal of Medicine</i> , <b>2019</b> , 380, e43	59.2	1
43	Towards localizing on the surface of the beating heart. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , <b>2012</b> , 2012, 1413-6	0.9	1
42	Fourier modeling of porcine heartbeat and respiration in vivo for synchronization of HeartLander robot locomotion. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , <b>2011</b> , 2011, 7011-4	0.9	1

41	Experimental Off-Pump Coronary Bypass Using a Robotic Telemanipulation System. <i>Computer Aided Surgery</i> , <b>2002</b> , 7, 248-253		1
40	Shape estimation for image-guided surgery with a highly articulated snake robot		1
39	Establishing a Ventilator-Heart Lung Machine Communication Bridge to Mitigate Errors when Weaning from Bypass. <i>Journal of Extra-Corporeal Technology</i> , <b>2019</b> , 51, 38-40	0.4	1
38	Data Safety Monitoring Board: Composition and Role <b>2017</b> , 329-334		1
37	Commentary: The need for emotional intelligence coaching in cardiothoracic surgery. <i>Journal of Thoracic and Cardiovascular Surgery</i> , <b>2021</b> , 162, 1141-1142	1.5	1
36	Intermediate-Term Outcomes of Endoscopic or Open Vein Harvesting for Coronary Artery Bypass Grafting: The REGROUP Randomized Clinical Trial. <i>JAMA Network Open</i> , <b>2021</b> , 4, e211439	10.4	1
35	Computer-Assisted Process Modeling to Enhance Intraoperative Safety in Cardiac Surgery. <i>JAMA Surgery</i> , <b>2016</b> , 151, 1183-1186	5.4	1
34	Commentary: The conundrum of cerebral malperfusion in aortic dissection. <i>Journal of Thoracic and Cardiovascular Surgery</i> , <b>2021</b> , 161, 1721	1.5	1
33	Harvesting the saphenous vein <b>2021</b> , 75-83		1
32	A Quick Reference Tool for Goal-Directed Perfusion in Cardiac Surgery. <i>Journal of Extra-Corporeal Technology</i> , <b>2019</b> , 51, 172-174	0.4	0
31	Feasibility of Healthcare Providers' Autonomic Activation Recognition in Real-Life Cardiac Surgery Using Noninvasive Sensors. <i>Communications in Computer and Information Science</i> , <b>2020</b> , 1293, 402-408	0.3	0
30	Toward Onboard Estimation of Physiological Phase for an Epicardial Crawling Robot <b>2012</b> , 2012, 62907163		3
29	Space-Time Localization and Registration on the Beating Heart. <i>IEEE International Conference on Intelligent Robots and Systems</i> , <b>2013</b> , 2012, 3792-3797	0.6	
28	Evaluation in vitro of a treatment planning algorithm for an epicardial crawling robot. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , <b>2010</b> , 2010, 2275-8	0.9	
27	Electrophysiological Basis of Atrial Fibrillation <b>2007</b> , 18-3		
26	Neurological Basis of Atrial Fibrillation <b>2007</b> , 19-28		
25	Mechanical Basis of Atrial Fibrillation <b>2007</b> , 29-49		
24	Molecular Basis of Atrial Fibrillation <b>2007</b> , 50-64		

23 Atrial Plasticity **2007**, 65-84

22 Atrioventricular Node Ablation **2007**, 87-92

21 Percutaneous Atrial Catheter Ablation **2007**, 93-112

20 Implantable Device Therapy **2007**, 113-130

19 Surgical Ablation Therapy I: Maze Procedure **2007**, 131-137

18 Surgical Ablation Therapy II: Endocardium-Based Catheter Ablation **2007**, 138-145

17 Surgical Ablation Therapy III: Epicardium-Based Catheter Ablation **2007**, 146-151

16 Modification of the Left Atrial Appendage **2007**, 152-156

15 Transpericardial Therapy **2007**, 159-170

14 Epicardial Atrial Ablation Using a Novel Articulated Robotic Medical Probe via a Percutaneous Subxiphoid Approach. *Innovations: Technology and Techniques in Cardiothoracic and Vascular Surgery*, **2006**, 1, 335-340 1.5

13 Experimental off-pump coronary bypass using a robotic telemanipulation system. *Computer Aided Surgery*, **2002**, 7, 248-53

12 Percutaneous Subxiphoid Access to the Epicardium Using a Miniature Crawling Robotic Device. *Innovations: Technology and Techniques in Cardiothoracic and Vascular Surgery*, **2006**, 1, 227-231 1.5

11 Impact of Subxiphoid Video Pericardioscopy with a Rigid Shaft on Cardiac Hemodynamics in a Porcine Model. *Innovations: Technology and Techniques in Cardiothoracic and Vascular Surgery*, **2010**, 5, 51-54 1.5

10 Accurate Positioning for Intervention on the Beating Heart Using a Crawling Robot **2011**, 105-121

9 Articulated Robotic MedProbe snake robot for single port surgery 284-287

8 Postoperative Echocardiographic Appearance of the Mitral Valve After Nonresectional Leaflet Remodeling Repair Mimicking Thrombus. *Circulation: Cardiovascular Imaging*, **2020**, 13, e009853 3.9

7 Commentary: Another Dutch treat. *Journal of Thoracic and Cardiovascular Surgery*, **2020**, 159, 1893-1894 1.5

6 Digital Cognitive Aids to Support Adaptation of Surgical Processes to COVID-19 Protective Policies **2020**, 2020, 205-210

- 5 Prevalence of Surgical Flow Disruptions Across Intra-operative High- and Low-Workload Phases in Cardiac Surgery. *Proceedings of the International Symposium of Human Factors and Ergonomics in Healthcare*, **2021**, 10, 263-266 0.5
- 4 Organ-mounted robot localization via function approximation. *International Journal of Medical Robotics and Computer Assisted Surgery*, **2019**, 15, e1971 2.9
- 3 Commentary: Nontechnical skills redux. *Journal of Thoracic and Cardiovascular Surgery*, **2021**, 1.5
- 2 Fraction of expired oxygen: an additional safety approach to monitor oxygen delivery to the heart lung machine oxygenator. *Perfusion (United Kingdom)*, **2021**, 2676591211001594 1.9
- 1 A Coding Framework for Usability Evaluation of Digital Health Technologies. *Lecture Notes in Computer Science*, **2022**, 185-196 0.9