

Stephane Carlier

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

134
papers

5,477
citations

40
h-index

72
g-index

138
ext. papers

6,084
ext. citations

4.9
avg, IF

4.74
L-index

#	Paper	IF	Citations
134	Stent underexpansion and residual reference segment stenosis are related to stent thrombosis after sirolimus-eluting stent implantation: an intravascular ultrasound study. <i>Journal of the American College of Cardiology</i> , 2005 , 45, 995-8	15.1	586
133	A hypothesis for vulnerable plaque rupture due to stress-induced debonding around cellular microcalcifications in thin fibrous caps. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2006 , 103, 14678-83	11.5	392
132	Contribution of stent underexpansion to recurrence after sirolimus-eluting stent implantation for in-stent restenosis. <i>Circulation</i> , 2004 , 109, 1085-8	16.7	221
131	Bifurcation coronary lesions treated with the "crush" technique: an intravascular ultrasound analysis. <i>Journal of the American College of Cardiology</i> , 2005 , 46, 599-605	15.1	180
130	Characterization of atherosclerosis plaques by measuring both backscattering and attenuation coefficients in optical coherence tomography. <i>Journal of Biomedical Optics</i> , 2008 , 13, 034003	3.5	172
129	Images in cardiovascular medicine. Detection of luminal-intimal border and coronary wall enhancement in intravascular ultrasound imaging after injection of microbubbles and simultaneous sonication with transthoracic echocardiography. <i>Circulation</i> , 2005 , 112, e1-2	16.7	168
128	Relation of arterial stiffness to diastolic dysfunction in hypertensive heart disease. <i>Heart</i> , 2005 , 91, 1551-5	15.6	160
127	Decreased coronary flow reserve in hypertrophic cardiomyopathy is related to remodeling of the coronary microcirculation. <i>Circulation</i> , 1998 , 97, 230-3	16.7	157
126	Realistic finite element-based stent design: the impact of balloon folding. <i>Journal of Biomechanics</i> , 2008 , 41, 383-9	2.9	141
125	Characterization of plaque components and vulnerability with intravascular ultrasound elastography. <i>Physics in Medicine and Biology</i> , 2000 , 45, 1465-75	3.8	133
124	Characterisation of atherosclerotic plaque by spectral similarity of radiofrequency intravascular ultrasound signals. <i>EuroIntervention</i> , 2009 , 5, 133-9	3.1	121
123	Morphological and mechanical information of coronary arteries obtained with intravascular elastography; feasibility study in vivo. <i>European Heart Journal</i> , 2002 , 23, 405-13	9.5	113
122	Nonuniform strut distribution correlates with more neointimal hyperplasia after sirolimus-eluting stent implantation. <i>Circulation</i> , 2004 , 110, 3430-4	16.7	107
121	Association of plaque characterization by intravascular ultrasound virtual histology and arterial remodeling. <i>American Journal of Cardiology</i> , 2005 , 96, 1476-83	3	99
120	Vasa vasorum imaging: a new window to the clinical detection of vulnerable atherosclerotic plaques. <i>Current Atherosclerosis Reports</i> , 2005 , 7, 164-9	6	93
119	A state-of-the-art review on segmentation algorithms in intravascular ultrasound (IVUS) images. <i>IEEE Transactions on Information Technology in Biomedicine</i> , 2012 , 16, 823-34		89
118	Randomized comparison of primary stenting and provisional balloon angioplasty guided by flow velocity measurement. Doppler Endpoints Balloon Angioplasty Trial Europe (DEBATE) II Study Group. <i>Circulation</i> , 2000 , 102, 2930-7	16.7	89

117	Shape-driven segmentation of the arterial wall in intravascular ultrasound images. <i>IEEE Transactions on Information Technology in Biomedicine</i> , 2008 , 12, 335-47		88
116	Augmentation of wall shear stress inhibits neointimal hyperplasia after stent implantation: inhibition through reduction of inflammation?. <i>Circulation</i> , 2003 , 107, 2741-6	16.7	82
115	Standardized evaluation methodology and reference database for evaluating IVUS image segmentation. <i>Computerized Medical Imaging and Graphics</i> , 2014 , 38, 70-90	7.6	81
114	Intravascular ultrasound assessment of lesions with target vessel failure after sirolimus-eluting stent implantation. <i>American Journal of Cardiology</i> , 2005 , 95, 498-502	3	81
113	Advancing intravascular ultrasonic palpation toward clinical applications. <i>Ultrasound in Medicine and Biology</i> , 2001 , 27, 1471-80	3.5	77
112	Peripheral "oscillatory" compliance is associated with aortic augmentation index. <i>Hypertension</i> , 2001 , 37, 1434-9	8.5	75
111	Assessing intermediate left main coronary lesions using intravascular ultrasound. <i>American Heart Journal</i> , 2007 , 154, 983-8	4.9	73
110	Long-term patency of internal mammary artery bypass grafts: relationship with preoperative severity of the native coronary artery stenosis. <i>Circulation</i> , 2004 , 110, 1136-40	16.7	69
109	Angiographic results of the first human experience with everolimus-eluting stents for the treatment of coronary lesions (the FUTURE I trial). <i>American Journal of Cardiology</i> , 2005 , 95, 113-6	3	68
108	Intracoronary delivery of hematopoietic bone marrow stem cells and luminal loss of the infarct-related artery in patients with recent myocardial infarction. <i>Journal of the American College of Cardiology</i> , 2006 , 47, 1727-30	15.1	67
107	Intravascular ultrasound assessment of drug-eluting stent expansion. <i>American Heart Journal</i> , 2007 , 153, 297-303	4.9	66
106	Nonrandomized comparison of coronary stenting under intravascular ultrasound guidance of direct stenting without predilation versus conventional predilation with a semi-compliant balloon versus predilation with a new scoring balloon. <i>American Journal of Cardiology</i> , 2007 , 100, 812-7	3	65
105	Individualizing the aorto-radial pressure transfer function: feasibility of a model-based approach. <i>American Journal of Physiology - Heart and Circulatory Physiology</i> , 2000 , 279, H542-9	5.2	65
104	Outcome after acute incomplete sirolimus-eluting stent apposition as assessed by serial intravascular ultrasound. <i>American Journal of Cardiology</i> , 2006 , 98, 436-42	3	63
103	Intravascular ultrasound study of patterns of calcium in ruptured coronary plaques. <i>American Journal of Cardiology</i> , 2005 , 96, 352-7	3	62
102	Late incomplete lesion coverage following Cypher stent deployment for diffuse right coronary artery stenosis. <i>Heart</i> , 2004 , 90, e45	5.1	59
101	A prospective registry to evaluate sirolimus-eluting stents implanted at coronary bifurcation lesions using the "crush technique". <i>American Journal of Cardiology</i> , 2006 , 97, 1317-21	3	56
100	A new method for assessment of plaque vulnerability based on vasa vasorum imaging, by using contrast-enhanced intravascular ultrasound and differential image analysis. <i>International Journal of Cardiology</i> , 2008 , 130, 23-9	3.2	50

99	Pulse pressure method and the area method for the estimation of total arterial compliance in dogs: sensitivity to wave reflection intensity. <i>Annals of Biomedical Engineering</i> , 1999 , 27, 480-5	4.7	48
98	Challenges in atherosclerotic plaque characterization with intravascular ultrasound (IVUS): from data collection to classification. <i>IEEE Transactions on Information Technology in Biomedicine</i> , 2008 , 12, 315-27		46
97	Procedural implications of intravascular ultrasound morphologic features of chronic total coronary occlusions. <i>American Journal of Cardiology</i> , 2006 , 97, 1455-62	3	46
96	Intravascular ultrasound profile analysis of ruptured coronary plaques. <i>American Journal of Cardiology</i> , 2006 , 98, 429-35	3	41
95	Necrotic core and its ratio to dense calcium are predictors of high-risk non-ST-elevation acute coronary syndrome. <i>American Journal of Cardiology</i> , 2008 , 101, 573-8	3	40
94	Intravascular ultrasonic assessment of stent diameters derived from manufacturer's compliance charts. <i>American Journal of Cardiology</i> , 2005 , 96, 74-8	3	40
93	Residual plaque burden, delivered dose, and tissue composition predict 6-month outcome after balloon angioplasty and beta-radiation therapy. <i>Circulation</i> , 2000 , 101, 2472-7	16.7	39
92	In vivo virtual histology intravascular ultrasound correlates of risk factors for sudden coronary death in men: results from the prospective, multi-centre virtual histology intravascular ultrasound registry. <i>European Heart Journal</i> , 2008 , 29, 2141-7	9.5	32
91	Measurement of arterial distensibility and compliance to assess prognosis. <i>Atherosclerosis</i> , 2010 , 209, 474-80	3.1	30
90	Imaging of atherosclerotic plaque using radiofrequency ultrasound signal processing. <i>Journal of Nuclear Cardiology</i> , 2006 , 13, 831-40	2.1	28
89	Stent implant follow-up in intravascular optical coherence tomography images. <i>International Journal of Cardiovascular Imaging</i> , 2010 , 26, 809-16	2.5	27
88	Guidance of intracoronary radiation therapy based on dose-volume histograms derived from quantitative intravascular ultrasound. <i>IEEE Transactions on Medical Imaging</i> , 1998 , 17, 772-8	11.7	27
87	High shear stress after successful balloon angioplasty is associated with restenosis and target lesion revascularization. <i>American Heart Journal</i> , 2002 , 144, 136-43	4.9	27
86	Effect of catheter placement on 3-D velocity profiles in curved tubes resembling the human coronary system. <i>Ultrasound in Medicine and Biology</i> , 1999 , 25, 803-10	3.5	27
85	Image-based gating of intravascular ultrasound pullback sequences. <i>IEEE Transactions on Information Technology in Biomedicine</i> , 2008 , 12, 299-306		25
84	Diastolic coronary vascular reserve: a new index to detect changes in the coronary microcirculation in hypertrophic cardiomyopathy. <i>Journal of the American College of Cardiology</i> , 2004 , 43, 670-7	15.1	24
83	Creatine kinase-MB enzyme elevation and long-term clinical events after successful coronary stenting in lesions with ruptured plaque. <i>American Journal of Cardiology</i> , 2005 , 95, 355-9	3	24
82	Studying coronary plaque regression with IVUS: a critical review of recent studies. <i>Journal of Interventional Cardiology</i> , 2006 , 19, 11-5	1.8	23

81	The accuracy of length measurements using different intravascular ultrasound motorized transducer pullback systems. <i>International Journal of Cardiovascular Imaging</i> , 2007 , 23, 733-8	2.5	21
80	Preserved endothelium-dependent vasodilation in coronary segments previously treated with balloon angioplasty and intracoronary irradiation. <i>Circulation</i> , 1999 , 100, 1623-9	16.7	21
79	Lumen Segmentation in Intravascular Optical Coherence Tomography Using Backscattering Tracked and Initialized Random Walks. <i>IEEE Journal of Biomedical and Health Informatics</i> , 2016 , 20, 606-14 ²	7.2	20
78	Comparison of differences in outcome after percutaneous coronary intervention in men versus women. <i>American Journal of Cardiology</i> , 2004 , 93, 916-9	3	20
77	The role of whole blood viscosity in premature coronary artery disease in women. <i>Atherosclerosis</i> , 2002 , 165, 367-73	3.1	19
76	A new 3-D automated computational method to evaluate in-stent neointimal hyperplasia in in-vivo intravascular optical coherence tomography pullbacks. <i>Lecture Notes in Computer Science</i> , 2009 , 12, 776-85 ²	8.9	19
75	Quantitative IVUS blood flow: validation in vitro, in animals and in patients. <i>Ultrasound in Medicine and Biology</i> , 2003 , 29, 507-15	3.5	18
74	Ultrafiltration improves aortic compliance in haemodialysis patients. <i>Journal of Human Hypertension</i> , 2005 , 19, 439-44	2.6	17
73	Joint learning of ultrasonic backscattering statistical physics and signal confidence primal for characterizing atherosclerotic plaques using intravascular ultrasound. <i>Medical Image Analysis</i> , 2014 , 18, 103-17	15.4	16
72	Iterative self-organizing atherosclerotic tissue labeling in intravascular ultrasound images and comparison with virtual histology. <i>IEEE Transactions on Biomedical Engineering</i> , 2012 , 59, 3039-49	5	16
71	Influence of cardiovascular risk factors on total arterial compliance. <i>Journal of the American Society of Echocardiography</i> , 2008 , 21, 123-8	5.8	16
70	Intravascular ultrasonic differences between aorto-ostial and shaft narrowing in saphenous veins used as aortocoronary bypass grafts. <i>American Journal of Cardiology</i> , 2006 , 97, 1463-6	3	16
69	Stenting with a true bifurcated stent: acute and mid-term follow-up results. <i>Catheterization and Cardiovascular Interventions</i> , 1999 , 47, 361-96	2.7	16
68	Supervised domain adaptation of decision forests: Transfer of models trained in vitro for in vivo intravascular ultrasound tissue characterization. <i>Medical Image Analysis</i> , 2016 , 32, 1-17	15.4	16
67	A comparison of methods for assessing total arterial compliance. <i>Journal of Human Hypertension</i> , 2010 , 24, 254-62	2.6	13
66	Synergistic effect of cardiovascular risk factors on necrotic core in coronary arteries: a report from the global intravascular radiofrequency data analysis registry. <i>JACC: Cardiovascular Imaging</i> , 2009 , 2, 629-36	8.4	13
65	Volumetric intravascular ultrasound assessment of neointimal hyperplasia and nonuniform stent strut distribution in sirolimus-eluting stent restenosis. <i>American Journal of Cardiology</i> , 2006 , 98, 1559-62 ³		13
64	2007 ,		13

63	Noninvasive tests for arterial structure, function, and compliance: do they identify risk or diagnose disease?. <i>Journal of the American Society of Echocardiography</i> , 2004 , 17, 195-202; quiz 203-4	5.8	13
62	Comparison of brachytherapy strategies based on dose-volume histograms derived from quantitative intravascular ultrasound. <i>Cardiovascular Radiation Medicine</i> , 1999 , 1, 115-24		13
61	A new method for real-time co-registration of 3D coronary angiography and intravascular ultrasound or optical coherence tomography. <i>Cardiovascular Revascularization Medicine</i> , 2014 , 15, 226-32 ^{1.6}		12
60	A new technique for assessing arterial pressure wave forms and central pressure with tissue Doppler. <i>Cardiovascular Ultrasound</i> , 2007 , 5, 6	2.4	12
59	P0-18 Forward-Looking IVUS Imaging Using a Dual-Annular Ring CMUT Array: Experimental Results 2007 ,		12
58	Sonotherapy, antirestenotic therapeutic ultrasound in coronary arteries: the first clinical experience. <i>Catheterization and Cardiovascular Interventions</i> , 2003 , 60, 9-17	2.7	12
57	In vitro study of FFR, QCA, and IVUS for the assessment of optimal stent deployment. <i>Catheterization and Cardiovascular Interventions</i> , 2001 , 54, 363-75	2.7	12
56	COVID-19 Outbreak in a Hemodialysis Center: A Retrospective Monocentric Case Series. <i>Canadian Journal of Kidney Health and Disease</i> , 2020 , 7, 2054358120944298	2.3	12
55	Intravascular ultrasound assessment of fibrous cap remnants after coronary plaque rupture. <i>American Heart Journal</i> , 2006 , 152, 327-32	4.9	11
54	Pulse pressure vs. total arterial compliance as a marker of arterial health. <i>European Journal of Clinical Investigation</i> , 2005 , 35, 438-43	4.6	11
53	. <i>European Journal of Cardiovascular Prevention and Rehabilitation</i> , 2002 , 9, 237-245		11
52	Relationship between tensile stress and plaque growth after balloon angioplasty treated with and without intracoronary beta-brachytherapy. <i>European Heart Journal</i> , 2000 , 21, 2063-70	9.5	10
51	VCAM-1 Target in Non-Invasive Imaging for the Detection of Atherosclerotic Plaques. <i>Biology</i> , 2020 , 9,	4.9	9
50	Definition of a moving gross target volume for stereotactic radiation therapy of stented coronary arteries. <i>International Journal of Radiation Oncology Biology Physics</i> , 2002 , 52, 560-5	4	9
49	Hunting for necrosis in the shadows of intravascular ultrasound. <i>Computerized Medical Imaging and Graphics</i> , 2014 , 38, 104-12	7.6	8
48	Effect of simvastatin on coronary lesion site remodeling: a serial intravascular ultrasound study. <i>Cardiology</i> , 2006 , 106, 256-63	1.6	7
47	Contrast-enhanced intravascular ultrasound: combining morphology with activity-based assessment of plaque vulnerability. <i>Expert Review of Cardiovascular Therapy</i> , 2007 , 5, 917-25	2.5	7
46	Challenges in tissue characterization from backscattered intravascular ultrasound signals 2007 ,		7

45	Vascular remodeling and plaque composition between focal and diffuse coronary lesions assessed by intravascular ultrasound. <i>American Journal of Cardiology</i> , 2004 , 94, 1067-70	3	7
44	The evolving role of coronary angiography and fluoroscopy in cardiac diagnosis and intervention. <i>EuroIntervention</i> , 2007 , 2, 526-32	3.1	6
43	Confidence estimation in IVUS radio-frequency data with random walks 2012 ,		5
42	2F-2 Annular CMUT Arrays for Side Looking Intravascular Ultrasound Imaging. <i>Proceedings IEEE Ultrasonics Symposium</i> , 2007 ,		5
41	Arterial wall strength after endovascular photodynamic therapy. <i>Lasers in Surgery and Medicine</i> , 2003 , 33, 8-15	3.6	5
40	Coronary stent implantation in a septal perforator artery: case report and review of the literature. <i>Japanese Circulation Journal</i> , 2000 , 64, 802-4		5
39	Coronary Flow Reserve Versus Geometric Measurements of Coronary Dimensions: Advantages and Limitations of the Functional Stenosis Assessment. <i>Journal of Interventional Cardiology</i> , 1999 , 12, 411-424 ¹⁸		5
38	Semi-automatic matching of OCT and IVUS images for image fusion 2008 ,		4
37	Cardiac hemodynamics, coronary circulation and interventional cardiology. <i>Annals of Biomedical Engineering</i> , 2005 , 33, 1728-34	4.7	4
36	Flow velocity and predictors of a suboptimal coronary flow velocity reserve after coronary balloon angioplasty. <i>European Heart Journal</i> , 2002 , 23, 133-8	9.5	4
35	Multiscale distribution preserving autoencoders for plaque detection in intravascular optical coherence tomography 2016 ,		4
34	A Belgian consensus strategy to identify familial hypercholesterolaemia in the coronary care unit and its subsequent cascade screening and treatment: BEL-FaHST (The BELgium Familial Hypercholesterolaemia STRategy). <i>Atherosclerosis</i> , 2018 , 277, 369-376	3.1	4
33	Assessing the landscape of percutaneous coronary chronic total occlusion treatment in Belgium and Luxembourg: the Belgian Working Group on Chronic Total Occlusions (BWGCTO) registry. <i>Acta Cardiologica</i> , 2018 , 73, 427-436	0.9	3
32	A new intracoronary measurement catheter, MetriCath, compared to intravascular ultrasound and quantitative coronary angiography in a stented porcine coronary model. <i>Catheterization and Cardiovascular Interventions</i> , 2002 , 57, 2-9; discussion 10-1	2.7	3
31	Methods in Atherosclerotic Plaque Characterization Using Intravascular Ultrasound Images and Backscattered Signals 2011 , 121-152		3
30	Derivation of the distensibility coefficient using tissue Doppler as a marker of arterial function. <i>Clinical Science</i> , 2008 , 114, 441-7	6.5	2
29	life Sciences - Signal-Processing Approaches to Risk Assessment in Coronary Artery Disease. <i>IEEE Signal Processing Magazine</i> , 2006 , 23, 59-62	9.4	2
28	Coronary stent traversed volume during the cardiac cycle defined as a target for high-precision radiotherapy by using biplane angiograms. <i>Radiotherapy and Oncology</i> , 2002 , 63, 103-6	5.3	2

27	Echo decorrelation estimated from signal powers. <i>Ultrasound in Medicine and Biology</i> , 1999 , 25, 405-9	3.5	2
26	Stroke volume changes during dobutamine-atropine stress echocardiography: the influence of heart rate and ischaemia. <i>International Journal of Cardiovascular Imaging</i> , 1999 , 15, 263-9		2
25	PCSCOPE: a general-purpose acquisition system. A first application in the recording of EMGs. <i>Medical and Biological Engineering and Computing</i> , 1990 , 28, 497-501	3.1	2
24	Ruptured pseudoaneurysm of coronary artery bypass graft. <i>European Heart Journal - Case Reports</i> , 2021 , 5, ytaa514	0.9	2
23	Full-wave intravascular ultrasound simulation from histology. <i>Lecture Notes in Computer Science</i> , 2014 , 17, 627-34	0.9	2
22	Effect of Oxidized Low-Density Lipoprotein on Head and Neck Squamous Cell Carcinomas. <i>Biomedicines</i> , 2021 , 9,	4.8	2
21	Imaging of atherosclerosis. Elastography. <i>European Journal of Cardiovascular Prevention and Rehabilitation</i> , 2002 , 9, 237-45		2
20	Bag of forests for modelling of tissue energy interaction in optical coherence tomography for atherosclerotic plaque susceptibility assessment 2015 ,		1
19	IVUS makes important strides in 2005. <i>Journal of Interventional Cardiology</i> , 2006 , 19, 337-9	1.8	1
18	Angiographic and three-dimensional intravascular ultrasound analysis of combined intracoronary beta radiation and self-expanding stent implantation in human coronary arteries. <i>American Journal of Cardiology</i> , 2004 , 94, 1237-42	3	1
17	Dosimetric comparison between high-precision external beam radiotherapy and endovascular brachytherapy for coronary artery in-stent restenosis. <i>International Journal of Radiation Oncology Biology Physics</i> , 2002 , 54, 1252-8	4	1
16	Comparison of different methods to define a target volume for external beam radiation therapy of restenotic coronary arteries. <i>Cardiovascular Radiation Medicine</i> , 2001 , 2, 208-12		1
15	Elastography. <i>European Journal of Cardiovascular Prevention and Rehabilitation</i> , 2002 , 9, 237-245		1
14	The role of intravascular ultrasound imaging in vascular brachytherapy. <i>International Journal of Cardiovascular Interventions</i> , 2000 , 3, 3-12		1
13			1
12	Clinical Utility of Intravascular Ultrasound 2020 , 3-24		1
11	The evolution of the CTO-PCI landscape in Belgium and Luxembourg: a four-year appraisal. <i>Acta Cardiologica</i> , 2020 , 1-9	0.9	1
10	Applications of Multiscale Overcomplete Wavelet-Based Representations in Intravascular Ultrasound (IVUS) Images 2012 , 313-336		1

9	Feasibility and cost of FH cascade screening in Belgium (BEL-CASCADE) including a novel rapid rule-out strategy. <i>Acta Cardiologica</i> , 2021 , 76, 227-235	0.9	o
8	Validation of a Novel System for Co-Registration of Coronary Angiographic and Intravascular Ultrasound Imaging. <i>Cardiovascular Revascularization Medicine</i> , 2019 , 20, 775-781	1.6	o
7	Lipid-lowering therapy and risk-based LDL-C goal attainment in Belgium: DA VINCI observational study.. <i>Acta Cardiologica</i> , 2022 , 1-10	0.9	o
6	Domain Adapted Model for In Vivo Intravascular Ultrasound Tissue Characterization 2017 , 157-181		
5	Intravascular Imaging to Assess Coronary Atherosclerosis and Percutaneous Coronary Interventions 2017 , 3-32		
4	Application of beta-irradiation through the struts of a previously deployed stent. <i>International Journal of Cardiovascular Interventions</i> , 2000 , 3, 121-125		
3	Successful Crossing of Complex Radial and Brachial Artery Anatomy Using a New Approach: Railtracking.. <i>American Journal of Case Reports</i> , 2022 , 23, e934760	1.3	
2	The single right coronary artery. <i>Journal of the Belgian Society of Radiology</i> , 2015 , 98, 98		
1	Stent visualization methods to guide percutaneous coronary interventions and assess long-term patency. <i>World Journal of Cardiology</i> , 2021 , 13, 416-437	2.1	