Declan P O'regan

List of Publications by Year
in descending order

133 papers	5,693 citations	94433 37 h-index	88630 70 g-index
144 all docs	144 docs citations	144 times ranked	8418 citing authors

#	Article	IF	Citations
1	Anatomically Constrained Neural Networks (ACNNs): Application to Cardiac Image Enhancement and Segmentation. IEEE Transactions on Medical Imaging, 2018, 37, 384-395.	8.9	493
2	Integrated allelic, transcriptional, and phenomic dissection of the cardiac effects of titin truncations in health and disease. Science Translational Medicine, 2015, 7, 270ra6.	12.4	375
3	Titin-truncating variants affect heart function in disease cohorts and the general population. Nature Genetics, 2017, 49, 46-53.	21.4	255
4	Inhibition of pyruvate dehydrogenase kinase improves pulmonary arterial hypertension in genetically susceptible patients. Science Translational Medicine, 2017, 9, .	12.4	206
5	Genetic Variants Associated With Cancer Therapyâ€"Induced Cardiomyopathy. Circulation, 2019, 140, 31-41.	1.6	195
6	Genetic Etiology for Alcohol-Induced Cardiac Toxicity. Journal of the American College of Cardiology, 2018, 71, 2293-2302.	2.8	182
7	Deep-learning cardiac motion analysis for human survival prediction. Nature Machine Intelligence, 2019, 1, 95-104.	16.0	179
8	A Probabilistic Patch-Based Label Fusion Model for Multi-Atlas Segmentation With Registration Refinement: Application to Cardiac MR Images. IEEE Transactions on Medical Imaging, 2013, 32, 1302-1315.	8.9	174
9	Machine Learning of Three-dimensional Right Ventricular Motion Enables Outcome Prediction in Pulmonary Hypertension: A Cardiac MR Imaging Study. Radiology, 2017, 283, 381-390.	7.3	161
10	Automatic 3D Bi-Ventricular Segmentation of Cardiac Images by a Shape-Refined Multi- Task Deep Learning Approach. IEEE Transactions on Medical Imaging, 2019, 38, 2151-2164.	8.9	155
11	Shared genetic pathways contribute to risk of hypertrophic and dilated cardiomyopathies with opposite directions of effect. Nature Genetics, 2021, 53, 128-134.	21.4	155
12	Cardiac Image Super-Resolution with Global Correspondence Using Multi-Atlas PatchMatch. Lecture Notes in Computer Science, 2013, 16, 9-16.	1.3	150
13	Reevaluating the Genetic Contribution of Monogenic Dilated Cardiomyopathy. Circulation, 2020, 141, 387-398.	1.6	148
14	A bi-ventricular cardiac atlas built from 1000+ high resolution MR images of healthy subjects and an analysis of shape and motion. Medical Image Analysis, 2015, 26, 133-145.	11.6	119
15	On the choice of outlet boundary conditions for patient-specific analysis of aortic flow using computational fluid dynamics. Journal of Biomechanics, 2017, 60, 15-21.	2.1	116
16	Liver Fat Content and T2*: Simultaneous Measurement by Using Breath-hold Multiecho MR Imaging at 3.0 Tâ€"Feasibility. Radiology, 2008, 247, 550-557.	7.3	114
17	Right ventricular remodelling in pulmonary arterial hypertension with three-dimensional echocardiography: comparison with cardiac magnetic resonance imaging. European Journal of Echocardiography, 2010, 11, 64-73.	2.3	107
18	A population-based phenome-wide association study of cardiac and aortic structure and function. Nature Medicine, 2020, 26, 1654-1662.	30.7	98

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19	Reperfusion Hemorrhage Following Acute Myocardial Infarction: Assessment with T2* Mapping and Effect on Measuring the Area at Risk. Radiology, 2009, 250, 916-922.	7.3	97
20	Exome-wide association study reveals novel susceptibility genes to sporadic dilated cardiomyopathy. PLoS ONE, 2017, 12, e0172995.	2.5	92
21	Genetic and functional insights into the fractal structure of the heart. Nature, 2020, 584, 589-594.	27.8	86
22	Body Fat Is Associated With Reduced Aortic Stiffness Until Middle Age. Hypertension, 2013, 61, 1322-1327.	2.7	80
23	CardioClassifier: disease- and gene-specific computational decision support for clinical genome interpretation. Genetics in Medicine, 2018, 20, 1246-1254.	2.4	75
24	Assessment of severe reperfusion injury with T2* cardiac MRI in patients with acute myocardial infarction. Heart, 2010, 96, 1885-1891.	2.9	68
25	Deep Learning of the Retina Enables Phenome- and Genome-Wide Analyses of the Microvasculature. Circulation, 2022, 145, 134-150.	1.6	57
26	Stratified Decision Forests for Accurate Anatomical Landmark Localization in Cardiac Images. IEEE Transactions on Medical Imaging, 2017, 36, 332-342.	8.9	56
27	Three-Tesla Cardiac Magnetic Resonance Imaging for Preterm Infants. Pediatrics, 2007, 120, 78-83.	2.1	55
28	Phenotypic Expression and Outcomes in Individuals With Rare Genetic Variants of Hypertrophic Cardiomyopathy. Journal of the American College of Cardiology, 2021, 78, 1097-1110.	2.8	55
29	Temporal sparse free-form deformations. Medical Image Analysis, 2013, 17, 779-789.	11.6	50
30	Genome-wide association analysis in dilated cardiomyopathy reveals two new players in systolic heart failure on chromosomes 3p25.1 and 22q11.23. European Heart Journal, 2021, 42, 2000-2011.	2.2	49
31	Abnormal brain white matter microstructure is associated with both pre-hypertension and hypertension. PLoS ONE, 2017, 12, e0187600.	2.5	47
32	Systematic large-scale assessment of the genetic architecture of left ventricular noncompaction reveals diverse etiologies. Genetics in Medicine, 2021, 23, 856-864.	2.4	45
33	Evolution and Current Applications of the Cabrol Procedure and Its Modifications. Annals of Thoracic Surgery, 2011, 91, 1636-1641.	1.3	43
34	Fractal analysis of left ventricular trabeculations is associated with impaired myocardial deformation in healthy Chinese. Journal of Cardiovascular Magnetic Resonance, 2016, 19, 102.	3.3	43
35	Cardiac MRI of myocardial salvage at the peri-infarct border zones after primary coronary intervention. American Journal of Physiology - Heart and Circulatory Physiology, 2009, 297, H340-H346.	3.2	42
36	Population-based studies of myocardial hypertrophy: high resolution cardiovascular magnetic resonance atlases improve statistical power. Journal of Cardiovascular Magnetic Resonance, 2014, 16, 16.	3.3	42

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37	Learning-Based Quality Control for Cardiac MR Images. IEEE Transactions on Medical Imaging, 2019, 38, 1127-1138.	8.9	42
38	VS-Net: Variable Splitting Network for Accelerated Parallel MRI Reconstruction. Lecture Notes in Computer Science, 2019, , 713-722.	1.3	42
39	Impact of number of channels on RF shimming at 3T. Magnetic Resonance Materials in Physics, Biology, and Medicine, 2013, 26, 401-410.	2.0	41
40	Precursors of Hypertensive Heart Phenotype Develop in Healthy Adults. JACC: Cardiovascular Imaging, 2015, 8, 1260-1269.	5.3	40
41	Moderate Physical Activity in Healthy Adults Is Associated With Cardiac Remodeling. Circulation: Cardiovascular Imaging, 2016, 9, .	2.6	40
42	Disease-specific variant pathogenicity prediction significantly improves variant interpretation in inherited cardiac conditions. Genetics in Medicine, 2021, 23, 69-79.	2.4	39
43	A comparison of MR cholangiopancreatography at 1.5 and 3.0 Tesla. British Journal of Radiology, 2005, 78, 894-898.	2.2	36
44	Assessing exercise cardiac reserve using real-time cardiovascular magnetic resonance. Journal of Cardiovascular Magnetic Resonance, 2016, 19, 7.	3.3	35
45	Artificial intelligence and the cardiologist: what you need to know for 2020. Heart, 2020, 106, 399-400.	2.9	35
46	Three-dimensional cardiovascular imaging-genetics: a mass univariate framework. Bioinformatics, 2018, 34, 97-103.	4.1	34
47	Cardiac structure and function in patients with schizophrenia taking antipsychotic drugs: an MRI study. Translational Psychiatry, 2019, 9, 163.	4.8	34
48	Explainable Anatomical Shape Analysis Through Deep Hierarchical Generative Models. IEEE Transactions on Medical Imaging, 2020, 39, 2088-2099.	8.9	34
49	Analysis of Turbulence Effects in a Patient-Specific Aorta with Aortic Valve Stenosis. Cardiovascular Engineering and Technology, 2021, 12, 438-453.	1.6	29
50	Myocardial infarction in sickle-cell disease. Lancet, The, 2007, 369, 246.	13.7	27
51	The relationship between synaptic density marker SV2A, glutamate and N-acetyl aspartate levels in healthy volunteers and schizophrenia: a multimodal PET and magnetic resonance spectroscopy brain imaging study. Translational Psychiatry, 2021, 11, 393.	4.8	27
52	Exercise cardiac MRI unmasks right ventricular dysfunction in acute hypoxia and chronic pulmonary arterial hypertension. American Journal of Physiology - Heart and Circulatory Physiology, 2018, 315, H950-H957.	3.2	25
53	Remodeling after acute myocardial infarction: mapping ventricular dilatation using three dimensional CMR image registration. Journal of Cardiovascular Magnetic Resonance, 2012, 14, 46.	3.3	24
54	MRIdb: Medical Image Management for Biobank Research. Journal of Digital Imaging, 2013, 26, 886-890.	2.9	24

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55	Precision Phenotyping of Dilated Cardiomyopathy Using Multidimensional Data. Journal of the American College of Cardiology, 2022, 79, 2219-2232.	2.8	24
56	Relationship between body composition and left ventricular geometry using three dimensional cardiovascular magnetic resonance. Journal of Cardiovascular Magnetic Resonance, 2016, 18, 32.	3.3	23
57	Fractal Analysis of Right Ventricular Trabeculae in Pulmonary Hypertension. Radiology, 2018, 288, 386-395.	7.3	23
58	Snapshot Inversion Recovery: An Optimized Single-Shot T1-weighted Inversion-Recovery Sequence for Improved Fetal Brain Anatomic Delineation. Radiology, 2011, 258, 229-235.	7.3	21
59	Noninvasive Mapping of the Electrophysiological Substrate in Cardiac Amyloidosis and Its Relationship to Structural Abnormalities. Journal of the American Heart Association, 2019, 8, e012097.	3.7	21
60	Regional variation in cardiovascular magnetic resonance service delivery across the UK. Heart, 2021, 107, 1974-1979.	2.9	21
61	x-f choice: Reconstruction of undersampled dynamic MRI by data-driven alias rejection applied to contrast-enhanced angiography. Magnetic Resonance in Medicine, 2006, 56, 811-823.	3.0	19
62	Cardiac T2* and lipid measurement at 3.0 T-initial experience. European Radiology, 2008, 18, 800-805.	4.5	19
63	The safe practice of CT coronary angiography in adult patients in UK imaging departments. Clinical Radiology, 2016, 71, 722-728.	1.1	19
64	Pulmonary Artery Stiffness Is Independently Associated with Right Ventricular Mass and Function: A Cardiac MR Imaging Study. Radiology, 2016, 280, 398-404.	7.3	17
65	Assessment of Hemodynamic Conditions in the Aorta Following Root Replacement with Composite Valve-Conduit Graft. Annals of Biomedical Engineering, 2016, 44, 1392-1404.	2.5	17
66	Putting machine learning into motion: applications in cardiovascular imaging. Clinical Radiology, 2020, 75, 33-37.	1.1	17
67	Deep Nested Level Sets: Fully Automated Segmentation of Cardiac MR Images in Patients with Pulmonary Hypertension. Lecture Notes in Computer Science, 2018, , 595-603.	1.3	17
68	Correspondence on â€œACMG SF v3.0 list for reporting of secondary findings in clinical exome and genome sequencing: a policy statement of the American College of Medical Genetics and Genomics (ACMG)â€•byÂMiller etÂal. Genetics in Medicine, 2022, 24, 744-746.	2.4	17
69	Subject-specific water-selective imaging using parallel transmission. Magnetic Resonance in Medicine, 2010, 63, 988-997.	3.0	16
70	Artificial Intelligence for Cardiac Imaging-Genetics Research. Frontiers in Cardiovascular Medicine, 2020, 6, 195.	2.4	16
71	Cardiac structure and function in schizophrenia: cardiac magnetic resonance imaging study. British Journal of Psychiatry, 2020, 217, 450-457.	2.8	15
72	Motion-corrected multiparametric renal arterial spin labelling at 3 T: reproducibility and effect of vasodilator challenge. European Radiology, 2019, 29, 232-240.	4.5	14

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73	Sex-Dependent QRS Guidelines for Cardiac Resynchronization Therapy Using Computer Model Predictions. Biophysical Journal, 2019, 117, 2375-2381.	0.5	14
74	Quantitative 3T MR Imaging of the Descending Thoracic Aorta: Patients with Familial Hypercholesterolemia Have an Increased Aortic Plaque Burden Despite Long-Term Lipid-lowering Therapy. Journal of Vascular and Interventional Radiology, 2008, 19, 1403-1408.	0.5	13
75	Metabolic pathways associated with right ventricular adaptation to pulmonary hypertension: 3D analysis of cardiac magnetic resonance imaging. European Heart Journal Cardiovascular Imaging, 2019, 20, 668-676.	1.2	13
76	<i>ZBTB17</i> (<i>MIZ1</i>) Is Important for the Cardiac Stress Response and a Novel Candidate Gene for Cardiomyopathy and Heart Failure. Circulation: Cardiovascular Genetics, 2015, 8, 643-652.	5.1	12
77	Genetic and environmental determinants of diastolic heart function. , 2022, 1, 361-371.		12
78	Validation of Artificial Intelligence Cardiac MRI Measurements: Relationship to Heart Catheterization and Mortality Prediction. Radiology, 2022, 305, 68-79.	7.3	12
79	Salvage assessment with cardiac MRI following acute myocardial infarction underestimates potential for recovery of systolic strain. European Radiology, 2013, 23, 1210-1217.	4.5	11
80	3D High-Resolution Cardiac Segmentation Reconstruction From 2D Views Using Conditional Variational Autoencoders. , 2019, , .		11
81	Evaluation of Computational Methodologies for Accurate Prediction of Wall Shear Stress and Turbulence Parameters in a Patient-Specific Aorta. Frontiers in Bioengineering and Biotechnology, 2022, 10, 836611.	4.1	10
82	Adipose tissue dysfunction, inflammation, and insulin resistance: alternative pathways to cardiac remodelling in schizophrenia. A multimodal, caseâ€"control study. Translational Psychiatry, 2021, 11, 614.	4.8	10
83	Magnetic resonance direct thrombus imaging at 3T field strength in patients with lower limb deep vein thrombosis: a feasibility study. Clinical Radiology, 2006, 61, 282-286.	1.1	9
84	In-vivo assessment of the morphology and hemodynamic functions of the BioValsalvaâ„¢ composite valve-conduit graft using cardiac magnetic resonance imaging and computational modelling technology. Journal of Cardiothoracic Surgery, 2014, 9, 193.	1.1	9
85	Learning a Model-Driven Variational Network for Deformable Image Registration. IEEE Transactions on Medical Imaging, 2022, 41, 199-212.	8.9	9
86	Joint Motion Correction and Super Resolution for Cardiac Segmentation viaÂLatent Optimisation. Lecture Notes in Computer Science, 2021, , 14-24.	1.3	9
87	Establishing a clinical cardiac MRI service. Clinical Radiology, 2006, 61, 211-224.	1.1	8
88	Left Main Bronchus Compression Due to Main Pulmonary Artery Dilatation in Pulmonary Hypertension: Two Case Reports. Pulmonary Circulation, 2015, 5, 723-725.	1.7	8
89	Sex and regional differences in myocardial plasticity in aortic stenosis are revealed by 3D model machine learning. European Heart Journal Cardiovascular Imaging, 2019, 21, 417-427.	1.2	7
90	Paradoxical Higher Myocardial Wall Stress and Increased Cardiac Remodeling Despite Lower Mass in Females. Journal of the American Heart Association, 2020, 9, e014781.	3.7	7

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91	Multi-atlas Spectral PatchMatch: Application to Cardiac Image Segmentation. Lecture Notes in Computer Science, 2014, 17, 348-355.	1.3	7
92	MulViMotion: Shape-Aware 3D Myocardial Motion Tracking From Multi-View Cardiac MRI. IEEE Transactions on Medical Imaging, 2022, 41, 1961-1974.	8.9	7
93	Imaging of the jaundiced patient. British Journal of Hospital Medicine (London, England: 2005), 2005, 66, 17-22.	0.5	6
94	Geometry and flow in ascending aortic aneurysms are influenced by left ventricular outflow tract orientation: Detecting increased wall shear stress on the outer curve of proximal aortic aneurysms. Journal of Thoracic and Cardiovascular Surgery, 2023, 166, 11-21.e1.	0.8	6
95	Enhancing Magnetic Resonance Imaging With Computational Fluid Dynamics. Journal of Engineering and Science in Medical Diagnostics and Therapy, 2019, 2, .	0.5	6
96	Phase-contrast magnetic resonance imaging and computational fluid dynamics assessment of thoracic aorta blood flow: a literature review. European Journal of Cardio-thoracic Surgery, 2020, 57, 438-446.	1.4	5
97	The Egyptian Collaborative Cardiac Genomics (ECCO-GEN) Project: defining a healthy volunteer cohort. Npj Genomic Medicine, 2020, 5, 46.	3.8	5
98	Prognostic impact of right ventricular mass change in patients with idiopathic pulmonary arterial hypertension. International Journal of Cardiology, 2020, 304, 172-174.	1.7	5
99	MRI at 3 Tesla detects no evidence for ischemic brain damage in intensively treated patients with homozygous familial hypercholesterolemia. Neuroradiology, 2007, 49, 927-931.	2.2	4
100	Nesterov Accelerated ADMM for Fast Diffeomorphic Image Registration. Lecture Notes in Computer Science, 2021, , 150-160.	1.3	4
101	Interpretation of the shoulder radiograph. British Journal of Hospital Medicine (London, England:) Tj ETQq1 1 0.784314 rgBT /Overlock 1	0.5	3
102	Myocarditis or myocardial infarction? MRI can help. Heart, 2011, 97, 1283-1283.	2.9	3
103	Acute myocardial infarction: susceptibility-weighted cardiac MRI for the detection ofÂreperfusion haemorrhage at 1.5 T. Clinical Radiology, 2016, 71, e150-e156.	1.1	3
104	Combining Deep Learning and Shape Priors for Bi-Ventricular Segmentation of Volumetric Cardiac Magnetic Resonance Images. Lecture Notes in Computer Science, 2018, , 258-267.	1.3	3
105	Interpretation of wrist and hand radiographs. British Journal of Hospital Medicine (London, England:) Tj ETQq1 1 0.784314 rgBT /Overlo	0.5	2
106	Interpretation of ankle and foot radiographs. British Journal of Hospital Medicine (London, England:) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5	0.5	2
107	Investigating stable chest pain of suspected cardiac origin. BMJ, The, 2013, 347, f3940-f3940.	6.0	2
108	Stiff Arteries, Stiff Ventricles. Circulation: Cardiovascular Imaging, 2016, 9, .	2.6	2

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109	Respiratory Motion Correction for 2D Cine Cardiac MR Images using Probabilistic Edge Maps. , 0, , .		2
110	Interpretation of elbow and forearm radiographs. British Journal of Hospital Medicine (London,) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 70	0.5	1
111	Interpretation of the abdominal radiograph: 1. British Journal of Hospital Medicine (London, England:) Tj ETQq1 1 0.784314 rgBT /Overlo	0.5	1
112	Interpretation of pelvis and hip radiographs. British Journal of Hospital Medicine (London, England:) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50	0.5	1
113	175â€...Aortopathy-causing mutations increase aortic stiffness in healthy individuals. Heart, 2015, 101, A99.1-A99.	2.9	1
114	Use of artificial intelligence to predict survival in pulmonary hypertension. Lancet, The, 2016, 387, S35.	13.7	1
115	Development of integrated high-resolution three-dimensional MRI and computational modelling techniques to identify novel genetic and anthropometric determinants of cardiac form and function. Lancet, The, 2016, 387, S36.	13.7	1
116	Identifying the optimal regional predictor of right ventricular global function: a highâ€resolution threeâ€dimensional cardiac magnetic resonance study. Anaesthesia, 2019, 74, 312-320.	3.8	1
117	Interpretation of the chest radiograph in the casualty department. British Journal of Hospital Medicine (London, England: 2005), 2005, 66, M8-M13.	0.5	0
118	Interpretation of skull and facial radiographs. British Journal of Hospital Medicine (London, England:) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5	0.5	0
119	Ultrasonography of the Shoulder. Ultrasound, 2005, 13, 48-53.	0.7	0
120	Interpretation of the abdominal radiograph: 2. British Journal of Hospital Medicine (London, England:) Tj ETQq0 0 0 rgBT /Overlock 10 Tf	0.5	0
121	Interpretation of cervical spine radiographs. British Journal of Hospital Medicine (London, England:) Tj ETQq1 1 0.784314 rgBT /Overlock	0.5	0
122	So you want to be â€¦ a radiologist. British Journal of Hospital Medicine (London, England: 2005), 2006, 67, M19-M19.	0.5	0
123	Imaging of the pancreas. British Journal of Hospital Medicine (London, England: 2005), 2006, 67, 8-13.	0.5	0
124	Interpretation of paediatric trauma. British Journal of Hospital Medicine (London, England: 2005), 2006, 67, M134-M137.	0.5	0
125	Interpretation of thoracolumbar spine radiographs. British Journal of Hospital Medicine (London,) Tj ETQq1 1 0.784314 rgBT /Overlock 1	0.5	0
126	Interpretation of knee radiographs. British Journal of Hospital Medicine (London, England: 2005), 2006, 67, M150-M152.	0.5	0

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127	So you want to beâ€¦ a radiologist. British Journal of Hospital Medicine (London, England: 2005), 2010, 71, M176-M176.	0.5	0
128	Adverse changes in left ventricular structure begin at normotensive systolic blood pressures: a high resolution MRI study. Journal of Cardiovascular Magnetic Resonance, 2015, 17, M11.	3.3	0
129	Three dimensional modelling of the effect of arterial pulse wave velocity and body size on left ventricular geometry. Journal of Cardiovascular Magnetic Resonance, 2015, 17, O44.	3.3	0
130	The Authors Reply:. JACC: Cardiovascular Imaging, 2016, 9, 763-764.	5.3	0
131	5â€...Defining the effects of genetic variation using machine learning analysis of CMRS: a study in hypertrophic cardiomyopathy and in a healthy population. , 2018, , .		0
132	One-stage Multi-task Detector for 3D Cardiac MR Imaging. , 2021, , .		0
133	PO-639-02 REPOLARISATION GRADIENTS DECREASE AFTER BARIATRIC SURGERY IN OBESE PATIENTS. Heart Rhythm, 2022, 19, S200.	0.7	0