Mark Potse

List of Publications by Citations

73 papers	2,114 citations	23 h-index	45 g-index
83 ext. papers	2,609 ext. citations	4.4 avg, IF	4.65 L-index

#	Paper	IF	Citations
73	A comparison of monodomain and bidomain reaction-diffusion models for action potential propagation in the human heart. *IEEE Transactions on Biomedical Engineering*, **2006**, 53, 2425-35	5	317
72	Electrical conduction in canine pulmonary veins: electrophysiological and anatomic correlation. *Circulation*, **2002**, 105, 2442-8	16.7	258
71	The Early Repolarization Pattern: A Consensus Paper. *Journal of the American College of Cardiology*, **2015**, 66, 470-7	15.1	229
70	The Digital Twin to enable the vision of precision cardiology. *European Heart Journal*, **2020**, 41, 4556-4564	39	136
69	Impaired conduction in the bundle branches of mouse hearts lacking the gap junction protein connexin40. *Circulation*, **2001**, 103, 1591-8	16.7	111
68	Mechanism of right precordial ST-segment elevation in structural heart disease: excitation failure by current-to-load mismatch. *Heart Rhythm*, **2010**, 7, 238-48	6.7	88
67	Validation of a simple model for the morphology of the T wave in unipolar electrograms. *American Journal of Physiology - Heart and Circulatory Physiology*, **2009**, 297, H792-801	5.2	75
66	Cardiac anisotropy in boundary-element models for the electrocardiogram. *Medical and Biological Engineering and Computing*, **2009**, 47, 719-29	3.1	66
65	Software design for analysis of multichannel intracardial and body surface electrocardiograms. *Computer Methods and Programs in Biomedicine*, **2002**, 69, 225-36	6.9	55
64	ST segment elevation by current-to-load mismatch: an experimental and computational study. *Heart Rhythm*, **2011**, 8, 111-8	6.7	48
63	Patient-specific modelling of cardiac electrophysiology in heart-failure patients. *Europace*, **2014**, 16 Suppl 4, iv56-iv61	3.9	43
62	Simulation of QRST integral maps with a membrane-based computer heart model employing parallel processing. *IEEE Transactions on Biomedical Engineering*, **2004**, 51, 1319-29	5	43
61	Mechanoelectrical coupling enhances initiation and affects perpetuation of atrial fibrillation during acute atrial dilation. *Heart Rhythm*, **2011**, 8, 429-36	6.7	38
60	Localized Structural Alterations Underlying a Subset of Unexplained Sudden Cardiac Death. *Circulation: Arrhythmia and Electrophysiology*, **2018**, 11, e006120	6.4	33
59	Spatially Coherent Activation Maps for Electrocardiographic Imaging. *IEEE Transactions on Biomedical Engineering*, **2017**, 64, 1149-1156	5	31
58	The effect of reduced intercellular coupling on electrocardiographic signs of left ventricular hypertrophy. *Journal of Electrocardiology*, **2011**, 44, 571-6	1.4	29
57	Depolarization versus repolarization abnormality underlying inferolateral J-wave syndromes: New concepts in sudden cardiac death with apparently normal hearts. *Heart Rhythm*, **2019**, 16, 781-790	6.7	29

56	A computer model of endo-epicardial electrical dissociation and transmural conduction during atrial fibrillation. *Europace*, **2012**, 14 Suppl 5, v10-v16	3.9	27
55	An in-silico analysis of the effect of heart position and orientation on the ECG morphology and vectorcardiogram parameters in patients with heart failure and intraventricular conduction defects. *Journal of Electrocardiology*, **2015**, 48, 617-25	1.4	26
54	Similarities and differences between electrocardiogram signs of left bundle-branch block and left-ventricular uncoupling. *Europace*, **2012**, 14 Suppl 5, v33-v39	3.9	25
53	Electrocardiographic identification of abnormal ventricular depolarization and repolarization in patients with idiopathic ventricular fibrillation. *Journal of the American College of Cardiology*, **1998**, 31, 1406-13	15.1	25
52	The effect of lesion size and tissue remodeling on ST deviation in partial-thickness ischemia. *Heart Rhythm*, **2007**, 4, 200-6	6.7	25
51	Epicardial Fibrosis Explains Increased Endo-Epicardial Dissociation and Epicardial Breakthroughs in Human Atrial Fibrillation. *Frontiers in Physiology*, **2020**, 11, 68	4.6	24
50	In vivo electromechanical assessment of heart failure patients with prolonged QRS duration. *Heart Rhythm*, **2015**, 12, 1259-67	6.7	20
49	Evaluation of a Rapid Anisotropic Model for ECG Simulation. *Frontiers in Physiology*, **2017**, 8, 265	4.6	20
48	Scalable and Accurate ECG Simulation for Reaction-Diffusion Models of the Human Heart. *Frontiers in Physiology*, **2018**, 9, 370	4.6	19
47	Clinical application of an integrated 3-phase mapping technique for localization of the site of origin of idiopathic ventricular tachycardia. *Circulation*, **1999**, 99, 1300-11	16.7	19
46	How disruption of endo-epicardial electrical connections enhances endo-epicardial conduction during atrial fibrillation. *Europace*, **2017**, 19, 308-318	3.9	18
45	A comparison of monodomain and bidomain propagation models for the human heart. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society*, **2006**, 2006, 3895-8		15
44	Continuous localization of cardiac activation sites using a database of multichannel ECG recordings. *IEEE Transactions on Biomedical Engineering*, **2000**, 47, 682-9	5	15
43	Reconstruction of three-dimensional biventricular activation based on the 12-lead electrocardiogram via patient-specific modelling. *Europace*, **2021**, 23, 640-647	3.9	14
42	Critical appraisal of the mechanism underlying J waves. *Journal of Electrocardiology*, **2013**, 46, 390-4	1.4	13
41	Relation between body surface mapping and endocardial spread of ventricular activation in postinfarction heart. *Journal of Cardiovascular Electrophysiology*, **2001**, 12, 1232-41	2.7	10
40	Hybrid Parallelization of a Large-Scale Heart Model. *Lecture Notes in Computer Science*, **2012**, 120-132	0.9	10
39	Reduced Sodium Current in the Lateral Ventricular Wall Induces Inferolateral J-Waves. *Frontiers in Physiology*, **2016**, 7, 365	4.6	10

38	P-wave complexity in normal subjects and computer models. *Journal of Electrocardiology*, **2016**, 49, 545-53	1.4	10
37	Computer simulation of ECG manifestations of left ventricular electrical remodeling. *Journal of Electrocardiology*, **2012**, 45, 630-4	1.4	9
36	Mathematical modeling and simulation of ventricular activation sequences: implications for cardiac resynchronization therapy. *Journal of Cardiovascular Translational Research*, **2012**, 5, 146-58	3.3	9
35	The role of extracellular potassium transport in computer models of the ischemic zone. *Medical and Biological Engineering and Computing*, **2007**, 45, 1187-99	3.1	9
34	Towards a large-scale scalable adaptive heart model using shallow tree meshes. *Journal of Computational Physics*, **2015**, 298, 79-94	4.1	8
33	Segmentation of the left ventricular endocardium from magnetic resonance images by using different statistical shape models. *Journal of Electrocardiology*, **2016**, 49, 383-91	1.4	8
32	Computer Modelling for Better Diagnosis and Therapy of Patients by Cardiac Resynchronisation Therapy. *Arrhythmia and Electrophysiology Review*, **2015**, 4, 62-7	3.2	7
31	Beat-to-beat P-wave morphological variability in patients with paroxysmal atrial fibrillation: an in silico study. *Europace*, **2018**, 20, iii26-iii35	3.9	7
30	Design and Analysis of a Lightweight Parallel Adaptive Scheme for the Solution of the Monodomain Equation. *SIAM Journal of Scientific Computing*, **2014**, 36, C163-C189	2.6	6
29	Improving the Spatial Solution of Electrocardiographic Imaging: A New Regularization Parameter Choice Technique for the Tikhonov Method. *Lecture Notes in Computer Science*, **2017**, 289-300	0.9	6
28	The Spectrum of Idiopathic Ventricular Fibrillation and J-Wave Syndromes: Novel Mapping Insights. *Cardiac Electrophysiology Clinics*, **2019**, 11, 699-709	1.4	5
27	The relation between local repolarization and T-wave morphology in heart failure patients. *International Journal of Cardiology*, **2017**, 241, 270-276	3.2	4
26	Properties of unipolar electrograms recorded with a multielectrode basket catheter. *Journal of Electrocardiology*, **2004**, 37, 1-10	1.4	4
25	Conversion of left ventricular endocardial positions from patient-independent co-ordinates into biplane fluoroscopic projections. *Medical and Biological Engineering and Computing*, **2002**, 40, 41-6	3.1	4
24	Left Atrial Appendage Electrical Isolation Reduces Atrial Fibrillation Recurrences: A Simulation Study. *Circulation: Arrhythmia and Electrophysiology*, **2021**, 14, e009230	6.4	4
23	Fibrosis and Conduction Abnormalities as Basis for Overlap of Brugada Syndrome and Early Repolarization Syndrome. *International Journal of Molecular Sciences*, **2021**, 22,	6.3	4
22	On Sampling Spatially-Correlated Random Fields for Complex Geometries. *Lecture Notes in Computer Science*, **2019**, 103-111	0.9	3
21	ST elevation or depression in subendocardial ischemia?. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society*, **2006**, 2006, 3899-902		3

20	Simulating T-wave parameters of local extracellular electrograms with a whole-heart bidomain reaction-diffusion model: Size matters!. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society*, **2007**, 2007, 6644-7		3
19	Dynamics of sustained reentry in a loop model with discrete gap junction resistances. *Physical Review E*, **2007**, 76, 021928	2.4	3
18	A left bundle branch block activation sequence and ventricular pacing influence voltage amplitudes: an in vivo and in silico study. *Europace*, **2018**, 20, iii77-iii86	3.9	3
17	The positive T wave. *Anatolian Journal of Cardiology*, **2007**, 7 Suppl 1, 164-7		3
16	Impact of the Endocardium in a Parameter Optimization to Solve the Inverse Problem of Electrocardiography. *Frontiers in Physiology*, **2018**, 9, 1946	4.6	2
15	Prediction of the Exit Site of Ventricular Tachycardia Based on Different ECG Lead Systems **2017**,		2
14	A Parameter Optimization to Solve the Inverse Problem in Electrocardiography. *Lecture Notes in Computer Science*, **2017**, 219-229	0.9	2
13	Why Ablation of Sites With Purkinje Activation Is Antiarrhythmic: The Interplay Between Fast Activation and Arrhythmogenesis. *Frontiers in Physiology*, **2021**, 12, 648396	4.6	2
12	Characterization of T Wave Amplitude, Duration and Morphology Changes During Hemodialysis: Relationship With Serum Electrolyte Levels and Heart Rate. *IEEE Transactions on Biomedical Engineering*, **2021**, 68, 2467-2478	5	2
11	Synergistic antiarrhythmic effect of inward rectifier current inhibition and pulmonary vein isolation in a 3D computer model for atrial fibrillation. *Europace*, **2021**, 23, i161-i168	3.9	2
10	Effect of Na+-channel blockade on the three-dimensional substrate of atrial fibrillation in a model of endo-epicardial dissociation and transmural conduction. *Europace*, **2018**, 20, iii69-iii76	3.9	2
9	Left-axis deviation in patients with nonischemic heart failure and left bundle branch block is a purely electrical phenomenon. *Heart Rhythm*, **2021**, 18, 1352-1360	6.7	1
8	Understanding ST depression in the stress-test ECG. *Anatolian Journal of Cardiology*, **2007**, 7 Suppl 1, 145-7		1
7	Estimation of potassium levels in hemodialysis patients by T wave nonlinear dynamics and morphology markers.. *Computers in Biology and Medicine*, **2022**, 143, 105304	7	0
6	Fibrillation Patterns Creep and Jump in a Detailed Three-Dimensional Model of the Human Atria. *Lecture Notes in Computer Science*, **2019**, 131-138	0.9	
5	Modeling transport of interstitial potassium in regional myocardial ischemia: effect on the injury current. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society*, **2007**, 2007, 6331-4		
4	Integration of Body Surface Mapping and Biplane Fluoroscopy for Guidance of Catheter Ablation of Ventricular Tachycadria. *Biomedizinische Technik*, **2001**, 46, 210-212	1.3	
3	A generic model of overall heart geometry for model based studies of electrical, mechanical, and ion-kinetics aspects of the heart. *IFMBE Proceedings*, **2009**, 2548-2551	0.2	

2 18-02: Fibrosis explains increased epicardial breakthrough in AF. *Europace*, **2016**, 18, i163-i163 3.9

1 Why do we need supercomputers to understand the electrocardiographic T wave?. *Anatolian Journal of Cardiology*, **2007**, 7 Suppl 1, 123-4