Patrick Segers

List of Publications by Year in Descending Order

391 papers	14,203 citations	57 h-index	104 g-index
507 ext. papers	16,612 ext. citations	3.5 avg, IF	6.74 L-index

#	Paper	IF	Citations
391	Assessment of Stiffness of Large to Small Arteries in Multistage Renal Disease Model: A Numerical Study.. *Frontiers in Physiology*, **2022**, 13, 832858	4.6	0
390	Essential principles of pulsatile pressure-flow relations in the arterial tree **2022**, 49-66		
389	Measurements of arterial pressure and flow in vivo **2022**, 27-47		1
388	Arterial wall stiffness: basic principles and methods of measurement in vivo **2022**, 111-124		
387	Template Matching and Matrix Profile for Signal Quality Assessment of Carotid and Femoral Laser Doppler Vibrometer Signals.. *Frontiers in Physiology*, **2021**, 12, 775052	4.6	1
386	Guiding Myocardial Revascularization by Algorithmic Interpretation of FFR Pullback Curves: A Proof of Concept Study. *Frontiers in Cardiovascular Medicine*, **2021**, 8, 623841	5.4	
385	Longitudinal Changes of Input Impedance, Pulse Wave Velocity, and Wave Reflection in a Middle-Aged Population: The Asklepios Study. *Hypertension*, **2021**, 77, 1154-1165	8.5	7
384	Right Ventricular Flow Dynamics in Dilated Right Ventricles: Energy Loss Estimation Based on Blood Speckle Tracking Echocardiography-A Pilot Study in Children. *Ultrasound in Medicine and Biology*, **2021**, 47, 1514-1527	3.5	1
383	Histological and biomechanical properties of systemic arteries in young and old Warmblood horses. *PLoS ONE*, **2021**, 16, e0253730	3.7	0
382	Mechanism of pulsus bisferiens in thoracoabdominal thoracic aneurysms: Insights from wave intensity analysis. *Journal of Clinical Hypertension*, **2021**, 23, 193-196	2.3	3
381	Outflow Through Aortic Side Branches Drives False Lumen Patency in Type B Aortic Dissection. *Frontiers in Cardiovascular Medicine*, **2021**, 8, 710603	5.4	0
380	On the assessment of arterial compliance from carotid pressure waveform. *American Journal of Physiology - Heart and Circulatory Physiology*, **2021**, 321, H424-H434	5.2	2
379	Corrosion casting of the cardiovascular structure in adult zebrafish for analysis by scanning electron microscopy and X-ray microtomography. *Journal of Veterinary Medicine Series C: Anatomia Histologia Embryologia*, **2020**, 49, 635-642	1.1	1
378	Analysis of multiple shear wave modes in a nonlinear soft solid: Experiments and finite element simulations with a tilted acoustic radiation force. *Journal of the Mechanical Behavior of Biomedical Materials*, **2020**, 107, 103754	4.1	7
377	Silicon photonics-based laser Doppler vibrometer array for carotid-femoral pulse wave velocity (PWV) measurement. *Biomedical Optics Express*, **2020**, 11, 3913-3926	3.5	3
376	Misconceptions About Arterial Stiffness May Lead to Erroneous Conclusions. *American Journal of Hypertension*, **2020**, 33, 402-404	2.3	1
375	Colour-Doppler echocardiography flow field velocity reconstruction using a streamfunction-vorticity formulation. *Journal of the Royal Society Interface*, **2020**, 17, 20200741	4.1	0

374	Muscle strength is a major determinant of the blood pressure response to isometric stress testing: the Asklepios population study. *Journal of Hypertension*, **2020**, 38, 224-234	1.9	2
373	How to Measure Arterial Stiffness in Humans. *Arteriosclerosis, Thrombosis, and Vascular Biology*, **2020**, 40, 1034-1043	9.4	41
372	Impact of varying diastolic pressure fitting technique for the reservoir-wave model on wave intensity analysis. *Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine*, **2020**, 234, 1300-1311	1.7	0
371	Effect of aortic stiffness versus stenosis on ventriculo-arterial interaction in an experimental model of coarctation repair. *European Journal of Cardio-thoracic Surgery*, **2020**, 58, 1206-1215	3	2
370	Ambulatory Electrocardiographic Monitoring and Ectopic Beat Detection in Conscious Mice. *Sensors* , **2020**, 20,	3.8	2
369	Mechanical and morphometric study of mitral valve chordae tendineae and related papillary muscle. *Journal of the Mechanical Behavior of Biomedical Materials*, **2020**, 111, 104011	4.1	2
368	Co-localization of microstructural damage and excessive mechanical strain at aortic branches in angiotensin-II-infused mice. *Biomechanics and Modeling in Mechanobiology*, **2020**, 19, 81-97	3.8	6
367	Large-Artery Stiffness in Health and Disease: JACC State-of-the-Art Review. *Journal of the American College of Cardiology*, **2019**, 74, 1237-1263	15.1	215
366	The Impact of Size and Position of a Mechanical Expandable Transcatheter Aortic Valve: Novel Insights Through Computational Modelling and Simulation. *Journal of Cardiovascular Translational Research*, **2019**, 12, 435-446	3.3	14
365	A 1D computer model of the arterial circulation in horses: An important resource for studying global interactions between heart and vessels under normal and pathological conditions. *PLoS ONE*, **2019**, 14, e0221425	3.7	1
364	Arterial Properties as Determinants of Left Ventricular Mass and Fibrosis in Severe Aortic Stenosis: Findings From ACRIN PA 4008. *Journal of the American Heart Association*, **2019**, 8, e03742	6	10
363	Using machine learning to characterize heart failure across the scales. *Biomechanics and Modeling in Mechanobiology*, **2019**, 18, 1987-2001	3.8	34
362	Optimization of a Transcatheter Heart Valve Frame Using Patient-Specific Computer Simulation. *Cardiovascular Engineering and Technology*, **2019**, 10, 456-468	2.2	11
361	Tomographic PIV in a model of the left ventricle: 3D flow past biological and mechanical heart valves. *Journal of Biomechanics*, **2019**, 90, 40-49	2.9	9
360	High-Frequency Fluctuations in Post-stenotic Patient Specific Carotid Stenosis Fluid Dynamics: A Computational Fluid Dynamics Strategy Study. *Cardiovascular Engineering and Technology*, **2019**, 10, 277-298	2.2	11
359	Mapping the site-specific accuracy of loop-based local pulse wave velocity estimation and reflection magnitude: a 1D arterial network model analysis. *Physiological Measurement*, **2019**, 40, 075002	2.9	5
358	The aorta after coarctation repair - effects of calibre and curvature on arterial haemodynamics. *Journal of Cardiovascular Magnetic Resonance*, **2019**, 21, 22	6.9	8
357	A 3D CFD model of the interstitial fluid pressure and drug distribution in heterogeneous tumor nodules during intraperitoneal chemotherapy. *Drug Delivery*, **2019**, 26, 404-415	7	16

356	Impact of Diabetes Mellitus on Ventricular Structure, Arterial Stiffness, and Pulsatile Hemodynamics in Heart Failure With Preserved Ejection Fraction. *Journal of the American Heart Association*, **2019**, 8, e011457	6	28
355	Detecting carotid stenosis from skin vibrations using Laser Doppler Vibrometry - An in vitro proof-of-concept. *PLoS ONE*, **2019**, 14, e0218317	3.7	4
354	Mixed impact of torsion on LV hemodynamics: A CFD study based on the Chimera technique. *Computers in Biology and Medicine*, **2019**, 112, 103363	7	0
353	Synchrotron-based visualization and segmentation of elastic lamellae in the mouse carotid artery during quasi-static pressure inflation. *Journal of the Royal Society Interface*, **2019**, 16, 20190179	4.1	3
352	Physics of Within-Tissue Wave Propagation Generated by Pulse Propagation in the Carotid Artery. *Applied Sciences (Switzerland)*, **2019**, 9, 2878	2.6	
351	Proximal pressure reducing effect of wave reflection in the pulmonary circulation disappear in obstructive disease: insight from a rabbit model. *American Journal of Physiology - Heart and Circulatory Physiology*, **2019**, 316, H992-H1004	5.2	1
350	Non-invasive intraventricular pressure differences estimated with cardiac MRI in subjects without heart failure and with heart failure with reduced and preserved ejection fraction. *Open Heart*, **2019**, 6, e001088	3	2
349	MEASUREMENT OF AORTIC STIFFNESS BY LASER DOPPLER VIBROMETRY. *Journal of Hypertension*, **2019**, 37, e88	1.9	1
348	Kinematic boundary conditions substantially impact in silico ventricular function. *International Journal for Numerical Methods in Biomedical Engineering*, **2019**, 35, e3151	2.6	7
347	Effect of Obesity on Left Atrial Strain in Persons Aged 35-55 Years (The Asklepios Study). *American Journal of Cardiology*, **2019**, 123, 854-861	3	16
346	Analysis of several subcycling schemes in partitioned simulations of a strongly coupled fluid-structure interaction. *International Journal for Numerical Methods in Fluids*, **2019**, 89, 181-195	1.9	3
345	Application of the wave-reservoir approach to different aortic sites: overstretching the concept. *Journal of Hypertension*, **2018**, 36, 963-964	1.9	1
344	Closed-Loop Lumped Parameter Modeling of Hemodynamics During Cirrhogenesis in Rats. *IEEE Transactions on Biomedical Engineering*, **2018**, 65, 2311-2322	5	13
343	Single calibration multiplane stereo-PIV: the effect of mitral valve orientation on three-dimensional flow in a left ventricle model. *Experiments in Fluids*, **2018**, 59, 1	2.5	6
342	Effect of organic and inorganic nitrates on cerebrovascular pulsatile power transmission in patients with heart failure and preserved ejection fraction. *Physiological Measurement*, **2018**, 39, 044001	2.9	8
341	An in silico framework to analyze the anisotropic shear wave mechanics in cardiac shear wave elastography. *Physics in Medicine and Biology*, **2018**, 63, 075005	3.8	11
340	Propagation-based phase-contrast synchrotron imaging of aortic dissection in mice: from individual elastic lamella to 3D analysis. *Scientific Reports*, **2018**, 8, 2223	4.9	15
339	Patient-Specific Computer Simulation to Elucidate the Role of Contact Pressure in the Development of New Conduction Abnormalities After Catheter-Based Implantation of a Self-Expanding Aortic Valve. *Circulation: Cardiovascular Interventions*, **2018**, 11, e005344	6	48

338	A Unified Mechanism for the Water Hammer Pulse and Pulsus Bisferiens in Severe Aortic Regurgitation: Insights from Wave Intensity Analysis. *Artery Research*, **2018**, 21, 9-12	2.2	3
337	The role of biomechanics in aortic aneurysm management: requirements, open problems and future prospects. *Journal of the Mechanical Behavior of Biomedical Materials*, **2018**, 77, 295-307	4.1	13
336	An in silico biomechanical analysis of the stent-esophagus interaction. *Biomechanics and Modeling in Mechanobiology*, **2018**, 17, 111-131	3.8	12
335	Reversal of Aging-Induced Increases in Aortic Stiffness by Targeting Cytoskeletal Protein-Protein Interfaces. *Journal of the American Heart Association*, **2018**, 7,	6	14
334	Reply to Comment on 'Numerical assessment and comparison of pulse wave velocity methods aiming at measuring aortic stiffness'. *Physiological Measurement*, **2018**, 39, 078002	2.9	2
333	Measuring pulmonary arterial compliance: mission impossible? Insights from a novel in vivo continuous-flow based experimental model. *Pulmonary Circulation*, **2018**, 8, 2045894018776882	2.7	4
332	Quantitative analysis of hepatic macro- and microvascular alterations during cirrhogenesis in the rat. *Journal of Anatomy*, **2018**, 232, 485-496	2.9	14
331	Should We Ignore What We Cannot Measure? How Non-Uniform Stretch, Non-Uniform Wall Thickness and Minor Side Branches Affect Computational Aortic Biomechanics in Mice. *Annals of Biomedical Engineering*, **2018**, 46, 159-170	4.7	8
330	Assessment of methodologies to calculate intraventricular pressure differences in computational models and patients. *Medical and Biological Engineering and Computing*, **2018**, 56, 469-481	3.1	7
329	A Fast 4D B-Spline Framework for Model-Based Reconstruction and Regularization in Vector Flow Imaging **2018**,		2
328	Synchrotron-based phase contrast imaging of cardiovascular tissue in mice grating interferometry or phase propagation?. *Biomedical Physics and Engineering Express*, **2018**, 5, 015010	1.5	2
327	A modular inverse elastostatics approach to resolve the pressure-induced stress state for in vivo imaging based cardiovascular modeling. *Journal of the Mechanical Behavior of Biomedical Materials*, **2018**, 85, 124-133	4.1	9
326	From 4D Medical Images (CT, MRI, and Ultrasound) to 4D Structured Mesh Models of the Left Ventricular Endocardium for Patient-Specific Simulations. *BioMed Research International*, **2018**, 2018, 7030718	3	6
325	Procedure to describe clavicular motion. *Journal of Shoulder and Elbow Surgery*, **2017**, 26, 490-496	4.3	
324	Abnormal Wave Reflections and Left Ventricular Hypertrophy Late After Coarctation of the Aorta Repair. *Hypertension*, **2017**, 69, 501-509	8.5	49
323	Isosorbide Dinitrate, With or Without Hydralazine, Does Not Reduce Wave Reflections, Left Ventricular Hypertrophy, or Myocardial Fibrosis in Patients With Heart Failure With Preserved Ejection Fraction. *Journal of the American Heart Association*, **2017**, 6,	6	25
322	Grading of mitral regurgitation based on intensity analysis of the continuous wave Doppler signal. *Heart*, **2017**, 103, 190-197	5.1	11
321	Mathematical modeling of intraperitoneal drug delivery: simulation of drug distribution in a single tumor nodule. *Drug Delivery*, **2017**, 24, 491-501	7	41

320	Validation of non-invasive central blood pressure devices: ARTERY Society task force consensus statement on protocol standardization. *European Heart Journal*, **2017**, 38, 2805-2812	9.5	126
319	Estimation of the Permeability Tensor of the Microvasculature of the Liver Through Fabric Tensors **2017**, 71-79		2
318	A finite element model to study the effect of tissue anisotropy on ex vivo arterial shear wave elastography measurements. *Physics in Medicine and Biology*, **2017**, 62, 5245-5275	3.8	6
317	Towards a consensus on the understanding and analysis of the pulse waveform: Results from the 2016 Workshop on Arterial Hemodynamics: Past, present and future. *Artery Research*, **2017**, 18, 75-80	2.2	29
316	Relative contributions from the ventricle and arterial tree to arterial pressure and its amplification: an experimental study. *American Journal of Physiology - Heart and Circulatory Physiology*, **2017**, 313, H558-H567	5.2	14
315	Effects of organic and inorganic nitrate on aortic and carotid haemodynamics in heart failure with preserved ejection fraction. *European Journal of Heart Failure*, **2017**, 19, 1507-1515	12.3	28
314	Hemodynamic Impact of the C-Pulse Cardiac Support Device: A One-Dimensional Arterial Model Study. *Artificial Organs*, **2017**, 41, E141-E154	2.6	2
313	A multilevel framework to reconstruct anatomical 3D models of the hepatic vasculature in rat livers. *Journal of Anatomy*, **2017**, 230, 471-483	2.9	16
312	Numerical assessment and comparison of pulse wave velocity methods aiming at measuring aortic stiffness. *Physiological Measurement*, **2017**, 38, 1953-1967	2.9	12
311	Vascular Smooth Muscle Cells and Arterial Stiffening: Relevance in Development, Aging, and Disease. *Physiological Reviews*, **2017**, 97, 1555-1617	47.9	272
310	False Lumen Flow Patterns and their Relation with Morphological and Biomechanical Characteristics of Chronic Aortic Dissections. Computational Model Compared with Magnetic Resonance Imaging Measurements. *PLoS ONE*, **2017**, 12, e0170888	3.7	17
309	The effect of stretching on transmural shear wave anisotropy in cardiac shear wave elastography **2017**,		1
308	Modelling drug transport during intraperitoneal chemotherapy. *Pleura and Peritoneum*, **2017**, 2, 73-83	2	12
307	Optimization of dialyzer design to maximize solute removal with a two-dimensional transport model. *Journal of Membrane Science*, **2017**, 541, 519-528	9.6	14
306	Validation of non-invasive central blood pressure devices: Artery society task force (abridged) consensus statement on protocol standardization. *Artery Research*, **2017**, 20, 35	2.2	6
305	Proximal aortic stiffening in Turner patients may be present before dilation can be detected: a segmental functional MRI study. *Journal of Cardiovascular Magnetic Resonance*, **2017**, 19, 27	6.9	19
304	Angiotensin II infusion into ApoE-/- mice: a model for aortic dissection rather than abdominal aortic aneurysm?. *Cardiovascular Research*, **2017**, 113, 1230-1242	9.9	50
303	Wall Shear Rate Measurement: Validation of a New Method Through Multiphysics Simulations. *IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control*, **2017**, 64, 66-77	3.2	14

302	Investigating Shear Wave Physics in a Generic Pediatric Left Ventricular Model via In Vitro Experiments and Finite Element Simulations. *IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control*, **2017**, 64, 349-361	3.2	9
301	Patient-specific CFD models for intraventricular flow analysis from 3D ultrasound imaging: Comparison of three clinical cases. *Journal of Biomechanics*, **2017**, 50, 144-150	2.9	18
300	Effect of Ultrafast Imaging on Shear Wave Visualization and Characterization: An Experimental and Computational Study in a Pediatric Ventricular Model. *Applied Sciences (Switzerland)*, **2017**, 7, 840	2.6	8
299	Impact of plaque type and side branch geometry on side branch compromise after provisional stent implantation: a simulation study. *EuroIntervention*, **2017**, 13, e236-e245	3.1	7
298	Differential impact of local stiffening and narrowing on hemodynamics in repaired aortic coarctation: an FSI study. *Medical and Biological Engineering and Computing*, **2016**, 54, 497-510	3.1	18
297	Unstructured hexahedral mesh generation of complex vascular trees using a multi-block grid-based approach. *Computer Methods in Biomechanics and Biomedical Engineering*, **2016**, 19, 663-72	2.1	6
296	Patient-specific CFD simulation of intraventricular haemodynamics based on 3D ultrasound imaging. *BioMedical Engineering OnLine*, **2016**, 15, 107	4.1	21
295	2-D Versus 3-D Cross-Correlation-Based Radial and Circumferential Strain Estimation Using Multiplane 2-D Ultrafast Ultrasound in a 3-D Atherosclerotic Carotid Artery Model. *IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control*, **2016**, 63, 1543-1553	3.2	17
294	The influence of anesthesia and fluid-structure interaction on simulated shear stress patterns in the carotid bifurcation of mice. *Journal of Biomechanics*, **2016**, 49, 2741-2747	2.9	11
293	MRI Assessment of Diastolic and Systolic Intraventricular Pressure Gradients in Heart Failure. *Current Heart Failure Reports*, **2016**, 13, 37-46	2.8	2
292	A Computational Framework to Model Degradation of Biocorrodible Metal Stents Using an Implicit Finite Element Solver. *Annals of Biomedical Engineering*, **2016**, 44, 382-90	4.7	11
291	A Finite Element Method to Predict Adverse Events in Intracranial Stenting Using Microstents: In Vitro Verification and Patient Specific Case Study. *Annals of Biomedical Engineering*, **2016**, 44, 442-52	4.7	6
290	Pitfalls of Doppler Measurements for Arterial Blood Flow Quantification in Small Animal Research: A Study Based on Virtual Ultrasound Imaging. *Ultrasound in Medicine and Biology*, **2016**, 42, 1399-411	3.5	3
289	Ascending Aortic Aneurysm in Angiotensin II-Infused Mice: Formation, Progression, and the Role of Focal Dissections. *Arteriosclerosis, Thrombosis, and Vascular Biology*, **2016**, 36, 673-81	9.4	45
288	Optimization of construct perfusion in radial-flow packed-bed bioreactors for tissue engineering with a 2D stationary fluid dynamic model. *Biochemical Engineering Journal*, **2016**, 109, 197-211	4.2	1
287	Misinterpretation of the Determinants of Elevated Forward Wave Amplitude Inflates the Role of the Proximal Aorta. *Journal of the American Heart Association*, **2016**, 5,	6	46
286	Shear Stress Metrics and Their Relation to Atherosclerosis: An In Vivo Follow-up Study in Atherosclerotic Mice. *Annals of Biomedical Engineering*, **2016**, 44, 2327-2338	4.7	18
285	Assessment of shear stress related parameters in the carotid bifurcation using mouse-specific FSI simulations. *Journal of Biomechanics*, **2016**, 49, 2135-2142	2.9	23

284	Fluid-Structure Interaction Simulation of Prosthetic Aortic Valves: Comparison between Immersed Boundary and Arbitrary Lagrangian-Eulerian Techniques for the Mesh Representation. *PLoS ONE*, **2016**, 11, e0154517	3.7	44
283	A 1D model of the arterial circulation in mice. *ALTEX: Alternatives To Animal Experimentation*, **2016**, 33, 13-28	4.3	14
282	Patient-specific image-based computer simulation for theprediction of valve morphology and calcium displacement after TAVI with the Medtronic CoreValve and the Edwards SAPIEN valve. *EuroIntervention*, **2016**, 11, 1044-52	3.1	51
281	Bone structural similarity score: a multiparametric tool to match properties of biomimetic bone substitutes with their target tissues. *Journal of Applied Biomaterials and Functional Materials*, **2016**, 14, e277-89	1.8	9
280	Reply to: "Letter to the editor: Comparing pace and speed in the pulmonary circulation?". *American Journal of Physiology - Heart and Circulatory Physiology*, **2016**, 310, H950	5.2	
279	Coronary fractional flow reserve measurements of a stenosed side branch: a computational study investigating the influence of the bifurcation angle. *BioMedical Engineering OnLine*, **2016**, 15, 91	4.1	15
278	15.8 AN EXTENDED ONE-DIMENSIONAL ARTERIAL NETWORK MODEL FOR THE SIMULATION OF PRESSURE AND FLOW IN UPPER AND LOWER LIMB EXTREMITIES. *Artery Research*, **2016**, 16, 87	2.2	
277	Pulsatile Load Components, Resistive Load and Incident Heart Failure: The Multi-Ethnic Study of Atherosclerosis (MESA). *Journal of Cardiac Failure*, **2016**, 22, 988-995	3.3	17
276	Aging is Associated With an Earlier Arrival of Reflected Waves Without a Distal Shift in Reflection Sites. *Journal of the American Heart Association*, **2016**, 5,	6	30
275	Assessing the Performance of Ultrafast Vector Flow Imaging in the Neonatal Heart via Multiphysics Modeling and In Vitro Experiments. *IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control*, **2016**, 63, 1772-1785	3.2	23
274	Standardization of Arterial Stiffness Measurements Make Them Ready for Use in Clinical Practice. *American Journal of Hypertension*, **2016**, 29, 1234-1236	2.3	17
273	A versatile and experimentally validated finite element model to assess the accuracy of shear wave elastography in a bounded viscoelastic medium. *IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control*, **2015**, 62, 439-50	3.2	15
272	Recommendations on the Use of Echocardiography in Adult Hypertension: A Report from the European Association of Cardiovascular Imaging (EACVI) and the American Society of Echocardiography (ASE). *Journal of the American Society of Echocardiography*, **2015**, 28, 727-54	5.8	198
271	A multilevel modeling framework to study hepatic perfusion characteristics in case of liver cirrhosis. *Journal of Biomechanical Engineering*, **2015**, 137, 051007	2.1	20
270	Non-invasive, energy-based assessment of patient-specific material properties of arterial tissue. *Biomechanics and Modeling in Mechanobiology*, **2015**, 14, 1045-56	3.8	26
269	The aortic reservoir-wave as a paradigm for arterial haemodynamics: insights from three-dimensional fluid-structure interaction simulations in a model of aortic coarctation. *Journal of Hypertension*, **2015**, 33, 554-63; discussion 563	1.9	16
268	An animal-specific FSI model of the abdominal aorta in anesthetized mice. *Annals of Biomedical Engineering*, **2015**, 43, 1298-309	4.7	22
267	A finite element strategy to investigate the free expansion behaviour of a biodegradable polymeric stent. *Journal of Biomechanics*, **2015**, 48, 2012-8	2.9	40

266	Intrinsic cardiomyopathy in Marfan syndrome: results from in-vivo and ex-vivo studies of the Fbn1C1039G/+ model and longitudinal findings in humans. *Pediatric Research*, **2015**, 78, 256-63	3.2	34
265	Dissecting abdominal aortic aneurysm in Ang II-infused mice: suprarenal branch ruptures and apparent luminal dilatation. *Cardiovascular Research*, **2015**, 105, 213-22	9.9	49
264	Influence of valve size, orientation and downstream geometry of an aortic BMHV on leaflet motion and clinically used valve performance parameters. *Annals of Biomedical Engineering*, **2015**, 43, 1370-84	4.7	1
263	2D versus 3D cross-correlation-based radial and circumferential strain imaging in a 3D atherosclerotic carotid artery model using ultrafast plane wave ultrasound **2015**,		2
262	4D.01. *Journal of Hypertension*, **2015**, 33, e60	1.9	5
261	Reference values for local arterial stiffness. Part A: carotid artery. *Journal of Hypertension*, **2015**, 33, 1981-96	1.9	71
260	MR pulse wave velocity increases with age faster in the thoracic aorta than in the abdominal aorta. *Journal of Magnetic Resonance Imaging*, **2015**, 41, 765-72	5.6	19
259	8A.03. *Journal of Hypertension*, **2015**, 33, e104-e105	1.9	
258	Reference values for local arterial stiffness. Part B: femoral artery. *Journal of Hypertension*, **2015**, 33, 1997-2009	1.9	41
257	Vulnerable plaque detection and quantification with gold particle-enhanced computed tomography in atherosclerotic mouse models. *Molecular Imaging*, **2015**, 14,	3.7	10
256	Performance comparison of ultrasound-based methods to assess aortic diameter and stiffness in normal and aneurysmal mice. *PLoS ONE*, **2015**, 10, e0129007	3.7	19
255	Assessment of Model Based (Input) Impedance, Pulse Wave Velocity, and Wave Reflection in the Asklepios Cohort. *PLoS ONE*, **2015**, 10, e0141656	3.7	16
254	Wave Separation, Wave Intensity, the Reservoir-Wave Concept, and the Instantaneous Wave-Free Ratio: Presumptions and Principles. *Hypertension*, **2015**, 66, 93-8	8.5	56
253	Recommendations on the use of echocardiography in adult hypertension: a report from the European Association of Cardiovascular Imaging (EACVI) and the American Society of Echocardiography (ASE) *European Heart Journal Cardiovascular Imaging*, **2015**, 16, 577-605	4.1	146
252	Resistive and pulsatile arterial load as predictors of left ventricular mass and geometry: the multi-ethnic study of atherosclerosis. *Hypertension*, **2015**, 65, 85-92	8.5	55
251	Vascular dysregulation in normal-tension glaucoma is not affected by structure and function of the microcirculation or macrocirculation at rest: a case-control study. *Medicine (United States)*, **2015**, 94, e425	1.8	13
250	Changes in Central Hemodynamics, Wave Reflection, and Heart Vessel Coupling with Normal and Accelerated Aging **2015**, 83-95		3
249	Noninvasive pulmonary artery wave intensity analysis in pulmonary hypertension. *American Journal of Physiology - Heart and Circulatory Physiology*, **2015**, 308, H1603-11	5.2	50

248	Incidence, severity, mortality, and confounding factors for dissecting AAA detection in angiotensin II-infused mice: a meta-analysis. *Cardiovascular Research*, **2015**, 108, 159-70	9.9	22
247	Late systolic central hypertension as a predictor of incident heart failure: the Multi-ethnic Study of Atherosclerosis. *Journal of the American Heart Association*, **2015**, 4, e001335	6	31
246	Assessment of wall elasticity variations on intraluminal haemodynamics in descending aortic dissections using a lumped-parameter model. *PLoS ONE*, **2015**, 10, e0124011	3.7	10
245	Dissecting abdominal aortic aneurysm in Angiotensin II-infused mice: the importance of imaging. *Current Pharmaceutical Design*, **2015**, 21, 4049-60	3.3	7
244	Novel magnetic resonance wave intensity analysis in pulmonary hypertension. *Journal of Cardiovascular Magnetic Resonance*, **2014**, 16,	6.9	3
243	Provisional stenting of coronary bifurcations: insights into final kissing balloon post-dilation and stent design by computational modeling. *JACC: Cardiovascular Interventions*, **2014**, 7, 325-33	5	39
242	Fluid□tructure interaction simulation of pulse propagation in arteries: Numerical pitfalls and hemodynamic impact of a local stiffening. *International Journal of Engineering Science*, **2014**, 77, 1-13	5.7	19
241	Carotid haemodynamics during sympathetic nervous system stimulation via handgrip and cold pressor testing in young healthy subjects: A feasibility study. *Artery Research*, **2014**, 8, 178	2.2	
240	A multi-angle plane wave imaging approach for high frequency 2D flow visualization in small animals: Simulation study in the murine arterial system **2014**,		1
239	Wave reflection leads to over- and underestimation of local wave speed by the PU- and QA-loop methods: theoretical basis and solution to the problem. *Physiological Measurement*, **2014**, 35, 847-61	2.9	43
238	The influence of vascular anatomy on carotid artery stenting: a parametric study for damage assessment. *Journal of Biomechanics*, **2014**, 47, 890-8	2.9	21
237	Arterial compliance across the spectrum of ankle-brachial index: the Multiethnic Study of Atherosclerosis. *Atherosclerosis*, **2014**, 233, 691-696	3.1	8
236	Validation of a numerical FSI simulation of an aortic BMHV by in vitro PIV experiments. *Medical Engineering and Physics*, **2014**, 36, 1014-23	2.4	13
235	A 3D porous media liver lobule model: the importance of vascular septa and anisotropic permeability for homogeneous perfusion. *Computer Methods in Biomechanics and Biomedical Engineering*, **2014**, 17, 1295-310	2.1	34
234	Supersonic Shear Wave Imaging to Assess Arterial Nonlinear Behavior and Anisotropy: Proof of Principle via Ex Vivo Testing of the Horse Aorta. *Advances in Mechanical Engineering*, **2014**, 6, 272586	1.2	17
233	Feasibility of a priori numerical assessment of plaque scaffolding after carotid artery stenting in clinical routine: proof of concept. *International Journal of Artificial Organs*, **2014**, 37, 928-39	1.9	7
232	Validation and calibration of an electrical analog model of human liver perfusion based on hypothermic machine perfusion experiments. *International Journal of Artificial Organs*, **2014**, 37, 486-98	1.9	10
231	Absence of cardiovascular manifestations in a haploinsufficient Tgfbr1 mouse model. *PLoS ONE*, **2014**, 9, e89749	3.7	9

230	Reflection magnitude as a predictor of mortality: the Multi-Ethnic Study of Atherosclerosis. *Hypertension*, **2014**, 64, 958-64	8.5	57
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