Georg Schmitz

List of Publications by Year in Descending Order

111 papers	1,497 citations	22 h-index	34 g-index
176 ext. papers	1,970 ext. citations	3.9 avg, IF	4.79 L-index

#	Paper	IF	Citations
111	Effects of contrast-enhanced ultrasound treatment on neoadjuvant chemotherapy in breast cancer. *Theranostics*, **2021**, 11, 9557-9570	12.1	2
110	Identification of static nonlinearities by sinusoidal excitation with variable DC offsets. *Review of Scientific Instruments*, **2021**, 92, 035103	1.7	
109	Assessing Vessel Reconstruction in Ultrasound Localization Microscopy by Maximum Likelihood Estimation of a Zero-Inflated Poisson Model. *IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control*, **2020**, 67, 1603-1612	3.2	8
108	Super-resolution Ultrasound Imaging. *Ultrasound in Medicine and Biology*, **2020**, 46, 865-891	3.5	83
107	Transient Light Waveguides Deep Into Scattering Media by Transversal Ultrasound **2020**,		1
106	Ultrasound Imaging. *Recent Results in Cancer Research*, **2020**, 216, 135-154	1.5	0
105	Modeling and Measurement of the Nonlinear Force on Nanoparticles in Magnetomotive Techniques. *IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control*, **2020**, 67, 679-690	3.2	5
104	Transversally travelling ultrasound for light guiding deep into scattering media. *Communications Physics*, **2020**, 3,	5.4	2
103	On the Performance of Time Domain Displacement Estimators for Magnetomotive Ultrasound Imaging. *IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control*, **2019**, 66, 911-921	3.2	8
102	Sonographic visibility of cannulas using convex ultrasound transducers. *Biomedizinische Technik*, **2019**, 64, 691-698	1.3	
101	Reliable Motion Estimation in Super-Resolution US by Reducing the Interference of Microbubble Movement **2019**,		2
100	Maximum-Likelihood Estimation to Assess the Degree of Reconstruction of Microvasculature from Super-Resolution US Imaging **2019**,		1
99	Improving Harmonic Motion Estimation with Phase-Based Estimators for Magnetomotive Ultrasound Imaging **2019**,		1
98	Clinical Pilot Application of Super-Resolution US Imaging in Breast Cancer. *IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control*, **2019**, 66, 517-526	3.2	26
97	Advanced Ultrasound Technologies for Diagnosis and Therapy. *Journal of Nuclear Medicine*, **2018**, 59, 740-746	8.9	27
96	Unilateral deep brain stimulation suppresses alpha and beta oscillations in sensorimotor cortices. *NeuroImage*, **2018**, 174, 201-207	7.9	26
95	Motion model ultrasound localization microscopy for preclinical and clinical multiparametric tumor characterization. *Nature Communications*, **2018**, 9, 1527	17.4	71

94	Real-Time Magnetomotive Ultrasound Imaging Using a Recursive Estimator **2018**,		4
93	Relative Blood Volume Estimation from Clinical Super-Resolution US Imaging in Breast Cancer **2018**,		4
92	Full-Wave Ultrasound Reconstruction with Linear Arrays Based on a Fourier Split-Step Approach **2018**,		4
91	Accelerating Nonlinear Speed of Sound Reconstructions Using a Randomized Block Kaczmarz Algorithm **2018**,		1
90	Magnetomotive ultrasound imaging using the nonlinear magnetization of nanoparticles **2017**,		1
89	Aberration correction in photoacoustic imaging using paraxial backpropagation **2017**,		1
88	Determination of adequate measurement times for super-resolution characterization of tumor vascularization **2017**,		1
87	Notice of Removal: Random incident sound waves for fast compressed pulse-echo ultrasound imaging **2017**,		2
86	Automated Generation of Reliable Blood Velocity Parameter Maps from Contrast-Enhanced Ultrasound Data. *Contrast Media and Molecular Imaging*, **2017**, 2017, 2098324	3.2	4
85	Rejecting deep brain stimulation artefacts from MEG data using ICA and mutual information. *Journal of Neuroscience Methods*, **2016**, 268, 131-41	3	17
84	Detection and Tracking of Multiple Microbubbles in Ultrasound B-Mode Images. *IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control*, **2016**, 63, 72-82	3.2	74
83	Photoacoustic clutter reduction by inversion of a linear scatter model using plane wave ultrasound measurements. *Biomedical Optics Express*, **2016**, 7, 1468-78	3.5	15
82	**2016**,		1
81	Evaluation of bubble tracking algorithms for super-resolution imaging of microvessels **2016**,		6
80	Low-Dose Molecular Ultrasound Imaging with E-Selectin-Targeted PBCA Microbubbles. *Molecular Imaging and Biology*, **2016**, 18, 180-90	3.8	18
79	Gradient Spin Echo (GraSE) imaging for fast myocardial T2 mapping. *Journal of Cardiovascular Magnetic Resonance*, **2015**, 17, 12	6.9	79
78	Optimized SNR simultaneous multispectral photoacoustic imaging with laser diodes. *Optics Express*, **2015**, 23, 1816-28	3.3	9
77	Low-Energy Ultrasound Treatment Improves Regional Tumor Vessel Infarction by Retargeted Tissue Factor. *Journal of Ultrasound in Medicine*, **2015**, 34, 1227-36	2.9	7

76	Assessment of the potential of beamforming for needle enhancement in punctures **2015**,		2
75	Photoacoustic clutter reduction using plane wave ultrasound and a linear scatter estimation approach **2015**,		1
74	Iterative photoacoustic reconstruction in heterogeneous media using the Kaczmarz method **2014**,		1
73	Needle visibility for deep punctures with curved arrays **2014**,		2
72	Ultrafast volumetric B1 (+) mapping for improved radiofrequency shimming in 3 tesla body MRI. *Journal of Magnetic Resonance Imaging*, **2014**, 40, 857-63	5.6	5
71	Pulse-echo ultrasound imaging combining compressed sensing and the fast multipole method **2014** ,		9
70	Nonlinear reconstruction of the speed of sound in soft tissues: A comparison between the simulation results applying Kaczmarz and Contrast Source Inversion methods **2014**,		1
69	Photoacoustic coded excitation using pulse position modulation **2013**,		1
68	Phase shift variance imaging - a new technique for destructive microbubble imaging. *IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control*, **2013**, 60, 909-23	3.2	2
67	Reconstruction of flow velocity inside vessels by tracking single microbubbles with an MCMC data association algorithm **2013**,		3
66	Influence of shell composition on the resonance frequency of microbubble contrast agents. *Ultrasound in Medicine and Biology*, **2013**, 39, 1292-302	3.5	18
65	Size distribution of microbubbles as a function of shell composition. *Ultrasonics*, **2013**, 53, 1363-7	3.5	3
64	Estimation of multipath transmission parameters for quantitative ultrasound measurements of bone. *IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control*, **2013**, 60, 1884-95	3.2	10
63	Nonlinear simultaneous reconstruction of inhomogeneous compressibility and mass density distributions in unidirectional pulse-echo ultrasound imaging. *Physics in Medicine and Biology*, **2013**, 58, 6163-78	3.8	17
62	The separate recovery of spatial fluctuations in compressibility and mass density in plane wave pulse-echo ultrasound imaging **2013**,		2
61	Compensating the combined effects of absorption and dispersion in plane wave pulse-echo ultrasound imaging using sparse recovery **2013**,		7
60	Evaluation of a nonlinear simultaneous compressibility and mass density reconstruction algorithm in contrast to established linear ultrasound imaging approaches **2013**,		1
59	Fast image acquisition in pulse-echo ultrasound imaging using compressed sensing **2012**,		7

58	Bursting bubbles and bilayers. *Theranostics*, **2012**, 2, 1140-59	12.1	52
57	Piezoelectric Thin Films: A Technology Platform for Innovative Devices. *Integrated Ferroelectrics*, **2012**, 134, 25-36	0.8	4
56	Size-dependent multispectral photoacoustic response of solid and hollow gold nanoparticles. *Nanotechnology*, **2012**, 23, 225707	3.4	24
55	Size dependent photoacoustic signal response of gold nanoparticles using a multispectral laser diode system **2012**,		1
54	Compressed Sensing for Fast Image Acquisition in Pulse-Echo Ultrasound. *Biomedizinische Technik*, **2012**, 57,	1.3	20
53	Influence of Microbubble Shell Chemistry on the Destruction Threshold of Ultrasound Contrast Agent Microbubbles. *Acoustical Imaging*, **2012**, 91-101		1
52	Multispectral photoacoustic coded excitation using pseudorandom codes **2012**,		4
51	Targeted ultrasound imaging of cancer: an emerging technology on its way to clinics. *Current Pharmaceutical Design*, **2012**, 18, 2184-99	3.3	48
50	Plane Wave Pulse-Echo Ultrasound Diffraction Tomography with a Fixed Linear Transducer Array. *Acoustical Imaging*, **2012**, 19-30		7
49	Microcapsules: Reverse Sonoporation and Long-lasting, Safe Contrast. *Acoustical Imaging*, **2012**, 81-90		2
48	Biomedical Sonography **2012**, 331-367		
47	Advanced characterization and refinement of poly N-butyl cyanoacrylate microbubbles for ultrasound imaging. *Ultrasound in Medicine and Biology*, **2011**, 37, 1622-34	3.5	36
46	Analysis of ultrasound fields in cell culture wells for in vitro ultrasound therapy experiments. *Ultrasound in Medicine and Biology*, **2011**, 37, 2105-15	3.5	70
45	Quantitative photoacoustic blood oxygenation measurement of whole porcine blood samples using a multi-wavelength semiconductor laser system **2011**,		1
44	**2011**,		1
43	Imaging tumor vascularity by tracing single microbubbles **2011**,		27
42	Fast pulse-echo ultrasound imaging employing compressive sensing **2011**,		32
41	Coencapsulation of lipid microbubbles within polymer microcapsules for contrast applications. *Bubble Science, Engineering & Technology*, **2011**, 3, 12-19		7

40	Method for the estimation and compensation of attenuating tissue layers by the acoustic observation of microbubbles for sonoporation therapy **2010**,		1
39	Experimental evaluation of photoacoustic coded excitation using unipolar golay codes. *IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control*, **2010**, 57, 1583-93	3.2	24
38	Magnetic Microbubbles: Magnetically Targeted and Ultrasound-Triggered Vectors for Gene Delivery in Vitro **2010**,		15
37	Multispectral photoacoustic coded excitation imaging using unipolar orthogonal Golay codes. *Optics Express*, **2010**, 18, 9076-87	3.3	42
36	**2010**,		2
35	A statistical model for the quantification of microbubbles in destructive imaging. *Investigative Radiology*, **2010**, 45, 592-9	10.1	7
34	Determination of microbubble cavitation threshold pressure as function of shell chemistry. *Bubble Science, Engineering & Technology*, **2010**, 2, 55-64		14
33	Magnetic and Acoustically Active Lipospheres for Magnetically Targeted Nucleic Acid Delivery. *Advanced Functional Materials*, **2010**, 20, 3881-3894	15.6	60
32	Synergistic effects of sonoporation and taurolidin/TRAIL on apoptosis in human fibrosarcoma. *Ultrasound in Medicine and Biology*, **2010**, 36, 1893-906	3.5	18
31	Model-based parameter estimation in the frequency domain for Quantitative Ultrasound measurement of bone **2009**,		5
30	Evaluation of Ferucarbotran (Resovist) as a photoacoustic contrast agent / Evaluation von Ferucarbotran (Resovist) als photoakustisches Kontrastmittel. *Biomedizinische Technik*, **2009**, 54, 83-8	1.3	11
29	Compact semiconductor laser sources for photoacoustic imaging **2009**,		1
28	Phospholipid-stabilized microbubbles: Influence of shell chemistry on cavitation threshold and binding to giant uni-lamellar vesicles. *Applied Acoustics*, **2009**, 70, 1313-1322	3.1	24
27	Discussion of the application of finite Volterra series for the modeling of the oscillation behavior of ultrasound contrast agents. *Applied Acoustics*, **2009**, 70, 1363-1369	3.1	10
26	Fast simulation of second harmonic ultrasound fields **2009**,		1
25	Evaluation of an analytical solution to the Burgers equation based on Volterra series **2009**,		2
24	Simulation study of photoacoustic coded excitation using Golay Codes **2008**,		4
23	A method for the determination of the inertial cavitation threshold of ultrasound contrast agents **2008**,		4

22	Model-based estimation of quantitative ultrasound variables at the proximal femur. *IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control*, **2008**, 55, 1304-15	3.2	18
21	Monitoring and modeling of microbubble behavior during ultrasound mediated transfection of cell monolayers **2008**,		3
20	Ultrasonic imaging of molecular targets. *Basic Research in Cardiology*, **2008**, 103, 174-81	11.8	17
19	7A-3 Optimal Pulse Sequences for the Suppression of Memoryless Tissue Harmonics. *Proceedings IEEE Ultrasonics Symposium*, **2007**,		3
18	Ultrasonic bubbles in medicine: influence of the shell. *Ultrasonics Sonochemistry*, **2007**, 14, 438-44	8.9	55
17	Hybrid 3D Sono/PET in a mouse. *European Journal of Nuclear Medicine and Molecular Imaging*, **2007**, 34, 1706-7	8.8	4
16	Generation of a Droplet Inside a Microbubble with the Aid of an Ultrasound Contrast Agent: First Result. *Letters in Drug Design and Discovery*, **2007**, 4, 74-77	0.8	13
15	Mutual Attraction of Oscillating Microbubbles **2007**, 75-80		1
14	Ultrasound Based Navigation System for Minimal Invasive Surgery at the Lumbar Spine within OrthoMIT **2007**, 224-229		
13	2A-6 Optimization Algorithm for Improved Quantitative Ultrasound Signal Processing at the Proximal Femur **2006**,		2
12	Bubble dynamics involved in ultrasonic imaging. *Expert Review of Molecular Diagnostics*, **2006**, 6, 493-502	3.8	44
11	Nitric oxide delivery by ultrasonic cracking: some limitations. *Ultrasonics*, **2006**, 44 Suppl 1, e109-13	3.5	22
10	Electro-acoustical characterization procedure for cMUTs. *Ultrasonics*, **2005**, 43, 383-90	3.5	4
9	Ultrasonic fragmentation of microbubbles: a theoretical approach of the flash in flash-echo. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society*, **2005**, 2005, 4023-6		1
8	Ultrasound in Medical Diagnosis **2002**, 162-174		4
7	Improvement of ultrasound compound imaging by speed-of-sound estimation. *Biomedizinische Technik*, **2002**, 47 Suppl 1 Pt 1, 430-3	1.3	
6	Spatiotemporal multiscale vessel enhancement for coronary angiograms **2002**,		3
5	Beschleunigung und Bewertung blockbasierter Bewegungsschätzmethoden für die Röntgenfluoroskopie. *Informatik Aktuell*, **2000**, 123-130	0.3	2

4	A Gaussian approach for the calculation of the accuracy of stereotactic frame systems. *Medical Physics*, **1999**, 26, 381-391	4.4	15
3	Tissue-characterization of the prostate using radio frequency ultrasonic signals. *IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control*, **1999**, 46, 126-38	3.2	57
2	The EASI project--improving the effectiveness and quality of image-guided surgery. *IEEE Transactions on Information Technology in Biomedicine*, **1998**, 2, 156-68		17
1	Color-Coded Tissue Characterization Images of the Prostate. *Acoustical Imaging*, **1996**, 359-364		2