

# Thilo Michel

## List of Publications by Year in descending order

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123  
papers

2,162  
citations

346980

22  
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286692

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g-index

127  
all docs

127  
docs citations

127  
times ranked

2525  
citing authors

#	ARTICLE	IF	CITATIONS
1	Comparing different approaches for stellar intensity interferometry. Monthly Notices of the Royal Astronomical Society, 2022, 512, 1722-1729.	1.6	0
2	Single-exposure X-ray phase imaging microscopy with a grating interferometer. Journal of Synchrotron Radiation, 2022, 29, 794-806.	1.0	2
3	Personal Dosimetry in Continuous Photon Radiation Fields With the Dosepix Detector. IEEE Transactions on Nuclear Science, 2021, 68, 1129-1134.	1.2	4
4	Noise Reduction for Single-Shot Grating-Based Phase-Contrast Imaging at an X-ray Backlighter. Journal of Imaging, 2021, 7, 178.	1.7	4
5	Assessment of the additional clinical potential of X-ray dark-field imaging for breast cancer in a preclinical setup. Therapeutic Advances in Medical Oncology, 2020, 12, 175883592095793.	1.4	9
6	Discrimination analysis of breast calcifications using X-ray dark-field radiography. Medical Physics, 2020, 47, 1813-1826.	1.6	12
7	Evaluation of the Weighted Mean X-ray Energy for an Imaging System Via Propagation-Based Phase-Contrast Imaging. Journal of Imaging, 2020, 6, 63.	1.7	4
8	Measurement of the Spectral Shape of the $\gamma$ -Decay of $^{137}\text{Cs}$ . $\text{Xe}$ $\gamma$ -Decay with the Complete EXO-200 Dataset. Physical Review Letters, 2019, 123, 161802.	2.9	163
9	Reflectivity and PDE of VUV4 Hamamatsu SiPMs in liquid xenon. Journal of Instrumentation, 2020, 15, P01019-P01019.	0.5	9
10	A phase-sampling method for an X-ray Talbot-Lau scanner with continuous grating movement. Journal of Instrumentation, 2020, 15, P01010-P01010.	0.5	3
11	LED as laboratory test source for astronomical intensity interferometry. Optics Express, 2020, 28, 5248.	1.7	7
12	Simulation of charge readout with segmented tiles in nEXO. Journal of Instrumentation, 2019, 14, P09020-P09020.	0.5	8
13	A fast alignment method for grating-based X-ray phase-contrast imaging systems. Journal of Instrumentation, 2019, 14, P08003-P08003.	0.5	3
14	Imaging individual barium atoms in solid xenon for barium tagging in nEXO. Nature, 2019, 569, 203-207.	13.7	26
15	Talbot-Lau x-ray phase-contrast setup for fast scanning of large samples. Scientific Reports, 2019, 9, 4199.	1.6	17
16	Exploration of different x-ray Talbot-Lau setups for dark-field lung imaging examined in a porcine lung. Physics in Medicine and Biology, 2019, 64, 065013.	1.6	11
17	Reflectance of VUV-sensitive SiPM surfaces in liquid xenon. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2019, 936, 577-579.	0.7	2

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19	Implementation of a Talbot-Lau interferometer in a clinical-like c-arm setup: A feasibility study. Scientific Reports, 2018, 8, 2325.	1.6	21
20	A preclinical Talbot-Lau prototype for x-ray dark-field imaging of human-sized objects. Medical Physics, 2018, 45, 2565-2571.	1.6	21
21	Characterization of an Ionization Readout Tile for nEXO. Journal of Instrumentation, 2018, 13, P01006-P01006.	0.5	14
22	VUV-Sensitive Silicon Photomultipliers for Xenon Scintillation Light Detection in nEXO. IEEE Transactions on Nuclear Science, 2018, 65, 2823-2833.	1.2	29
23	Study of silicon photomultiplier performance in external electric fields. Journal of Instrumentation, 2018, 13, T09006-T09006.	0.5	5
24	Single-shot Talbot-Lau x-ray dark-field imaging of a porcine lung applying the moiré imaging approach. Physics in Medicine and Biology, 2018, 63, 185010.	1.6	5
25	Deep neural networks for energy and position reconstruction in EXO-200. Journal of Instrumentation, 2018, 13, P08023-P08023.	0.5	34
26	Phase-Sensitive Region-of-Interest Computed Tomography. Lecture Notes in Computer Science, 2018, , 137-144.	1.0	2
27	Enhanced reconstruction algorithm for moiré artifact suppression in Talbot-Lau x-ray imaging. Physics in Medicine and Biology, 2018, 63, 135018.	1.6	11
28	Non-Destructive Testing of Archaeological Findings by Grating-Based X-Ray Phase-Contrast and Dark-Field Imaging. Journal of Imaging, 2018, 4, 58.	1.7	22
29	Improved Reconstruction Technique for Moiré Imaging Using an X-Ray Phase-Contrast Talbot-Lau Interferometer. Journal of Imaging, 2018, 4, 62.	1.7	12
30	Talbot-Lau X-ray phase contrast for tiling-based acquisitions without reference scanning. Medical Physics, 2017, 44, 1886-1898.	1.6	3
31	Optimization procedure for a Talbot-Lau x-ray phase-contrast imaging system. Journal of Instrumentation, 2017, 12, P04018-P04018.	0.5	12
32	High-performance direct conversion X-ray detectors based on sintered hybrid lead triiodide perovskite wafers. Nature Photonics, 2017, 11, 436-440.	15.6	442
33	Measurement and simulative proof concerning the visibility loss in x-ray Talbot-Lau Moiré imaging. Journal of Instrumentation, 2017, 12, T12007-T12007.	0.5	4
34	Improved reconstruction of phase-stepping data for Talbot-Lau x-ray imaging. Journal of Medical Imaging, 2017, 4, 1.	0.8	24
35	Evaluation of a new reconstruction algorithm for x-ray phase-contrast imaging. Proceedings of SPIE, 2016, , .	0.8	0
36	A beam hardening and dispersion correction for x-ray dark-field radiography. Medical Physics, 2016, 43, 2774-2779.	1.6	24

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37	Angular correlation function of the hypersatellite-satellite x-ray cascade following $K$ -shell electron capture of $^{55}\text{Fe}$ . Physical Review C, 2016, 94, .	1.1	2
38	Designing the phase grating for Talbot-Lau phase-contrast imaging systems: a simulation and experiment study. Optics Express, 2016, 24, 13357.	1.7	15
39	Construction and evaluation of a high-energy grating-based x-ray phase-contrast imaging setup. , 2016, , .		0
40	High-energy x-ray grating-based phase-contrast radiography of human anatomy. , 2016, , .		1
41	Influence of magnetic fields on charge sharing caused by diffusion in medipix detectors with a Si sensor. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2016, 810, 19-26.	0.7	0
42	Reconstruction method for grating-based x-ray phase-contrast images without knowledge of the grating positions. Journal of Instrumentation, 2015, 10, P12017-P12017.	0.5	20
43	The Dosepix detector— an energy-resolving photon-counting pixel detector for spectrometric measurements. Journal of Instrumentation, 2015, 10, C04015-C04015.	0.5	8
44	Improvement of the energy resolution of pixelated CdTe detectors for applications in $0\nu\beta\beta$ searches. Journal of Instrumentation, 2015, 10, P07010-P07010.	0.5	0
45	Rejection of $\hat{1}\pm$ -particle background for neutrinoless double beta decay search with pixel detectors. Journal of Instrumentation, 2014, 9, P10015-P10015.	0.5	2
46	Energy weighting in grating-based X-ray phase-contrast imaging. , 2014, , .		0
47	Analysis of a deconvolution-based information retrieval algorithm in X-ray grating-based phase-contrast imaging. Proceedings of SPIE, 2014, , .	0.8	1
48	Simulation of dark-field imaging of micro-calcifications in human breast tissue with X-ray Talbot-Lau interferometry. Journal of Instrumentation, 2014, 9, C05028-C05028.	0.5	1
49	Detection of non-classical space-time correlations with a novel type of single-photon camera. Optics Express, 2014, 22, 17561.	1.7	9
50	Simulation framework for coherent and incoherent X-ray imaging and its application in Talbot-Lau dark-field imaging. Optics Express, 2014, 22, 23276.	1.7	24
51	Energy weighted x-ray dark-field imaging. Optics Express, 2014, 22, 24507.	1.7	11
52	Three-dimensional photograph of electron tracks through a plastic scintillator. European Physical Journal C, 2014, 74, 1.	1.4	2
53	Measurement of the double $K$ -shell vacancy creation probability in the electron-capture decay of $^{55}\text{Fe}$ with active-pixel detectors. Physical Review C, 2014, 89, .	1.1	6
54	Reconstruction of scalar and vectorial components in X-ray dark-field tomography. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 12699-12704.	3.3	32

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55	3D particle track reconstruction in a single layer cadmium-telluride hybrid active pixel detector. European Physical Journal C, 2014, 74, 1.	1.4	10
56	Investigation on the directional dark-field signals from paperboards using a grating interferometer. Journal of Instrumentation, 2014, 9, C04032-C04032.	0.5	9
57	Characterization of the Dosepix detector with XRF and analog testpulses. Journal of Instrumentation, 2014, 9, C05069-C05069.	0.5	5
58	Signal Decomposition for X-ray Dark-Field Imaging. Lecture Notes in Computer Science, 2014, 17, 170-177.	1.0	6
59	On a dark-field signal generated by micrometer-sized calcifications in phase-contrast mammography. Physics in Medicine and Biology, 2013, 58, 2713-2732.	1.6	118
60	Characterization of the energy resolution and the tracking capabilities of a hybrid pixel detector with CdTe-sensor layer for a possible use in a neutrinoless double beta decay experiment. European Physical Journal C, 2013, 73, 1.	1.4	7
61	Grating-based darkfield imaging of human breast tissue. Zeitschrift Fur Medizinische Physik, 2013, 23, 228-235.	0.6	44
62	Artifacts in X-ray dark-field measurements. , 2013, , .		1
63	Energy-resolved interferometric x-ray imaging. , 2013, , .		0
64	Grating-based dark-field breast imaging. , 2013, , .		2
65	Increasing the darkfield contrast-to-noise ratio using a deconvolution-based information retrieval algorithm in X-ray grating-based phase-contrast imaging. Optics Express, 2013, 21, 18011.	1.7	16
66	Projection angle dependence in grating-based X-ray dark-field imaging of ordered structures. Optics Express, 2013, 21, 19922.	1.7	31
67	Grating-based x-ray phase-contrast imaging with a multi energy-channel photon-counting pixel detector. Optics Express, 2013, 21, 25677.	1.7	14
68	The Potential of Hybrid Pixel Detectors in the Search for the Neutrinoless Double-Beta Decay of $^{116}\text{Cd}$ . Advances in High Energy Physics, 2013, 2013, 1-20.	0.5	6
69	Energy-dependent visibility measurements, their simulation and optimisation of an X-ray Talbot-Lau Interferometer. Journal of Instrumentation, 2012, 7, P02003-P02003.	0.5	6
70	Bayesian deconvolution as a method for the spectroscopy of X-rays with highly pixelated photon counting detectors. Journal of Instrumentation, 2012, 7, P03003-P03003.	0.5	13
71	Electrical measurements of a multi-mode hybrid pixel detector ASIC for radiation detection. Journal of Instrumentation, 2012, 7, C01056-C01056.	0.5	5
72	Improving the spectral resolution of a highly pixelated detector by applying a pixel-by-pixel energy calibration for investigating the spectral properties of the anode heel effect. Journal of Instrumentation, 2012, 7, P07011-P07011.	0.5	2

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73	Time-resolved spectrometry for the characterization of a reference field for pulsed radiation. Journal of Instrumentation, 2012, 7, T10002-T10002.	0.5	0
74	Spectroscopic dark-field imaging using a grating-based Talbot-Lau interferometer. Proceedings of SPIE, 2012, , .	0.8	1
75	Spectrum optimization of a Talbot-Lau interferometer towards clinical application. , 2012, , .		0
76	Charged particle tracking with the Timepix ASIC. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2012, 661, 31-49.	0.7	50
77	The Influence of Pixel Pitch and Electrode Pad Size on the Spectroscopic Performance of a Photon Counting Pixel Detector With CdTe Sensor. IEEE Transactions on Nuclear Science, 2011, 58, 17-25.	1.2	20
78	Material reconstruction with the Medipix2 detector with CdTe sensor. Journal of Instrumentation, 2011, 6, C01037-C01037.	0.5	2
79	A pixel detector ASIC for dosimetry using time-over-threshold energy measurements. Radiation Measurements, 2011, 46, 1619-1623.	0.7	18
80	A modified spectrum reconstruction method for the Charge Summing Mode of Medipix3. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2011, 633, S128-S130.	0.7	2
81	Application of Hybrid Pixel Detectors for Searches of Rare Decays. Nuclear Physics, Section B, Proceedings Supplements, 2011, 215, 275-277.	0.5	0
82	Energy-dependent visibility measurement and its simulation in X-ray Talbot interferometry. , 2011, , .		0
83	Noise in x-ray grating-based phase-contrast imaging. Medical Physics, 2011, 38, 4133-4140.	1.6	69
84	Monte Carlo simulations of bremsstrahlung production in a carbon target for imaging in radiotherapy. , 2011, , .		0
85	Investigations on the origin of the darkfield signal in X-Ray Talbot interferometry. , 2011, , .		2
86	Spectroscopic measurements concerning grating-based x-ray phase-contrast imaging. , 2011, , .		0
87	Optimization of differential phase-contrast imaging setups using simulative approaches. , 2011, , .		2
88	X-ray spectroscopy with photon counting imaging detectors such as Timepix. , 2011, , .		3
89	Grating-based high energy X-ray interferometry with the Medipix-detector in simulation and measurement. Journal of Instrumentation, 2010, 5, P10008-P10008.	0.5	4
90	Detection of optical photons with the Timepix in an HPD set-up. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2010, 623, 288-290.	0.7	1

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91	Rauschfreie Röntgenbilder mit Medipix. Bildgebende Pixeldetektoren. Physik in Unserer Zeit, 2010, 41, 128-133.	0.0	0
92	Simulation of x-ray phase-contrast computed tomography of a medical phantom comprising particle and wave contributions. , 2010, , .		3
93	Induced signals in X-ray detectors with steering grid geometry. , 2009, , .		2
94	Time resolved measurement of a pulsed X-ray source with the Timepix detector. , 2009, , .		2
95	Simulation of a medical linac with evaluation of dose profiles behind an electron applicator. , 2009, , .		0
96	Comparison of simulated and measured energy response spectra for a Medipix2 detector using CdTe as sensor material. , 2009, , .		2
97	Comparison of recent experimental data with Monte Carlo tools such as RoSi, Geant4 and Penelope. , 2009, , .		2
98	Low Energy Dosimetry With Photon Counting Pixel Detectors Such as Medipix. IEEE Transactions on Nuclear Science, 2009, 56, 417-423.	1.2	21
99	A hybrid photodetector using the Timepix semiconductor assembly for photoelectron detection. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2009, 602, 205-208.	0.7	9
100	Exploiting the MEDIPIX2 detector for the reconstruction of X-ray spectra. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2009, 607, 103-106.	0.7	7
101	Reconstruction of X-ray spectra with the energy sensitive photon counting detector Medipix2. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2009, 598, 510-514.	0.7	22
102	Contrast agent recognition in small animal CT using the Medipix2 detector. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2009, 607, 179-182.	0.7	56
103	Towards an asynchronously operating hybrid photon detector based on the Timepix readout chip. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2009, 610, 72-74.	0.7	0
104	Towards a direction-sensitive optical module for neutrino telescopes based on a hybrid photon detector. Nuclear Physics, Section B, Proceedings Supplements, 2009, 197, 74-77.	0.5	0
105	Material resolving X-ray imaging using spectrum reconstruction with Medipix2. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2008, 591, 19-23.	0.7	33
106	Measurement and detailed simulation of the Modulation Transfer Function of the Medipix2. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2008, 591, 314-317.	0.7	13
107	Experimental demonstration of a hybrid photon detector concept based on the Timepix detector. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2008, 595, 353-358.	0.7	13
108	Generalised adjoint simulation of induced signals in semiconductor X-ray pixel detectors. Journal of Instrumentation, 2008, 3, P11002-P11002.	0.5	9

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109	Evaluation of different X-ray tube concepts with the simulation package ROSI. , 2008, , .		0
110	Monte Carlo simulation of pixelated photon counting X-ray detectors like the Medipix2 and the Medipix3 using high-Z sensor materials. , 2008, , .		4
111	Reconstruction of incident X-ray spectra using the Medipix2 detector. , 2008, , .		0
112	Low energy dosimetry with photon counting pixel detectors such as Medipix. , 2007, , .		1
113	Correlated counting and energy resolving properties of photon counting X-ray detectors like the medipix detectors. , 2007, , .		1
114	First measurements of material reconstruction in X-ray imaging with the medipix2 detector. , 2007, , .		3
115	3D simulation of induced signals in the Medipix detector. , 2007, , .		1
116	Discriminator threshold dependency of the zero-frequency DQE of photon-counting pixel detectors. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2007, 576, 235-238.	0.7	7
117	Investigation of charge carrier transport and charge sharing in X-ray semiconductor pixel detectors such as Medipix2. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2007, 576, 239-242.	0.7	29
118	Investigating the DQE of the Medipix detector using the multiplicity concept. , 2006, , .		2
119	Measurement of Helicity-Dependent Photoabsorption Cross Sections on the Neutron from 815 to 1825ÅMeV. Physical Review Letters, 2005, 94, 162001.	2.9	39
120	Helicity dependence of the $\gamma \rightarrow N \pi$ channels and multipole analysis in the $\Delta$ region. European Physical Journal A, 2004, 21, 323-333.	1.0	56
121	First Measurement of the Gerasimov-Drell-Hearn Sum Rule for $H_1$ from 0.7 to 1.8ÅGeV at ELSA. Physical Review Letters, 2003, 91, 192001.	2.9	78
122	Helicity Amplitudes $A_{1/2}$ and $A_{3/2}$ for the $D_{13}(1520)$ Resonance Obtained from the $\bar{p} \rightarrow \pi^+ \pi^0$ Reaction. Physical Review Letters, 2002, 88, 232002.	2.9	63
123	Helicity Dependence of $\bar{p} \rightarrow \pi^+ \pi^0$ below 450 MeV and Contribution to the Gerasimov-Drell-Hearn Sum Rule. Physical Review Letters, 2000, 84, 5950-5954.	2.9	95