

# Philip W T Pong

## List of Publications by Year in descending order

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87  
papers

1,583  
citations

304368

22  
h-index

329751

37  
g-index

88  
all docs

88  
docs citations

88  
times ranked

1809  
citing authors

#	ARTICLE	IF	CITATIONS
1	Magnetoresistive Sensor Development Roadmap (Non-Recording Applications). IEEE Transactions on Magnetics, 2019, 55, 1-30.	1.2	138
2	Review of Noise Sources in Magnetic Tunnel Junction Sensors. IEEE Transactions on Magnetics, 2011, 47, 602-612.	1.2	86
3	Patterned arrays of assembled nanoparticles prepared by interfacial assembly and femtosecond laser fabrication. Journal of Nanoparticle Research, 2020, 22, 1.	0.8	76
4	Noncontact Operation-State Monitoring Technology Based on Magnetic-Field Sensing for Overhead High-Voltage Transmission Lines. IEEE Transactions on Power Delivery, 2013, 28, 2145-2153.	2.9	71
5	A Novel Approach for Fault Location of Overhead Transmission Line With Noncontact Magnetic-Field Measurement. IEEE Transactions on Power Delivery, 2012, 27, 1186-1195.	2.9	65
6	DC Arc-Fault Detection Based on Empirical Mode Decomposition of Arc Signatures and Support Vector Machine. IEEE Sensors Journal, 2021, 21, 7024-7033.	2.4	65
7	Skyrmion domain wall collision and domain wall-gated skyrmion logic. Physical Review B, 2016, 94, .	1.1	63
8	Design and Implementation of a Multi-Purpose TMR Sensor Matrix for Wireless Electric Vehicle Charging. IEEE Sensors Journal, 2019, 19, 1683-1692.	2.4	57
9	Inter-Turn Short-Circuit Fault Detection Approach for Permanent Magnet Synchronous Machines Through Stray Magnetic Field Sensing. IEEE Sensors Journal, 2019, 19, 7884-7895.	2.4	45
10	Velocity Measurement Technique for Permanent Magnet Synchronous Motors Through External Stray Magnetic Field Sensing. IEEE Sensors Journal, 2018, 18, 4013-4021.	2.4	44
11	Efficient Communication of Sensors Monitoring Overhead Transmission Lines. IEEE Transactions on Smart Grid, 2012, 3, 1130-1136.	6.2	42
12	Overview of Spintronic Sensors With Internet of Things for Smart Living. IEEE Transactions on Magnetics, 2019, 55, 1-22.	1.2	41
13	Magnetically assembled iron oxide nanoparticle coatings and their integration with pseudo-spin-valve thin films. Journal of Materials Chemistry C, 2017, 5, 252-263.	2.7	40
14	Non-Contact Capacitive-Coupling-Based and Magnetic-Field-Sensing-Assisted Technique for Monitoring Voltage of Overhead Power Transmission Lines. IEEE Sensors Journal, 2017, 17, 1069-1083.	2.4	39
15	Magnetics in Smart Grid. IEEE Transactions on Magnetics, 2014, 50, 1-7.	1.2	32
16	On-Site Non-Invasive Current Monitoring of Multi-Core Underground Power Cables With a Magnetic-Field Sensing Platform at a Substation. IEEE Sensors Journal, 2017, 17, 1837-1848.	2.4	32
17	Cyber-enabled grids: Shaping future energy systems. Advances in Applied Energy, 2021, 1, 100003.	6.6	30
18	A ferromagnetic skyrmion-based nano-oscillator with modified profile of Dzyaloshinskii-Moriya interaction. Journal of Magnetism and Magnetic Materials, 2020, 496, 165912.	1.0	27

#	ARTICLE	IF	CITATIONS
19	Magnetic-Field-Assisted Assembly of Anisotropic Superstructures by Iron Oxide Nanoparticles and Their Enhanced Magnetism. <i>Nanoscale Research Letters</i> , 2016, 11, 189.	3.1	25
20	Operation-State Monitoring and Energization-Status Identification for Underground Power Cables by Magnetic Field Sensing. <i>IEEE Sensors Journal</i> , 2013, 13, 4527-4533.	2.4	24
21	Sensitive and Specific Colorimetric Detection of Cancer Cells Based on Folate-Conjugated Gold-iron-Oxide Composite Nanoparticles. <i>ACS Applied Nano Materials</i> , 2019, 2, 7421-7431.	2.4	24
22	Non-Contact Voltage Monitoring of HVDC Transmission Lines Based on Electromagnetic Fields. <i>IEEE Sensors Journal</i> , 2019, 19, 3121-3129.	2.4	24
23	Magnetic-Field-Sensing-Based Approach for Current Reconstruction, Sag Detection, and Inclination Detection for Overhead Transmission System. <i>IEEE Transactions on Magnetics</i> , 2019, 55, 1-7.	1.2	23
24	Underground Power Cable Detection and Inspection Technology Based on Magnetic Field Sensing at Ground Surface Level. <i>IEEE Transactions on Magnetics</i> , 2014, 50, 1-5.	1.2	22
25	Condition Monitoring of Electrolytic Capacitors in Boost Converters by Magnetic Sensors. <i>IEEE Sensors Journal</i> , 2019, 19, 10393-10402.	2.4	22
26	Fault Classification of Power Distribution Cables by Detecting Decaying DC Components With Magnetic Sensing. <i>IEEE Transactions on Instrumentation and Measurement</i> , 2020, 69, 2016-2027.	2.4	22
27	Online Monitoring of Aluminum Electrolytic Capacitors in Photovoltaic Systems by Magnetoresistive Sensors. <i>IEEE Sensors Journal</i> , 2020, 20, 767-777.	2.4	21
28	Magnetic Tunnel Junction Sensors With Conetic Alloy. <i>IEEE Transactions on Magnetics</i> , 2011, 47, 714-717.	1.2	19
29	CoFe <sub>2</sub> O <sub>4</sub> Nanoparticle-Integrated Spin-Valve Thin Films Prepared by Interfacial Self-Assembly. <i>Journal of Physical Chemistry C</i> , 2017, 121, 22508-22516.	1.5	19
30	TMR-Sensor-Array-Based Misalignment-Tolerant Wireless Charging Technique for Roadway Electric Vehicles. <i>IEEE Transactions on Magnetics</i> , 2019, 55, 1-7.	1.2	17
31	Performance Study on Commercial Magnetic Sensors for Measuring Current of Unmanned Aerial Vehicles. <i>IEEE Transactions on Instrumentation and Measurement</i> , 2020, 69, 1397-1407.	2.4	17
32	Marker-Free Coil-Misalignment Detection Approach Using TMR Sensor Array for Dynamic Wireless Charging of Electric Vehicles. <i>IEEE Transactions on Magnetics</i> , 2018, 54, 1-5.	1.2	16
33	Controlled convective self-assembly of silver nanoparticles in volatile organic solvent and its application in electronics. <i>RSC Advances</i> , 2015, 5, 98747-98756.	1.7	15
34	Energization-Status Identification of Three-Phase Three-Core Shielded Distribution Power Cables Based on Non-Destructive Magnetic Field Sensing. <i>IEEE Sensors Journal</i> , 2017, 17, 7405-7417.	2.4	15
35	Hysteresis loop collapse for linear response in magnetic-tunnel-junction sensors. <i>Journal of Applied Physics</i> , 2009, 105, .	1.1	14
36	Arc-Faults Detection in PV Systems by Measuring Pink Noise With Magnetic Sensors. <i>IEEE Transactions on Magnetics</i> , 2019, 55, 1-6.	1.2	14

#	ARTICLE	IF	CITATIONS
37	Experimental Investigation of a Johnson Noise Thermometry Using GMR Sensor for Electric Vehicle Applications. IEEE Sensors Journal, 2018, 18, 3098-3107.	2.4	13
38	Curved Trapezoidal Magnetic Flux Concentrator Design for Current Measurement of Multi-Core Power Cable With Magnetic Sensing. IEEE Transactions on Magnetics, 2019, 55, 1-9.	1.2	13
39	A String-Current Behavior and Current Sensing-Based Technique for Line Fault Detection in Photovoltaic Systems. IEEE Transactions on Magnetics, 2021, 57, 1-6.	1.2	13
40	DC-Arcing Detection by Noise Measurement With Magnetic Sensing by TMR Sensors. IEEE Transactions on Magnetics, 2018, 54, 1-5.	1.2	12
41	A ferromagnetic skyrmion-based nano-oscillator with modified perpendicular magnetic anisotropy. Physics Letters, Section A: General, Atomic and Solid State Physics, 2021, 392, 127157.	0.9	12
42	Amine-Functionalized Fe <sub>2</sub> O <sub>3</sub> @SiO <sub>2</sub> Core-Shell Nanoparticles With Tunable Sizes. IEEE Nanotechnology Magazine, 2018, 17, 69-77.	1.1	11
43	Current-controlled unidirectional edge-meron motion. Journal of Applied Physics, 2016, 120, .	1.1	10
44	Broadband Point Measurement of Transient Magnetic Interference in Substations With Magnetoresistive Sensors. IEEE Transactions on Magnetics, 2014, 50, 1-5.	1.2	9
45	Enhancement of tunneling magnetoresistance by optimization of capping layer thicknesses in CoFeB/MgO/CoFeB magnetic tunnel junctions. Journal of Applied Physics, 2009, 105, 07C915.	1.1	8
46	Synthesis and Characterization of Silica-Encapsulated Iron Oxide Nanoparticles. IEEE Transactions on Magnetics, 2014, 50, 1-4.	1.2	8
47	Fault-Line Identification of HVDC Transmission Lines by Frequency-Spectrum Correlation Based on Capacitive Coupling and Magnetic Field Sensing. IEEE Transactions on Magnetics, 2018, 54, 1-5.	1.2	8
48	Spin-torque diode with tunable sensitivity and bandwidth by out-of-plane magnetic field. Applied Physics Letters, 2016, 108, 232407.	1.5	7
49	Online Detecting Magnet Defect Fault in PMSG With Magnetic Sensing. IEEE Transactions on Transportation Electrification, 2021, 7, 2775-2786.	5.3	7
50	Online Detection and Location of Eccentricity Fault in PMSG With External Magnetic Sensing. IEEE Transactions on Industrial Electronics, 2022, 69, 9749-9760.	5.2	7
51	Multicharacteristics Arc Model and Autocorrelation-Algorithm Based Arc Fault Detector for DC Microgrid. IEEE Transactions on Industrial Electronics, 2023, 70, 4875-4886.	5.2	7
52	Magnetic thermally sensitive interpenetrating polymer network (IPN) nanogels: IPN-pNIPAm@Fe <sub>2</sub> O <sub>3</sub> -SiO <sub>2</sub> . RSC Advances, 2020, 10, 38287-38293.	1.7	6
53	A Multifunctional Nanoplatfrom Based on Graphene Quantum Dots@Cobalt Ferrite for Monitoring of Drug Delivery and Fluorescence/Magnetic Resonance Bimodal Cellular Imaging. Advanced NanoBiomed Research, 2022, 2, .	1.7	6
54	Curved trapezoidal magnetic flux concentrator design for improving sensitivity of magnetic sensor in multi-conductor current measurement. , 2016, , .		5

#	ARTICLE	IF	CITATIONS
55	On-Site Real-Time Current Monitoring of Three-Phase Three-Core Power Distribution Cables with Magnetic Sensing. , 2018, , .		5
56	Multi-€binding biotinylated iron oxide nanoparticles as a promising versatile material for magnetic biomedical applications. Micro and Nano Letters, 2018, 13, 415-420.	0.6	5
57	A Portable Power Quality Monitoring Approach in Microgrid With Electromagnetic Sensing and Computational Intelligence. IEEE Transactions on Magnetics, 2021, 57, 1-6.	1.2	5
58	Effect of Oxygen Stoichiometry on Microstructural and Magnetic Properties of FePt/TaO <sub>x</sub> Bilayer Fabricated by Ion-Beam-Bombardment Deposition. IEEE Transactions on Magnetics, 2013, 49, 3310-3313.	1.2	4
59	Fe <sub>2</sub> O <sub>3</sub> –SiO <sub>2</sub> Core–Shell Nanoparticles Conjugated With Bovine Serum Albumin. IEEE Transactions on Magnetics, 2017, 53, 1-6.	1.2	4
60	A Linear Slope Analyzing Strategy of GMR Sensor Transfer Curve for Static Detection of Magnetic Nanoparticles. IEEE Sensors Journal, 2021, 21, 23934-23942.	2.4	4
61	Development of ultra-low magnetic field sensors with magnetic tunneling junctions. Proceedings of SPIE, 2007, , .	0.8	3
62	Preliminary design and noise considerations for an ultrasensitive magnetic field sensor. Proceedings of SPIE, 2007, , .	0.8	3
63	Angular Dependence of Low-Frequency Noise in Al <sub>2</sub> O <sub>3</sub> -Based Magnetic Tunnel Junction Sensors With Conetic Alloy. IEEE Transactions on Magnetics, 2012, 48, 3712-3714.	1.2	3
64	Magnetic-field-sensing mechanism based on dual-vortex motion and magnetic noise. Journal of Applied Physics, 2014, 115, 17D142.	1.1	3
65	Injection Locking of Spin-Torque Nano-Oscillators. IEEE Transactions on Magnetics, 2014, 50, 1-3.	1.2	3
66	Field-angle and DC-bias dependence of spin-torque diode in giant magnetoresistive microstripe. Applied Physics Letters, 2016, 109, 192402.	1.5	3
67	Kondo effect in magnetic tunnel junctions with an AlO <sub>x</sub> tunnel barrier. Physics Letters, Section A: General, Atomic and Solid State Physics, 2016, 380, 2237-2241.	0.9	3
68	Velocity measurement method for PMSMs through external stray magnetic field sensing. , 2017, , .		3
69	One-Pot Synthesis and Surface Modification of Lauric-Acid-Capped CoFe <sub>2</sub> O <sub>4</sub> Nanoparticles. IEEE Transactions on Magnetics, 2018, 54, 1-5.	1.2	3
70	Magnetic tunnel junction magnetic field sensor design tool. , 2010, , .		2
71	Non-contact electric-coupling-based and magnetic-field-sensing-assisted technique for monitoring voltage of overhead power transmission lines. , 2015, , .		2
72	Performance Optimization of Spin-Torque Microwave Detectors with Material and Operational Parameters. Journal of Nanotechnology, 2016, 2016, 1-11.	1.5	2

#	ARTICLE	IF	CITATIONS
73	Dual Measurement of Current and Temperature Using a Single Tunneling Magnetoresistive Sensor. , 2018, , .		2
74	A Magnetic-Sensing-Based Wide-Bandwidth Grid Impedance Measurement Technique With Small Perturbation Injection. IEEE Transactions on Magnetics, 2022, 58, 1-6.	1.2	2
75	Tunable magnetic low-frequency noise in magnetic tunnel junctions: effect of shape anisotropy. Journal of Physics Condensed Matter, 2020, 32, 495805.	0.7	2
76	Effect of Plasma Oxidation on Pre-Oxidized Magnetic Tunnel Junctions. IEEE Transactions on Magnetics, 2008, 44, 2911-2913.	1.2	1
77	A magnetically shielded instrument for magnetoresistance and noise characterizations of magnetic tunnel junction sensors. , 2010, , .		1
78	The modeling of energy transport for life goes on. Physics of Life Reviews, 2011, 8, 289-290.	1.5	1
79	Green Transport System: A Technology Demonstration of Adaptive Road Lighting with Giant Magnetoresistive Sensor Network for Energy Efficiency and Reducing Light Pollution. Applied Mechanics and Materials, 2013, 284-287, 2385-2390.	0.2	1
80	Linear Phase Tuning of Spin Torque Oscillators Using In-Plane Microwave Fields. IEEE Transactions on Magnetics, 2014, 50, 1-4.	1.2	1
81	Motion and Switching of Dual-Vortex Cores in Elliptical Permalloy Nanodisk Stimulated by a Gaussian Magnetic Field Pulse. IEEE Transactions on Magnetics, 2017, 53, 1-6.	1.2	1
82	Magnetic-Particle-Encapsulated Alginate Beads for Aqueous-Based Bacteria Culturing and Manipulation. IEEE Transactions on Magnetics, 2022, 58, 1-5.	1.2	1
83	Dynamic properties of a ferromagnetic skyrmion in an in-plane magnetic field. Journal of Applied Physics, 2022, 131, .	1.1	1
84	A Feasibility Study on Building a Stand-Alone Community Microgrid in the United States. , 2022, , .		1
85	Capacitance effect on the oscillation and switching characteristics of spin torque oscillators. Nanoscale Research Letters, 2014, 9, 597.	3.1	0
86	Spin valves with conetic-based synthetic ferrimagnet free layer. , 2016, , .		0
87	Voltage-energized status identification of three-phase underground power cables via non-destructive magnetoresistive sensor. , 2016, , .		0