

# Jiancheng Fang

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/1174346/publications.pdf>

Version: 2024-02-01

118  
papers

3,260  
citations

136740

32  
h-index

174990

52  
g-index

119  
all docs

119  
docs citations

119  
times ranked

2070  
citing authors

#	ARTICLE	IF	CITATIONS
1	Adaptive Compensation Method for High-Speed Surface PMSM Sensorless Drives of EMF-Based Position Estimation Error. IEEE Transactions on Power Electronics, 2016, 31, 1438-1449.	5.4	242
2	Torque Ripple Reduction in BLDC Torque Motor With Nonideal Back EMF. IEEE Transactions on Power Electronics, 2012, 27, 4630-4637.	5.4	164
3	Loss Calculation and Thermal Analysis of Rotors supported by Active Magnetic Bearings for High-speed Permanent Magnet Electrical Machines. IEEE Transactions on Industrial Electronics, 2015, , 1-1.	5.2	132
4	High-Precision Control for a Single-Gimbal Magnetically Suspended Control Moment Gyro Based on Inverse System Method. IEEE Transactions on Industrial Electronics, 2011, 58, 4331-4342.	5.2	118
5	Predictive Iterated Kalman Filter for INS/GPS Integration and Its Application to SAR Motion Compensation. IEEE Transactions on Instrumentation and Measurement, 2010, 59, 909-915.	2.4	112
6	Decoupling Control of Magnetically Suspended Rotor System in Control Moment Gyros Based on an Inverse System Method. IEEE/ASME Transactions on Mechatronics, 2012, 17, 1133-1144.	3.7	103
7	Self-Compensation of the Commutation Angle Based on DC-Link Current for High-Speed Brushless DC Motors With Low Inductance. IEEE Transactions on Power Electronics, 2014, 29, 428-439.	5.4	87
8	Precise Accelerated Torque Control for Small Inductance Brushless DC Motor. IEEE Transactions on Power Electronics, 2013, 28, 1400-1412.	5.4	86
9	Mismatched Disturbance Rejection Control for Voltage-Controlled Active Magnetic Bearing via State-Space Disturbance Observer. IEEE Transactions on Power Electronics, 2015, 30, 2753-2762.	5.4	77
10	Feedback Linearization and Extended State Observer-Based Control for Rotor-AMBs System With Mismatched Uncertainties. IEEE Transactions on Industrial Electronics, 2017, 64, 1313-1322.	5.2	68
11	High-precise Rotor Position Detection for High-speed Surface PMSM Drive based on Linear Hall-effect Sensors. IEEE Transactions on Power Electronics, 2015, , 1-1.	5.4	63
12	New Experimental Limits on Exotic Spin-Spin-Velocity-Dependent Interactions by Using $\langle \mathbf{S}_i \cdot \mathbf{S}_j \rangle$ Spin Sources. Physical Review Letters, 2018, 121, 261803.	2.9	61
13	Analysis and Design of Passive Magnetic Bearing and Damping System for High-Speed Compressor. IEEE Transactions on Magnetics, 2012, 48, 2528-2537.	1.2	60
14	High-Precision Sensorless Drive for High-Speed BLDC Motors Based on the Virtual Third Harmonic Back-EMF. IEEE Transactions on Power Electronics, 2018, 33, 1528-1540.	5.4	60
15	Self-Adaptive Phase-Lead Compensation Based on Unsymmetrical Current Sampling Resistance Network for Magnetic Bearing Switching Power Amplifiers. IEEE Transactions on Industrial Electronics, 2012, 59, 1218-1227.	5.2	58
16	Frequency-Domain System Identification of an Unmanned Helicopter Based on an Adaptive Genetic Algorithm. IEEE Transactions on Industrial Electronics, 2014, 61, 870-881.	5.2	57
17	<i>In situ</i> magnetic compensation for potassium spin-exchange relaxation-free magnetometer considering probe beam pumping effect. Review of Scientific Instruments, 2014, 85, 063108.	0.6	56
18	Spin-exchange collision mixing of the K and Rb ac Stark shifts. Physical Review A, 2016, 94, .	1.0	56

#	ARTICLE	IF	CITATIONS
19	Frequency-Varying Current Harmonics for Active Magnetic Bearing via Multiple Resonant Controllers. IEEE Transactions on Industrial Electronics, 2017, 64, 517-526.	5.2	56
20	Spin exchange broadening of magnetic resonance lines in a high-sensitivity rotating K-Rb-21Ne co-magnetometer. Scientific Reports, 2016, 6, 36547.	1.6	50
21	An Accurate Gravity Compensation Method for High-Precision Airborne POS. IEEE Transactions on Geoscience and Remote Sensing, 2014, 52, 4564-4573.	2.7	49
22	A parametrically modulated dual-axis atomic spin gyroscope. Applied Physics Letters, 2018, 112, .	1.5	48
23	Spacecraft autonomous navigation using unscented particle filter-based celestial/Doppler information fusion. Measurement Science and Technology, 2008, 19, 095203.	1.4	43
24	Suppression of vibration caused by residual unbalance of rotor for magnetically suspended flywheel. JVC/Journal of Vibration and Control, 2013, 19, 1962-1979.	1.5	40
25	Effects of pump laser power density on the hybrid optically pumped comagnetometer for rotation sensing. Optics Express, 2019, 27, 27420.	1.7	40
26	Kinetics and Design of a Mechanically Dithered Ring Laser Gyroscope Position and Orientation System. IEEE Transactions on Instrumentation and Measurement, 2013, 62, 210-220.	2.4	39
27	A Modified Nonlinear Two-Filter Smoothing for High-Precision Airborne Integrated GPS and Inertial Navigation. IEEE Transactions on Instrumentation and Measurement, 2015, 64, 3315-3322.	2.4	39
28	A fast determination method for transverse relaxation of spin-exchange-relaxation-free magnetometer. Review of Scientific Instruments, 2015, 86, 043104.	0.6	36
29	A Novel Cross-Feedback Notch Filter for Synchronous Vibration Suppression of an MSFW With Significant Gyroscopic Effects. IEEE Transactions on Industrial Electronics, 2017, 64, 7181-7190.	5.2	36
30	Low frequency magnetic field suppression in an atomic spin co-magnetometer with a large electron magnetic field. Journal of Physics B: Atomic, Molecular and Optical Physics, 2016, 49, 065006.	0.6	34
31	High-Stability and Fast-Response Twisting Motion Control for the Magnetically Suspended Rotor System in a Control Moment Gyro. IEEE/ASME Transactions on Mechatronics, 2013, 18, 1625-1634.	3.7	33
32	A novel Cs-129Xe atomic spin gyroscope with closed-loop Faraday modulation. Review of Scientific Instruments, 2013, 84, 083108.	0.6	32
33	A Fast Calibration Method of the Star Sensor Installation Error Based on Observability Analysis for the Tightly Coupled SINS/CNS-Integrated Navigation System. IEEE Sensors Journal, 2018, 18, 6794-6803.	2.4	32
34	Atomic spin gyroscope based on 129Xe-Cs comagnetometer. Science Bulletin, 2013, 58, 1512-1515.	1.7	31
35	Optimizations of spin-exchange relaxation-free magnetometer based on potassium and rubidium hybrid optical pumping. Review of Scientific Instruments, 2014, 85, 123104.	0.6	28
36	Dynamics Modeling and Measurement of the Microvibrations for a Magnetically Suspended Flywheel. IEEE Transactions on Instrumentation and Measurement, 2015, 64, 3239-3252.	2.4	28

#	ARTICLE	IF	CITATIONS
37	Suppression of the cross-talk effect in a dual-axis $K$ Rb $\hat{a}$ comagnetometer. Physical Review Applied, 2017, 9, .	1.0	21
38	Closed-Loop Control of Compensation Point in the $K$ Rb $\hat{a}$ Comagnetometer. Physical Review Applied, 2019, 12, .	1.5	28
39	Novel nested saddle coils used in miniature atomic sensors. AIP Advances, 2018, 8, .	0.6	27
40	Suppression of Light Shift for High-Density Alkali-Metal Atomic Magnetometer. IEEE Sensors Journal, 2019, 19, 492-496.	2.4	27
41	A Novel Differential Doppler Measurement-Aided Autonomous Celestial Navigation Method for Spacecraft During Approach Phase. IEEE Transactions on Aerospace and Electronic Systems, 2017, 53, 587-597.	2.6	26
42	Effects of temperature on Rb and $^{129}\text{Xe}$ spin polarization in a nuclear magnetic resonance gyroscope with low pump power. AIP Advances, 2017, 7, .	0.6	26
43	Microwave Field Uniformity Impact on DC Magnetic Sensing With NV Ensembles in Diamond. IEEE Sensors Journal, 2019, 19, 451-456.	2.4	25
44	An overview of the autonomous navigation for a gravity-assist interplanetary spacecraft. Progress in Aerospace Sciences, 2013, 63, 56-66.	6.3	24
45	Dynamics of an all-optical atomic spin gyroscope. Applied Optics, 2013, 52, 7220.	0.9	24
46	Dynamics of Rb and $^{21}\text{Ne}$ spin ensembles interacting by spin exchange with a high Rb magnetic field. Journal of Physics B: Atomic, Molecular and Optical Physics, 2016, 49, 135002.	0.6	24
47	A Wide Linear Range Eddy Current Displacement Sensor Equipped with Dual-Coil Probe Applied in the Magnetic Suspension Flywheel. Sensors, 2012, 12, 10693-10706.	2.1	23
48	Integrated Calibration Method for Dithered RLG POS Using a Hybrid Analytic/Kalman Filter Approach. IEEE Transactions on Instrumentation and Measurement, 2013, 62, 3333-3342.	2.4	23
49	Suppression of vapor cell temperature error for spin-exchange-relaxation-free magnetometer. Review of Scientific Instruments, 2015, 86, 083103.	0.6	23
50	Study of the operation temperature in the spin-exchange relaxation free magnetometer. Review of Scientific Instruments, 2015, 86, 073116.	0.6	23
51	A method for calibrating coil constants by using the free induction decay of noble gases. AIP Advances, 2017, 7, .	0.6	22
52	Composite anti-disturbance controller for magnetically suspended control moment gyro subject to mismatched disturbances. Nonlinear Dynamics, 2015, 79, 1563-1573.	2.7	21
53	Current status and outlook of biodegradable metals in neuroscience and their potential applications as cerebral vascular stent materials. Bioactive Materials, 2022, 11, 140-153.	8.6	21
54	Analysis of Filtering Methods for Satellite Autonomous Orbit Determination Using Celestial and Geomagnetic Measurement. Mathematical Problems in Engineering, 2012, 2012, 1-16.	0.6	20

#	ARTICLE	IF	CITATIONS
55	A New Noncontact Flatness Measuring System of Large 2-D Flat Workpiece. IEEE Transactions on Instrumentation and Measurement, 2008, 57, 2891-2904.	2.4	19
56	A Novel Conical Active Magnetic Bearing With Claw Structure. IEEE Transactions on Magnetics, 2014, 50, 1-8.	1.2	18
57	On-Site Synchronous Determination of Coil Constant and Nonorthogonal Angle Based on Electron Paramagnetic Resonance. IEEE Transactions on Instrumentation and Measurement, 2020, 69, 3191-3197.	2.4	17
58	Light-shift measurement and suppression in atomic spin gyroscope. Applied Optics, 2012, 51, 7714.	0.9	16
59	Surge Detection Approach for Magnetically Suspended Centrifugal Compressors Using Adaptive Frequency Estimator. IEEE Transactions on Industrial Electronics, 2018, 65, 5733-5742.	5.2	16
60	Analysis and fabrication of a novel MEMS pendulum angular accelerometer with electrostatic actuator feedback. Microsystem Technologies, 2013, 19, 9-16.	1.2	15
61	Analysis and Suppression of the Suspended Rotor Displacement Fluctuation Influence for Motor System. IEEE Transactions on Industrial Electronics, 2014, 61, 6966-6974.	5.2	15
62	Decoupled Observability Analyses of Error States in INS/GPS Integration. Journal of Navigation, 2014, 67, 473-494.	1.0	15
63	Adaptive Neural Network Control of Small Unmanned Aerial Rotorcraft. Journal of Intelligent and Robotic Systems: Theory and Applications, 2014, 75, 331-341.	2.0	15
64	Recursive adaptive filter using current innovation for celestial navigation during the Mars approach phase. Science China Information Sciences, 2017, 60, 1.	2.7	15
65	Review of atomic MEMS: driving technologies and challenges. Microsystem Technologies, 2010, 16, 1683-1689.	1.2	14
66	Closed-loop EKF-based Pulsar Navigation for Mars Explorer with Doppler Effects. Journal of Navigation, 2014, 67, 776-790.	1.0	14
67	Adaptive Unscented Two-Filter Smoother Applied to Transfer Alignment for ADPOS. IEEE Sensors Journal, 2018, 18, 3410-3418.	2.4	14
68	Improved Measurement of the Low-Frequency Complex Permeability of Ferrite Annulus for Low-Noise Magnetic Shielding. IEEE Access, 2019, 7, 126059-126065.	2.6	14
69	Structure design and fabrication of a novel dual-mass resonant output micromechanical gyroscope. Microsystem Technologies, 2010, 16, 543-552.	1.2	12
70	Neutral oxygen-vacancy defect in cubic boron nitride: A plausible qubit candidate. Applied Physics Letters, 2019, 114, .	1.5	12
71	A Quadra-Layered Multipole Moment Heating Film With Self-Cancellation of Magnetic Field. IEEE Transactions on Magnetics, 2020, 56, 1-11.	1.2	12
72	Fast non-linearly constrained least square joint estimation of position and velocity for X-ray pulsar-based navigation. IET Radar, Sonar and Navigation, 2014, 8, 1154-1163.	0.9	11

#	ARTICLE	IF	CITATIONS
73	Pressure broadening and shift of K D1 and D2 lines in the presence of 3He and 21Ne. European Physical Journal D, 2016, 70, 1.	0.6	11
74	Magnetically guided Cesium interferometer for inertial sensing. Applied Physics Letters, 2017, 110, .	1.5	11
75	A method for measuring the spin polarization of 129Xe by using an atomic magnetometer. AIP Advances, 2017, 7, .	0.6	11
76	Polarization Measurement of Cs Using the Pump Laser Beam. IEEE Photonics Journal, 2017, 9, 1-8.	1.0	11
77	Analysis of Orbital Dynamic Equation in Navigation for a Mars Gravity-Assist Mission. Journal of Navigation, 2012, 65, 531-548.	1.0	10
78	Online current signal de-noising of magnetic bearing switching power amplifier based on lifting wavelet transform. IET Electric Power Applications, 2016, 10, 799-806.	1.1	10
79	Suppression Method of AC-Stark Shift in SERF Atomic Magnetometer. IEEE Photonics Journal, 2018, 10, 1-7.	1.0	10
80	Autonomous celestial navigation for a deep space probe approaching a target planet based on ephemeris correction. Proceedings of the Institution of Mechanical Engineers, Part G: Journal of Aerospace Engineering, 2015, 229, 2681-2699.	0.7	9
81	Ephemeris Corrections in Celestial/Pulsar Navigation Using Time Differential and Ephemeris Estimation. Journal of Guidance, Control, and Dynamics, 2018, 41, 268-275.	1.6	9
82	Design of orientation estimation system by inertial and magnetic sensors. Proceedings of the Institution of Mechanical Engineers, Part G: Journal of Aerospace Engineering, 2014, 228, 1105-1113.	0.7	8
83	A transfer alignment method for airborne distributed POS with three-dimensional aircraft flexure angles. Science China Information Sciences, 2018, 61, 1.	2.7	8
84	Spacecraft Autonomous Navigation Using the Doppler Velocity Differences of Different Points on the Solar Disk. IEEE Transactions on Aerospace and Electronic Systems, 2020, 56, 4615-4625.	2.6	8
85	Satellite stellar refraction navigation using star pixel coordinates. Navigation, Journal of the Institute of Navigation, 2019, 66, 129-138.	1.7	7
86	Whole-Head Magnetoencephalogram and Its Application in Developmental Communication Disorders Research: A Review. IEEE Access, 2021, 9, 42515-42532.	2.6	7
87	High-Precision Parameter Identification of High-Speed Magnetic Suspension Motor. IEEE Transactions on Energy Conversion, 2018, 33, 20-31.	3.7	6
88	Examination of Spin-Exchange Relaxation in the Alkali Metal-Noble Gas Comagnetometer With a Large Electron Magnetic Field. IEEE Transactions on Instrumentation and Measurement, 2021, 70, 1-8.	2.4	6
89	Biaxial Signal Decoupling Method for the Longitudinal Magnetic-Field-Modulated Spin-Exchange-Relaxation-Free Comagnetometer in Inertial Rotation Measurement. Physical Review Applied, 2022, 17, .	1.5	6
90	Fast Position and Velocity Determination for Pulsar Navigation Using NML and LSM. Chinese Journal of Electronics, 2017, 26, 1325-1329.	0.7	5

#	ARTICLE	IF	CITATIONS
91	Spacecraft angular velocity estimation method using optical flow of stars. Science China Information Sciences, 2018, 61, 1.	2.7	5
92	Steering law for a cluster of magnetically suspended momentum wheels with vernier gimbaling capability. International Journal of Applied Electromagnetics and Mechanics, 2015, 47, 691-704.	0.3	4
93	Analysis of Ephemeris Errors in Autonomous Celestial Navigation during Mars Approach Phase. Journal of Navigation, 2017, 70, 505-526.	1.0	4
94	Angular velocity estimation using characteristics of star trails obtained by star sensor for spacecraft. Science China Information Sciences, 2021, 64, 1.	2.7	4
95	The influence of modulated magnetic field on light absorption in SERF atomic magnetometer. Review of Scientific Instruments, 2022, 93, 013001.	0.6	4
96	Determination of Residual Magnetic Field Based on Optically-Detected Free Spin Precession of Hyperpolarized <sup>21</sup> Ne. IEEE Transactions on Instrumentation and Measurement, 2022, 71, 1-7.	2.4	4
97	In-Flight Alignment Algorithm Based on ADD2 for Airborne POS. Journal of Navigation, 2013, 66, 209-225.	1.0	3
98	Airborne Position and Orientation System for Aerial Remote Sensing. International Journal of Aerospace Engineering, 2017, 2017, 1-11.	0.5	3
99	Implicit Augmented UKF and Its Application to the Stellar Refraction Navigation. Journal of Aerospace Engineering, 2018, 31, 04018039.	0.8	3
100	Design and evaluation of an air-insulated catheter for intra-arterial selective cooling infusion from numerical simulation and in vitro experiment. Medical Engineering and Physics, 2022, 99, 103736.	0.8	3
101	Alternate of GPS for Ballistic Vehicle Navigation. , 0, , .		2
102	A Radio/Optical Integrated Navigation Method Based on Ephemeris Correction for an Interplanetary Probe to approach a Target Planet. Journal of Navigation, 2016, 69, 613-638.	1.0	2
103	Observability analysis of autonomous navigation for deep space exploration with LOS/TOA/velocity measurements. , 2016, , .		2
104	Accurate and fast-response magnetically suspended flywheel torque control. Transactions of the Institute of Measurement and Control, 2016, 38, 73-82.	1.1	2
105	Pressure broadening and frequency shift of the D1 and D2 lines of K in the presence of Ne and Kr. European Physical Journal D, 2018, 72, 1.	0.6	2
106	Effects of the pulse-driven magnetic field detuning on the calibration of coil constants while using noble gases. AIP Advances, 2018, 8, 045220.	0.6	2
107	Adaptive two-filter smoothing based on second-order divided difference filter for distributed position and orientation system. Science China Information Sciences, 2019, 62, 1.	2.7	2
108	Study on spurious suppression method of high accuracy DDS. , 2015, , .		1

#	ARTICLE	IF	CITATIONS
109	A Markley Variables-based Attitude Estimation Method Using Optical Flow and a Star Vector for Spinning Spacecraft. Journal of Navigation, 2018, 71, 1589-1598.	1.0	1
110	Optical Rotation Detection for Atomic Spin Precession Using a Superluminescent Diode. Photonic Sensors, 2019, 9, 135-141.	2.5	1
111	Design and implementation of high-accuracy FOG-IMU. , 2011, , .		0
112	Low rotating loss 2-pole radial magnetic bearing biased with permanent magnet. , 2011, , .		0
113	The design and implement of micro autopilot system for low-altitude mapping of MAV. , 2011, , .		0
114	Identification and elimination of outliers in magnetic heading information measurement. , 2012, , .		0
115	Experimental research on microvibrations of magnetically suspended momentum wheel. , 2014, , .		0
116	Research on improved CORDIC algorithm for high accuracy DDS signal source. , 2015, , .		0
117	A Proposal of NV Center in Nanodiamond Based Magnetometer toward Human Neuron AP Detection. , 2017, , .		0
118	A comparative study on the measurement of verdet constant of magneto-optic glass by different techniques. , 2018, , .		0