

Frank K Wilhelm

List of Publications by Year in descending order

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76
papers

6,386
citations

147801

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79698

73
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76
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76
docs citations

76
times ranked

4536
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|--|-----|-----------|
| 1 | General solution of the time evolution of two interacting harmonic oscillators. Physical Review A, 2021, 103, . | 2.5 | 12 |
| 2 | Integrated Tool Set for Control, Calibration, and Characterization of Quantum Devices Applied to Superconducting Qubits. Physical Review Applied, 2021, 15, . | 3.8 | 45 |
| 3 | Roadmap for quantum simulation of the fractional quantum Hall effect. Physical Review A, 2020, 102, . | 2.5 | 5 |
| 4 | Coupling a Superconducting Qubit to a Left-Handed Metamaterial Resonator. Physical Review Applied, 2020, 14, . | 3.8 | 12 |
| 5 | Quantum simulation of particle creation in curved space-time. PLoS ONE, 2020, 15, e0229382. | 2.5 | 2 |
| 6 | Superconducting Detector That Counts Microwave Photons Up to Two. Physical Review Applied, 2020, 14, . | 3.8 | 5 |
| 7 | Tunable, Flexible, and Efficient Optimization of Control Pulses for Practical Qubits. Physical Review Letters, 2018, 120, 150401. | 7.8 | 115 |
| 8 | Optimized cross-resonance gate for coupled transmon systems. Physical Review A, 2018, 97, . | 2.5 | 40 |
| 9 | The quantum technologies roadmap: a European community view. New Journal of Physics, 2018, 20, 080201. | 2.9 | 358 |
| 10 | Physical realizability of continuous-time quantum stochastic walks. Physical Review A, 2018, 97, . | 2.5 | 3 |
| 11 | Quantum simulation of a quantum stochastic walk. Quantum Science and Technology, 2017, 2, 015002. | 5.8 | 8 |
| 12 | Hybrid benchmarking of arbitrary quantum gates. Physical Review A, 2017, 95, . | 2.5 | 12 |
| 13 | Quantum gates and architecture for the quantum simulation of the Fermi-Hubbard model. Physical Review A, 2016, 94, . | 2.5 | 29 |
| 14 | Optimal Qubit Control Using Single-Flux Quantum Pulses. Physical Review Applied, 2016, 6, . | 3.8 | 49 |
| 15 | Characterization of decohering quantum systems: Machine learning approach. Physical Review A, 2016, 93, . | 2.5 | 18 |
| 16 | Entanglement generated by the dispersive interaction: The dressed coherent state. Physical Review A, 2016, 93, . | 2.5 | 19 |
| 17 | Method to efficiently simulate the thermodynamic properties of the Fermi-Hubbard model on a quantum computer. Physical Review A, 2016, 93, . | 2.5 | 26 |
| 18 | Simultaneous model selection and parameter estimation: A superconducting qubit coupled to a bath of incoherent two-level systems. Physical Review A, 2016, 94, . | 2.5 | 3 |

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|----|--|-----|-----------|
| 19 | Transient Dynamics of a Superconducting Nonlinear Oscillator. <i>Physical Review Applied</i> , 2016, 5, . | 3.8 | 10 |
| 20 | Scalable two- and four-qubit parity measurement with a threshold photon counter. <i>Physical Review A</i> , 2015, 92, . | 2.5 | 12 |
| 21 | Unitary-Feedback-Improved Qubit Initialization in the Dispersive Regime. <i>Physical Review Applied</i> , 2015, 4, . | 3.8 | 21 |
| 22 | Adaptive identification of coherent states. <i>Physical Review A</i> , 2015, 92, . | 2.5 | 6 |
| 23 | The $B \rightarrow K$ transition: Properties and applications. <i>International Journal of Quantum Chemistry</i> , 2015, 115, 1431-1441. | 2.0 | 93 |
| 24 | Training Schrödinger's cat: quantum optimal control. <i>European Physical Journal D</i> , 2015, 69, 1. | 1.3 | 550 |
| 25 | Generating nonclassical states from classical radiation by subtraction measurements. <i>New Journal of Physics</i> , 2014, 16, 045011. | 2.9 | 16 |
| 26 | High-fidelity qubit measurement with a microwave-photon counter. <i>Physical Review A</i> , 2014, 90, . | 2.5 | 36 |
| 27 | Adaptive Hybrid Optimal Quantum Control for Imprecisely Characterized Systems. <i>Physical Review Letters</i> , 2014, 112, 240503. | 7.8 | 101 |
| 28 | Efficient Estimation of Resonant Coupling between Quantum Systems. <i>Physical Review Letters</i> , 2014, 113, 210404. | 7.8 | 27 |
| 29 | Multimode Circuit Quantum Electrodynamics with Hybrid Metamaterial Transmission Lines. <i>Physical Review Letters</i> , 2013, 111, 163601. | 7.8 | 42 |
| 30 | The effect of environmental coupling on tunneling of quasiparticles in Josephson junctions. <i>Superconductor Science and Technology</i> , 2013, 26, 125013. | 3.5 | 8 |
| 31 | Theory of Josephson photomultipliers: Optimal working conditions and back action. <i>Physical Review A</i> , 2012, 86, . | 2.5 | 27 |
| 32 | Microwave Photon Counter Based on Josephson Junctions. <i>Physical Review Letters</i> , 2011, 107, 217401. | 7.8 | 184 |
| 33 | Tunable coupling between three qubits as a building block for a superconducting quantum computer. <i>Physical Review B</i> , 2011, 84, . | 3.2 | 17 |
| 34 | Generation and detection of NOON states in superconducting circuits. <i>New Journal of Physics</i> , 2010, 12, 093036. | 2.9 | 63 |
| 35 | The size of macroscopic superposition states in flux qubits. <i>Europhysics Letters</i> , 2010, 89, 30003. | 2.0 | 29 |
| 36 | Microscopic model of critical current noise in Josephson-junction qubits: Subgap resonances and Andreev bound states. <i>Physical Review B</i> , 2009, 80, . | 3.2 | 23 |

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|----|--|------|-----------|
| 37 | Simple Pulses for Elimination of Leakage in Weakly Nonlinear Qubits. <i>Physical Review Letters</i> , 2009, 103, 110501. | 7.8 | 476 |
| 38 | Stationary and Transient Leakage Current in the Pauli Spin Blockade. <i>Physical Review Letters</i> , 2009, 102, 176806. | 7.8 | 36 |
| 39 | Quantum trajectory equation for multiple qubits in circuit QED: Generating entanglement by measurement This paper was presented at the Theory CANADA 4 conference, held at Centre de recherches mathématiques, Montréal, Québec, Canada on 4-7 June 2008.. <i>Canadian Journal of Physics</i> , 2009, 87, 225-231. | 1.1 | 34 |
| 40 | Improving high- T_c dc SQUID performance by means of junction asymmetry. <i>Superconductor Science and Technology</i> , 2009, 22, 055002. | 3.5 | 2 |
| 41 | Electronic structure of superposition states in flux qubits. <i>Physica Scripta</i> , 2009, T137, 014022. | 2.5 | 16 |
| 42 | Superconducting quantum bits. <i>Nature</i> , 2008, 453, 1031-1042. | 27.8 | 1,572 |
| 43 | A shift in spectroscopy. <i>Nature</i> , 2008, 455, 41-43. | 27.8 | 2 |
| 44 | Long-range coupling and scalable architecture for superconducting flux qubits. <i>Physical Review B</i> , 2007, 76, . | 3.2 | 35 |
| 45 | Dynamical Tunneling in Macroscopic Systems. <i>Physical Review Letters</i> , 2007, 99, 137001. | 7.8 | 36 |
| 46 | Strong coupling of a qubit to shot noise. <i>Physical Review B</i> , 2007, 75, . | 3.2 | 5 |
| 47 | Photon lab in a circuit. <i>Nature</i> , 2007, 445, 500-500. | 27.8 | 1 |
| 48 | Efficient Read-out of Flux Qubits at Flux Degeneracy. <i>Quantum Information Processing</i> , 2006, 5, 563-575. | 2.2 | 0 |
| 49 | Intrinsic phonon decoherence and quantum gates in coupled lateral quantum-dot charge qubits. <i>Physical Review B</i> , 2005, 72, . | 3.2 | 33 |
| 50 | Ohmic and Step Noise from a Single Trapping Center Hybridized with a Fermi Sea. <i>Physical Review Letters</i> , 2005, 95, 247006. | 7.8 | 26 |
| 51 | Compensation of decoherence from telegraph noise by means of an open-loop quantum-control technique. <i>Physical Review A</i> , 2005, 71, . | 2.5 | 37 |
| 52 | Nonequilibrium stabilization of charge states in double quantum dots. <i>Physical Review B</i> , 2004, 69, . | 3.2 | 4 |
| 53 | Measuring Non-Gaussian Fluctuations through Incoherent Cooper-Pair Current. <i>Physical Review Letters</i> , 2004, 93, 247005. | 7.8 | 37 |
| 54 | Bang? Bang Refocusing of a Qubit Exposed to Telegraph Noise. <i>Quantum Information Processing</i> , 2004, 3, 247-272. | 2.2 | 11 |

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|----|---|------|-----------|
| 55 | The spin-boson model with a structured environment: a comparison of approaches. <i>Chemical Physics</i> , 2004, 296, 345-353. | 1.9 | 48 |
| 56 | Decoherence and gate performance of coupled solid-state qubits. <i>Physical Review A</i> , 2003, 67, . | 2.5 | 97 |
| 57 | Design of realistic switches for coupling superconducting solid-state qubits. <i>Applied Physics Letters</i> , 2003, 83, 2387-2389. | 3.3 | 11 |
| 58 | Publisher's Note: Decoherence and gate performance of coupled solid-state qubits [Phys. Rev. A 67, 042319 (2003)]. <i>Physical Review A</i> , 2003, 67, . | 2.5 | 3 |
| 59 | Supercurrent-induced Peltier-like effect in superconductor/normal-metal weak links. <i>Physical Review B</i> , 2003, 67, . | 3.2 | 15 |
| 60 | Nonlinear cotunneling through an artificial molecule. <i>Physical Review B</i> , 2003, 67, . | 3.2 | 6 |
| 61 | Observation of a controllable δ -junction in a 3-terminal Josephson device. <i>Physical Review B</i> , 2002, 66, . | 3.2 | 41 |
| 62 | Supercurrent-carrying density of states in diffusive mesoscopic Josephson weak links. <i>Physical Review B</i> , 2002, 66, . | 3.2 | 96 |
| 63 | Superconducting Single-Charge Transistor in a Tunable Dissipative Environment. <i>Physical Review Letters</i> , 2001, 87, 136802. | 7.8 | 17 |
| 64 | The nonequilibrium mesoscopic SNS transistor. <i>Physica B: Condensed Matter</i> , 2000, 280, 418-419. | 2.7 | 3 |
| 65 | Superconducting single-charge transistor in a tunable dissipative environment. <i>Physica B: Condensed Matter</i> , 2000, 284-288, 1810-1811. | 2.7 | 1 |
| 66 | Transport in mesoscopic proximity systems: A quasiclassical perspective. <i>Physica C: Superconductivity and Its Applications</i> , 2000, 341-348, 2569-2572. | 1.2 | 0 |
| 67 | Non-equilibrium supercurrent through mesoscopic ferromagnetic weak links. <i>Europhysics Letters</i> , 2000, 51, 434-440. | 2.0 | 47 |
| 68 | Mesoscopic proximity effect probed through superconducting tunneling contacts. <i>Physical Review B</i> , 2000, 62, 5353-5356. | 3.2 | 7 |
| 69 | Quantum Superposition of Macroscopic Persistent-Current States. <i>Science</i> , 2000, 290, 773-777. | 12.6 | 875 |
| 70 | Quasiclassical Green's function approach to mesoscopic superconductivity. <i>Superlattices and Microstructures</i> , 1999, 25, 1251-1288. | 3.1 | 430 |
| 71 | Mesoscopic Superconducting "Normal Metal" Superconducting Transistor. <i>Physical Review Letters</i> , 1998, 81, 1682-1685. | 7.8 | 132 |
| 72 | Coherent Electron Transport in Superconducting-Normal Metallic Films. <i>Physical Review Letters</i> , 1998, 80, 4289-4292. | 7.8 | 11 |

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|----|---|-----|-----------|
| 73 | Coherent charge transport in metallic proximity structures. <i>Physical Review B</i> , 1997, 55, 1123-1137. | 3.2 | 103 |
| 74 | Supercurrent in a mesoscopic proximity wire. <i>Journal of Low Temperature Physics</i> , 1997, 106, 305-310. | 1.4 | 50 |
| 75 | Coherent transport in a normal wire between reservoirs. <i>European Physical Journal D</i> , 1996, 46, 2393-2394. | 0.4 | 0 |
| 76 | Superconducting current in narrow proximity wires. <i>European Physical Journal D</i> , 1996, 46, 2395-2396. | 0.4 | 4 |