

Eun-Ah Kim

List of Publications by Year in descending order

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Version: 2024-02-01

91
papers

6,228
citations

94381

37
h-index

66879

78
g-index

93
all docs

93
docs citations

93
times ranked

6738
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|--|------|-----------|
| 1 | Spin-transfer torque generated by a topological insulator. Nature, 2014, 511, 449-451. | 13.7 | 1,134 |
| 2 | Intra-unit-cell electronic nematicity of the high-Tc copper-oxide pseudogap states. Nature, 2010, 466, 347-351. | 13.7 | 486 |
| 3 | Dynamical Layer Decoupling in a Stripe-Ordered High- T_c Superconductor. Physical Review Letters, 2007, 99, 127003. | 2.9 | 251 |
| 4 | Graphene as an electronic membrane. Europhysics Letters, 2008, 84, 57007. | 0.7 | 248 |
| 5 | Quantum Loop Topography for Machine Learning. Physical Review Letters, 2017, 118, 216401. | 2.9 | 214 |
| 6 | Simultaneous Transitions in Cuprate Momentum-Space Topology and Electronic Symmetry Breaking. Science, 2014, 344, 612-616. | 6.0 | 210 |
| 7 | Detection of a Cooper-pair density wave in Bi2Sr2CaCu2O8+x. Nature, 2016, 532, 343-347. | 13.7 | 205 |
| 8 | Direct phase-sensitive identification of a d -form factor density wave in underdoped cuprates. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, E3026-32. | 3.3 | 198 |
| 9 | Upper limit on spontaneous superconductivity in SrRuO_4 . Physical Review B, 2007, 76, . | 1.1 | 194 |
| 10 | Topological superconductivity in monolayer transition metal dichalcogenides. Nature Communications, 2017, 8, 14985. | 5.8 | 148 |
| 11 | Topological Defects Coupling Smectic Modulations to Intra-Unit-Cell Nematicity in Cuprates. Science, 2011, 333, 426-430. | 6.0 | 139 |
| 12 | Machine learning in electronic-quantum-matter imaging experiments. Nature, 2019, 570, 484-490. | 13.7 | 133 |
| 13 | Corner Junction as a Probe of Helical Edge States. Physical Review Letters, 2009, 102, 076602. | 2.9 | 118 |
| 14 | The 2021 quantum materials roadmap. JPhys Materials, 2020, 3, 042006. | 1.8 | 111 |
| 15 | Atomic-scale electronic structure of the cuprate d -symmetry form factor density wave state. Nature Physics, 2016, 12, 150-156. | 6.5 | 109 |
| 16 | Machine Learning Out-of-Equilibrium Phases of Matter. Physical Review Letters, 2018, 120, 257204. | 2.9 | 104 |
| 17 | Magnetic field-induced pair density wave state in the cuprate vortex halo. Science, 2019, 364, 976-980. | 6.0 | 101 |
| 18 | Machine learning quantum spin liquids with quasiparticle statistics. Physical Review B, 2017, 96, . | 1.1 | 99 |

| # | ARTICLE | IF | CITATIONS |
|----|--|-----|-----------|
| 19 | Universal entanglement entropy in two-dimensional conformal quantum critical points. Physical Review B, 2009, 79, . | 1.1 | 97 |
| 20 | Stability of Half-Quantum Vortices in $p_x + im_y$ Physical Review Letters, 2007, 99, 197002. | 1.1 | 95 |
| 21 | Theory of the nodal nematic quantum phase transition in superconductors. Physical Review B, 2008, 77, . | 1.1 | 81 |
| 22 | Fractional Charges on an Integer Quantum Hall Edge. Physical Review Letters, 2009, 102, 236402. | 2.9 | 80 |
| 23 | Signatures of Fractional Statistics in Noise Experiments in Quantum Hall Fluids. Physical Review Letters, 2005, 95, 176402. | 2.9 | 78 |
| 24 | Spectroscopic Imaging Scanning Tunneling Microscopy Studies of Electronic Structure in the Superconducting and Pseudogap Phases of Cuprate High- T_c Superconductors. Journal of the Physical Society of Japan, 2012, 81, 011005. | 0.7 | 76 |
| 25 | Theory of stripes in quasi-two-dimensional rare-earth tellurides. Physical Review B, 2006, 74, . | 1.1 | 74 |
| 26 | Commensurate $4a_0$ -period charge density modulations throughout the $\text{Bi}_{2-x}\text{Sr}_x\text{CaCu}_2\text{O}_{8+x}$ pseudogap regime. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 12661-12666. | 3.3 | 73 |
| 27 | Quantum limit transport and destruction of the Weyl nodes in TaAs. Nature Communications, 2018, 9, 2217. | 5.8 | 71 |
| 28 | Dirac spin-orbit torques and charge pumping at the surface of topological insulators. Physical Review B, 2017, 96, . | 1.1 | 70 |
| 29 | Mean-field analysis of intra-unit-cell order in the Emery model of the CuO_2 plane. Physical Review B, 2011, 84, . | 1.1 | 54 |
| 30 | Spin-torque generation in topological insulator based heterostructures. Physical Review B, 2016, 93, . | 1.1 | 54 |
| 31 | Evidence for a vestigial nematic state in the cuprate pseudogap phase. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 13249-13254. | 3.3 | 52 |
| 32 | Spin Aharonov-Bohm effect and topological spin transistor. Physical Review B, 2010, 82, . | 1.1 | 51 |
| 33 | Modulation Doping via a Two-Dimensional Atomic Crystalline Acceptor. Nano Letters, 2020, 20, 8446-8452. | 4.5 | 44 |
| 34 | Dirac spectrum in piecewise constant one-dimensional (1D) potentials. New Journal of Physics, 2010, 12, 123020. | 1.2 | 39 |
| 35 | Linear resistivity and Sachdev-Ye-Kitaev (SYK) spin liquid behavior in a quantum critical metal with spin-1/2 fermions. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 18341-18346. | 3.3 | 39 |
| 36 | Ab Initio Mismatched Interface Theory of Graphene on RuCl_2 : Doping and Magnetism. Physical Review Letters, 2020, 124, 106804. | 2.9 | 39 |

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|----|---|-----|-----------|
| 37 | Electronic structure of the cuprate superconducting and pseudogap phases from spectroscopic imaging STM. <i>New Journal of Physics</i> , 2011, 13, 065014. | 1.2 | 37 |
| 38 | Identifying the 'fingerprint' of antiferromagnetic spin fluctuations in iron pnictide superconductors. <i>Nature Physics</i> , 2015, 11, 177-182. | 6.5 | 35 |
| 39 | Entanglement Entropy of the $\hat{1}/2=1/2$ Composite Fermion Non-Fermi Liquid State. <i>Physical Review Letters</i> , 2015, 114, 206402. | 2.9 | 33 |
| 40 | One-component order parameter in URu_2Si_2 uncovered by resonant ultrasound spectroscopy and machine learning. <i>Science Advances</i> , 2020, 6, eaaz4074. | 4.7 | 33 |
| 41 | Interpreting machine learning of topological quantum phase transitions. <i>Physical Review Research</i> , 2020, 2, . | 1.3 | 33 |
| 42 | Coherent Superconductivity with a Large Gap Ratio from Incoherent Metals. <i>Physical Review Letters</i> , 2018, 121, 187001. | 2.9 | 32 |
| 43 | Measuring fractional charge and statistics in fractional quantum Hall fluids through noise experiments. <i>Physical Review B</i> , 2006, 74, . | 1.1 | 29 |
| 44 | Aharonov-Bohm Interference and Fractional Statistics in a Quantum Hall Interferometer. <i>Physical Review Letters</i> , 2006, 97, 216404. | 2.9 | 29 |
| 45 | Picometer registration of zinc impurity states in $\text{Bi}_2\text{Sr}_2\text{CaCu}_2\text{O}_{8+\delta}$ for phase determination in intra-unit-cell Fourier transform STM. <i>New Journal of Physics</i> , 2012, 14, 053017. | 1.2 | 27 |
| 46 | Manipulating superconductivity in ruthenates through Fermi surface engineering. <i>Physical Review B</i> , 2016, 94, . | 1.1 | 26 |
| 47 | Slope invariant $\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"} \langle \text{mml:mi} \rangle T \langle \text{mml:mi} \rangle \langle \text{mml:math} \rangle$ -linear resistivity from local self-energy. <i>Physical Review Research</i> , 2020, 2, . | 1.3 | 26 |
| 48 | Interedge tunneling in quantum Hall line junctions. <i>Physical Review B</i> , 2003, 67, . | 1.1 | 25 |
| 49 | Topological quantum phase transition in an exactly solvable model of a chiral spin liquid at finite temperature. <i>Physical Review B</i> , 2010, 81, . | 1.1 | 23 |
| 50 | Correlator convolutional neural networks as an interpretable architecture for image-like quantum matter data. <i>Nature Communications</i> , 2021, 12, 3905. | 5.8 | 22 |
| 51 | Non-Abelian phases in two-component $\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"} \langle \text{mml:mrow} \langle \text{mml:mi} \rangle \hat{1}/2 \langle \text{mml:mi} \rangle \langle \text{mml:mo} \rangle = \langle \text{mml:mo} \rangle 1.4 \langle \text{mml:mrow} \langle \text{mml:mi} \rangle 2 \langle \text{mml:mi} \rangle \langle \text{mml:math} \rangle$ quantum Hall states: Emergence of Fibonacci anyons. <i>Physical Review B</i> , 2015, 92, . | | |
| 52 | Spin-Charge Interplay in Electronic Liquid Crystals: Fluctuating Spin Stripe Driven by Charge Nematic Ordering. <i>Physical Review Letters</i> , 2010, 104, 106405. | 2.9 | 20 |
| 53 | Nematic and spin-charge orders driven by hole-doping a charge-transfer insulator. <i>New Journal of Physics</i> , 2014, 16, 093057. | 1.2 | 20 |
| 54 | Non-Abelian bosonization and modular transformation approach to superuniversality. <i>Physical Review B</i> , 2019, 99, . | 1.1 | 19 |

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|----|---|-----|-----------|
| 55 | Evidence of pair-density wave in spin-valley locked systems. Science Advances, 2019, 5, eaat4698. | 4.7 | 19 |
| 56 | Anomalous scaling of the penetration depth in nodal superconductors. Physical Review B, 2015, 92, . | 1.1 | 18 |
| 57 | Hybridization-induced interface states in a topological-insulator-ferromagnetic-metal heterostructure. Physical Review B, 2017, 96, . | 1.1 | 18 |
| 58 | Pomeranchuk Instability of Composite Fermi Liquids. Physical Review Letters, 2018, 121, 147601. | 2.9 | 18 |
| 59 | Strong spin-phonon coupling unveiled by coherent phonon oscillations in CaMn_2P_2 . Physical Review B, 2019, 99, . | 1.1 | 18 |
| 60 | Cooper-Pair Tunneling in Junctions of Singlet Quantum Hall States and Superconductors. Physical Review Letters, 2004, 93, 266803. | 2.9 | 17 |
| 61 | Cold-spots and glassy nematicity in underdoped cuprates. Physical Review B, 2016, 94, . | 1.1 | 16 |
| 62 | Quantum Spin Liquid Intertwining Nematic and Superconducting Order in FeSe. Physical Review Letters, 2018, 121, 237002. | 2.9 | 15 |
| 63 | Topological orders competing for the Dirac surface state in FeSeTe surfaces. Physical Review Research, 2021, 3, . | 1.3 | 15 |
| 64 | Quantum Hall line junction with impurities as a multislit Luttinger liquid interferometer. Physical Review B, 2005, 71, . | 1.1 | 14 |
| 65 | Harnessing interpretable and unsupervised machine learning to address big data from modern X-ray diffraction. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, . | 3.3 | 14 |
| 66 | Double Point Contact in Quantum Hall Line Junctions. Physical Review Letters, 2003, 91, 156801. | 2.9 | 13 |
| 67 | Effects of surface-bulk hybridization in three-dimensional topological metals. Physical Review B, 2014, 89, . | 1.1 | 13 |
| 68 | Superconducting proximity effect in topological metals. Physical Review B, 2014, 90, . | 1.1 | 12 |
| 69 | Utilizing complex oxide substrates to control carrier concentration in large-area monolayer MoS ₂ films. Applied Physics Letters, 2021, 118, . | 1.5 | 12 |
| 70 | Quantum Phases of Transition Metal Dichalcogenide Moiré Systems. Physical Review Letters, 2022, 128, 157602. | 2.9 | 12 |
| 71 | Tests of nematic-mediated superconductivity applied to BaMn_2P_2 . Physical Review Research, 2020, 2, . | 1.1 | 12 |
| 72 | Strange Metals from Melting Correlated Insulators in Twisted Bilayer Graphene. Physical Review Letters, 2021, 127, 266601. | 2.9 | 11 |

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|----|---|-----|-----------|
| 73 | Non-abelian statistics in the interference noise of the Moore–Read quantum Hall state. Journal of Statistical Mechanics: Theory and Experiment, 2008, 2008, L04001. | 0.9 | 10 |
| 74 | Nematic fluctuations balancing the zoo of phases in half-filled quantum Hall systems. Physical Review B, 2017, 95, . | 1.1 | 10 |
| 75 | Topological superconductivity in metal/quantum-spin-ice heterostructures. Npj Quantum Materials, 2017, 2, . | 1.8 | 10 |
| 76 | Multifaceted machine learning of competing orders in disordered interacting systems. Physical Review B, 2019, 100, . | 1.1 | 10 |
| 77 | Optical signatures of the chiral anomaly in mirror-symmetric Weyl semimetals. Physical Review B, 2019, 100, . | 1.1 | 9 |
| 78 | Beyond Ohm's law: Bernoulli effect and streaming in electron hydrodynamics. Physical Review B, 2021, 103, . | 1.1 | 9 |
| 79 | Strong interlayer interactions in bilayer and trilayer moiré superlattices. Science Advances, 2022, 8, eabk1911. | 4.7 | 9 |
| 80 | Inferring effective interactions from the local density of states: Application to STM data from Bi ₂ Sr ₂ CaCu ₂ O ₈ +f. Physical Review B, 2006, 74, . | 1.1 | 7 |
| 81 | Edge states for topological insulators in two dimensions and their Luttinger-like liquids. Physical Review B, 2012, 86, . | 1.1 | 7 |
| 82 | Interference of nematic quantum critical quasiparticles: A route to the octet model. Physical Review B, 2010, 81, . | 1.1 | 6 |
| 83 | Probing transport in quantum many-fermion simulations via quantum loop topography. Physical Review B, 2019, 99, . | 1.1 | 3 |
| 84 | Identification of Non-Fermi Liquid Physics in a Quantum Critical Metal via Quantum Loop Topography. Physical Review Letters, 2021, 127, 046601. | 2.9 | 3 |
| 85 | Phase transitions in models for coupled charge-density waves. Physical Review B, 2004, 69, . | 1.1 | 2 |
| 86 | Electronic liquid crystal physics of underdoped cuprates. Physica C: Superconductivity and Its Applications, 2012, 481, 168-177. | 0.6 | 1 |
| 87 | Observation of semilocalized dispersive states in the strongly correlated electron-doped ferromagnet EuO . Physical Review B, 2016, 94, . | 1.1 | 1 |
| 88 | Entanglement clustering for ground-stateable quantum many-body states. Physical Review Research, 2021, 3, . | 1.3 | 1 |
| 89 | Local interlayer tunneling between two-dimensional electron systems in the ballistic regime. Physical Review B, 2010, 82, . | 1.1 | 0 |
| 90 | Spectroscopic Imaging STM studies of broken electronic symmetries in underdoped cuprates. Journal of Physics: Conference Series, 2012, 400, 022022. | 0.3 | 0 |

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|----|--|-----|-----------|
| 91 | Spectroscopic imaging STM studies of broken electronic symmetries in underdoped cuprates. Physica B: Condensed Matter, 2012, 407, 1859-1863. | 1.3 | 0 |