

Kaushal Kumar Kesharpu

List of Publication

Personal Information

Name Kaushal Kumar Kesharpu
Position Researcher
Condensed Matter Theory Division
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Profiles in Scientific Databases

 scholar.google.ru

 arxiv.org

 [NASA/ADS](https://arxiv.org)

 orcid.org

 scopus.com

 publons.com

Specialisation and Research interest

Specialisation



• Condensed matter theory • Quantum field theory • Statistical physics

Current research interest

• High temperature superconductivity • Topological materials •
• Strongly correlated electronic systems • Majorana Fermions •
• Topological Superconductivity •

Publications in Scientific Journals

On Topological Materials

- **K.K. Kesharpu**, E.A. Kochetov, Alvarro Ferraz, "Topological Hall effect induced by classical large-spin background: su(2) path-integral approach", *Phys. Rev. B* **107**, 155146 (2022)
 [10.1103/PhysRevB.107.155146](https://doi.org/10.1103/PhysRevB.107.155146)
- **K.K. Kesharpu**, "Flipping chiral edge states through nuclear spin S and spin modulating vector in topological insulators", *arXiv:2305.13423* (Submitted to PRB.)
 [10.48550/arXiv.2305.13423](https://doi.org/10.48550/arXiv.2305.13423)

- **K.K. Kesharp**, E.A. Kochetov, "Spin-flip-induced superfluidity in a ring of spinful hard-core bosons", *Phys. Rev. A* **106**, 033323 (2022)
doi 10.1103/PhysRevA.106.033323

On High-Tc Superconductivity

- **K.K. Kesharp**, V.D. Kochev, P.D. Grigoriev, "Evolution of Shape and Volume Fraction of Superconducting Domains with Temperature and Anion Disorder in $(TMTSF)_2ClO_4$ ", *Crystals*, **11**(1), 72 (2021)
doi 10.1103/PhysRevB.103.014519
- V.D. Kochev, **K.K. Kesharp**, P.D. Grigoriev, "Anisotropic zero-resistance onset in organic superconductors", *Phys. Rev. B* **103**, 014519 (2021)
doi 10.3390/cryst11010072
- S.S. Seidov, **K.K. Kesharp**, P.I. Karpov, P.D. Grigoriev, "Conductivity of anisotropic inhomogeneous superconductors above the critical temperature", *Phys. Rev. B* **98**, 014515
doi 10.1103/PhysRevB.98.014515
- P.D. Grigoriev, A.A. Sinchenko, **K.K. Kesharp**, A. Shakin, T.I. Mogilyuk, A.P. Orlov, A.V. Frolov, D.S. Lyubshin, D.A. Chareev, O.S. Volkova, A.N. Vasiliev, Anisotropic effect of appearing superconductivity on the electron transport in FeSe, *JETP Lett.*, **105**(12), 786-791 (2017)
doi 10.1134/S0021364017120074
- **K.K. Kesharp**, V.D. Kochev, P.D. Grigoriev, "Peculiar effect of sample size in layered superconductors", *AIP Conference Proceedings*, **2551**, 030002 (2022)
doi 10.1063/5.0098901
- **K.K. Kesharp**, P.D. Grigoriev, D.I. Lazeva, T.I. Mogilyuk, "Self-consistent and Maxwell approximations to describe the excess conductivity anisotropy in FeSe above superconducting transition temperature", *J. Phys.: Conf. Ser.* **1238** 012010
doi 10.1088/1742-6596/1238/1/012010
- T. I. Mogilyuk, P. D. Grigoriev, **K. K. Kesharp**, I. A. Koleshnikov, A. A. Sinchenko, A. B. Frolov, A. P. Orlov "Excess conductivity of anisotropic inhomogeneous materials above superconducting critical temperature", *Physics Solid State* (2019) 61
doi 10.1134/S1063783419090166

On Density Wave Phase in Rare Earth Tritellurides

- Pavel A. Vorobyev, Pavel D. Grigoriev, **Kaushal K. Kesharp**, Vladimir V. Khovaylo, "The Evolution of Electron Dispersion in the Series of Rare-Earth Tritelluride Compounds Obtained from Their Charge-Density-Wave Properties and Susceptibility Calculations", *Materials* **2019**, **12**(14), 2264 doi 10.3390/ma12142264
- **K.K. Kesharp**, P.D. Grigoriev, "Temperature dependence of resistivity at the transition to a charge density wave state in rare-earth tritellurides", *J. Phys.: Conf. Ser.* **1238** 012019
doi 10.1088/1742-6596/1238/1/012019

Talks at Scientific Conferences

- 2023 III International conference on «Condensed Matter Physics»
29 May - 03 June, Chernogolovka, Russia
www.issp.ac.ru
- 2023 XX Conference on Strongly correlated electronic systems and Quantum critical phenomenons
25 May, Moscow, Russia
sces.lebedev.ru
- 2023 international workshop on «Superconducting and Magnetic Hybrid Structures»
11-15 July, Dubna, Russia
indico.jinr.ru/event/3615
- 2022 Modern Problems of Condensed Matter Theory (CMT2022)
17-22 October, Dubna, Russia
indico.jinr.ru/event/3097
- 2021 XX School-Conference of young scientists «Problems of condensed matter physics and high pressure physics»
16-26 September, Sochi, Russia
school.lpi.ru
- 2021 International Conference on Low-dimensional materials: theory, modelling, experiment (LDM2021)
12-17 July, Dubna, Russia
indico.jinr.ru
- 2020 XIX All russian conference on problems of condensed matter physics and high pressure
18- 27 September, Burevestnik, Russia
troitsk.ru
- 2019 Interaction between Radiation and Quantum matter
2-5 July, Moscow, Russia
irq2019.mpgu.edu
- 2019 Modern Trends in Condensed Matter Physics (Lev Gor'kov Memorial Conference)
24-27 June, Chernogolovka, Russia
gorkovconf.itp.ac.ru
- 2018 International Workshop on Localisation, Interactions and Superconductivity
30 June-4 July, Chernogolovka, Russia
intgroup.itp.ac.ru

2018 International Conference in remembrance of Alexei Abrikosov
25–28 June, Chernogolovka, Russia
[🌐 abrikosovconf.itp.ac.ru](http://abrikosovconf.itp.ac.ru)

2018 IV International Laser, Plasma Research and Technology LaPlaz-2018
30 January–1 February, Moscow, Russia
[🌐 conf.laplas.mephi.ru](http://conf.laplas.mephi.ru)
