

Roman Krasnoperov

Publications in scientific journals

1. Beriozko A., Soloviev A., **Krasnoperov R.** Representation of geological-geophysical data in a unified integrated GIS environment // Russian Journal of Earth Sciences, 2007, Vol. 9, No. 2, ES2001. DOI: [10.2205/2007ES000245](https://doi.org/10.2205/2007ES000245)
2. Berezko A., Soloviev A., Gvishiani A., Zhalkovsky E., Smagin S., Bolotsky E., **Krasnoperov R.** Intellectual Geographic Information System “Earth Science Data for the Territory of Russia” // Inzhenernaya Ekologiya (Engineer Ecology), 2008, No. 5, PP. 32–40. (*In Russian*) <http://elibrary.ru/item.asp?id=21387018>
3. **Krasnoperov R.** Earth crust motion and deformation analysis based on space geodesy methods // Russian Journal of Earth Sciences, 2009, Vol. 11, No. 1, ES1002. DOI: [10.2205/2009ES000394](https://doi.org/10.2205/2009ES000394)
4. Berezko A., Rybkina A., Soloviev A., **Krasnoperov R.** Intellectual GIS // Vestnik Otdelenia nauk o Zemle RAN (Herald of the Earth Sciences Department of RAS), 2009, No. 1, NZ3002. (*In Russian*) DOI: [10.2205/2009NZ000006](https://doi.org/10.2205/2009NZ000006)
5. Dokukin P., Kaftan V., **Krasnoperov R.** Geodetic network triangles shape influence on the Earth crust deformation determination // Izvestya Vuzov. Geodezija i Aerofotos'emka (University Bulletin. Geodesy and Aerophotosurveying), 2010, Vol. 5, PP. 6–11. (*In Russian*) <http://elibrary.ru/item.asp?id=15546232>
6. Kaftan V., **Krasnoperov R.**, Yurovsky P. Graphic representation of Earth surface displacement determination by means of Global Navigation Satellite Systems // Geodezija i Kartografija (Geodesy and Cartography), 2010, Vol. 11, PP. 2–7. (*In Russian*) <http://elibrary.ru/item.asp?id=22027807>
7. Beriozko A., Lebedev A., Soloviev A., **Krasnoperov R.**, Rybkina A. Geoinformation system with algorithmic shell as a new tool for Earth sciences // Russian Journal of Earth Sciences, 2011, Vol. 12, No. 1, ES1001. DOI: [10.2205/2011ES000501](https://doi.org/10.2205/2011ES000501)
8. Berezko A., **Krasnoperov R.**, Kedrov E., Pyatygina O., Shibaeva A. Visualization of Earth main magnetic field maps on a spherical display // Russian Journal of Earth Sciences, 2011, Vol. 12, No. 2, ES2004. DOI: [10.2205/2011ES000508](https://doi.org/10.2205/2011ES000508)

9. **Krasnoperov R.**, Lebedev A., Pyatygina O., Rybkina A., Shibaeva A. Multidisciplinary analytical GIS for processing and visualization of remote sensing data // Sovremennye Problemy Distancionnogo Zondirovaniya Zemli iz Kosmosa (Contemporary Problems of Space Remote Sensing of the Earth), 2012, Vol. 9, No. 3, PP. 50–54. (*In Russian*) <http://elibrary.ru/item.asp?id=17890035>
10. Kaftan V.I., **Krasnoperov R.I.** Geodetic observations at geomagnetic observatories // Geomagnetism and Aeronomy, 2015, Vol. 55, No. 1, PP. 118–123. DOI: [10.1134/S0016793215010065](https://doi.org/10.1134/S0016793215010065)
11. Kaftan V.I., **Krasnoperov R.I.**, Tertyshnikov A.V. Observation with the use of global navigation satellite systems at geomagnetic stations and observatories: applied and fundamental aspects // Geliogeofizicheskie Issledovania (Heliogeophysical Research), 2015, Vol. 12, PP. 1–10. (*In Russian*) <http://elibrary.ru/item.asp?id=23802395>
12. **Krasnoperov R.I.**, Sidorov R.V., Soloviev A.A. Modern Geodetic Methods for High-Accuracy Survey Coordination on the Example of Magnetic Exploration // Geomagnetism and Aeronomy, 2015, Vol. 55, No. 4, PP. 547–554. DOI: [10.1134/S0016793215040076](https://doi.org/10.1134/S0016793215040076)
13. **Krasnoperov R.I.**, Soloviev A.A. Analytical geoinformation system for integrated geological-geophysical research in the territory of Russia // Gornyi Zhurnal (Mining Journal), 2015, Vol. 10, PP. 89–93. (*In Russian*) DOI: [10.17580/gzh.2015.10.16](https://doi.org/10.17580/gzh.2015.10.16)
14. Nikolov B.P., Zharkikh J.I., Soloviev A.A., **Krasnoperov R.I.**, Agayan S.M. Integration of data mining methods for Earth science data analysis in GIS environment // Russian Journal of Earth Sciences, 2015, Vol. 15, No. 4, ES4004. DOI: [10.2205/2015ES000559](https://doi.org/10.2205/2015ES000559) WOS: 000420843400004
15. Soloviev A.A., Sidorov R.V., **Krasnoperov R.I.**, Grudnev A.A., Khokhlov A.V. Klimovskaya: A New Geomagnetic Observatory // Geomagnetism and Aeronomy, 2016, Vol. 56, No. 3, PP. 342–354. DOI: [10.1134/S0016793216030154](https://doi.org/10.1134/S0016793216030154) WOS: 000381225900012
16. **Krasnoperov R.I.**, Sidorov R.V., Soloviev A.A. (Ed.) Operation manual for absolute measurements using fluxgate declinometer/inclinometer // Geoinformatics Research Papers, 2016, Vol. 4, No. 1, BS4011. (*In Russian*) DOI: [10.2205/2016BS038](https://doi.org/10.2205/2016BS038)
17. Soloviev A.A., Zharkikh J.I., **Krasnoperov R.I.**, Nikolov B.P., Agayan S.M. GIS-oriented solutions for advanced clustering analysis of geoscience data using ArcGIS platform // Russian Journal of Earth Sciences, 2016, Vol. 16, No. 6, ES4004. DOI: [10.2205/2016ES000587](https://doi.org/10.2205/2016ES000587) WOS: 000393213000003

18. Gvishiani A., Soloviev A., **Krasnoperov R.**, Lukianova R. Automated Hardware and Software System for Monitoring the Earth's Magnetic Environment // Data Science Journal, 2016, Vol. 15, Art. No. 18. DOI: [10.5334/dsj-2016-018](https://doi.org/10.5334/dsj-2016-018)
19. **Krasnoperov R.I.**, Soloviev A.A., Nikolov B.P., Zharkikh J.I., Grudnev A.A. Interactive web-application for complex studying of spatial information on Earth sciences from the geodatabase of GC RAS // Geoinformatics Research Papers, 2016, Vol. 4, No. 2, BS4015. (In Russian) DOI: [10.2205/2016BS039](https://doi.org/10.2205/2016BS039)
20. Sidorov R., Soloviev A., **Krasnoperov R.**, Kudin D., Grudnev A., Kopytenko Y., Kotikov A., Sergushin P. Saint Petersburg magnetic observatory: from Voeikovo subdivision to INTERMAGNET certification // Geoscientific Instrumentation, Methods and Data Systems, 2017, Vol. 6, No. 2, PP. 473–485. DOI: [10.5194/gi-6-473-2017](https://doi.org/10.5194/gi-6-473-2017) WOS: 000414693800001
21. Soloviev A.A., Lukianova R.Y., Dobrovolsky M.N., Sidorov R.V., **Krasnoperov R.I.**, Kudin D.V., Grudnev A.A. Acquisition and systematization of information for database on extreme geomagnetic conditions // Geoinformatics Research Papers, 2017, Vol. 5, No. 2, BS5003. (In Russian) DOI: [10.2205/2017BS044](https://doi.org/10.2205/2017BS044)
22. Agayan S.M., Bogoutdinov Sh.R., **Krasnoperov R.I.** Short introduction into DMA // Russian Journal of Earth Sciences, 2018, Vol. 18, No. 2, ES2001. DOI: [10.2205/2018ES000618](https://doi.org/10.2205/2018ES000618) WOS: 000432947000004
23. Dzeboev B.A., Agayan S.M., Zharkikh Yu.I., **Krasnoperov R.I.**, Barykina Yu.V. Strongest earthquake-prone areas in Kamchatka // Izvestiya. Physics of the Solid Earth, 2018, Vol. 54, No. 2, PP. 284–291. DOI: [10.1134/S1069351318020052](https://doi.org/10.1134/S1069351318020052) WOS: 000429948800008
24. Soloviev A.A., **Krasnoperov R.I.**, Nikolov B.P., Zharkikh J.I., Agayan S.M. Web-Oriented Software System for Analysis of Spatial Geophysical Data Using Geoinformatics Methods // Izvestiya. Atmospheric and Oceanic Physics, 2018, Vol. 54, No. 9, PP. 1312–1319. DOI: [10.1134/S0001433818090360](https://doi.org/10.1134/S0001433818090360) WOS: 000458442000038
25. Dzeboev B.A., **Krasnoperov R.I.** On the monitoring of seismic activity using the algorithms of discrete mathematical analysis // Russian Journal of Earth Sciences, 2018, Vol. 18, No. 3, ES3003. DOI: [10.2205/2018ES000623](https://doi.org/10.2205/2018ES000623) WOS: 000438548300002
26. Dzeboev B.A., Krasnoperov R.I., Belov I.O., Barykina Yu.V., Vavilin E.V. Modified algorithmic system FCAZm and strong earthquake-prone areas in California // Geoinformatika, 2018, No. 2, PP. 2—8. (In Russian)
<https://elibrary.ru/item.asp?id=35448277>

27. Aleshin I.M., Getmanov V.G., Grudnev A.A., Dobrovolsky M.N., Ivanov S.D., Koryagin V.N., **Krasnoperov R.I.**, Kudin D.V., Perederin F.V., Soloviev A.A., Kholodkov K.I. Compact energy efficient online data logger for real time geomagnetic measurements // Nauchnoe priborostroenie, 2018, Vol. 28, No. 3, PP. 5–13. (*In Russian*) <https://elibrary.ru/item.asp?id=35412444>
28. Rybkina A., Hodson S., Gvishiani A., Kabat P., **Krasnoperov R.**, Samokhina O., Firsova E. CODATA and global challenges in data-driven science // Russian Journal of Earth Sciences, 2018, Vol. 18, No. 4, ES4002. DOI: [10.2205/2018ES000625](https://doi.org/10.2205/2018ES000625) WOS: 000443707100002
29. Soloviev A.A., **Krasnoperov R.I.** The 70th anniversary of academician RAS Alexey Dzhermenovich Gvishiani // Chebyshevskii Sbornik, 2018, Vol. 19, No. 4, PP. 5–10. (*In Russian*) DOI: [10.22405/2226-8383-2018-19-4-5-10](https://doi.org/10.22405/2226-8383-2018-19-4-5-10)
30. Gvishiani A.D., Solov'ev A.A., Sidorov R.V., **Krasnoperov R.I.**, Grudnev A.A., Kudin D.V., Karapetyan J.K., Simonyan A.O. Successes of the organization of geomagnetic monitoring in Russia and the near abroad // Vestn. Otd. nauk Zemle, 2018, Vol. 10, NZ4001. (*In Russian*) DOI: [10.2205/2018NZ000357](https://doi.org/10.2205/2018NZ000357)
31. Khokhlov A., **Krasnoperov R.**, Nikolov B., Nikolova J., Dobrovolsky M., Petrov V., Kudin D., Belov I. On the directions and structure of the short-term magnetic variations // Russian Journal of Earth Sciences, 2019, Vol. 19, No. 2, ES2002. DOI: [10.2205/2019ES000656](https://doi.org/10.2205/2019ES000656) WOS: 000466540100006
32. Gvishiani A.D., Kaftan V.I., **Krasnoperov R.I.**, Tatarinov V.N., Vavilin E.V. Geoinformatics and Systems Analysis in Geophysics and Geodynamics // Izvestiya, Physics of the Solid Earth, 2019, Vol. 55, No. 1, PP. 33–49. DOI: [10.1134/S1069351319010038](https://doi.org/10.1134/S1069351319010038) WOS: 000468175800004
33. Kaban M., **Krasnoperov R.**, Soloviev A., Nikolova Yu. The integrative density model of the crust and upper mantle of Eurasia: representation in GIS environment // Russian Journal of Earth Sciences, 2019, Vol. 19, No. 6, ES6005. DOI: [10.2205/2019ES000692](https://doi.org/10.2205/2019ES000692) WOS: 000506028300011
34. **Krasnoperov R.**, Peregoudov D., Lukianova R., Soloviev A., Dzeboev B. Early Soviet satellite magnetic field measurements in the years 1964 and 1970 // Earth System Science Data, 2020, Vol. 12, No. 1, PP. 555–561. DOI: [10.5194/essd-12-555-2020](https://doi.org/10.5194/essd-12-555-2020) WOS: 000518835500001
35. Kudin D.V., Uchaikin E.O., Gvozdarev A.Yu., Kudryavtsev N.G., **Krasnoperov R.I.**, Szollosy J., Hegymegi L. Development and testing of a portable “noise-meter” for areal magnetic noise survey // Russian Journal of Earth Sciences, 2020, Vol. 20, No. 3, ES3001. DOI: [10.2205/2020ES000713](https://doi.org/10.2205/2020ES000713) WOS: 000550619000006

36. Kozyreva O., Pilipenko V., **Krasnoperov R.**, Baddeley L., Sakharov Ya., Dobrovolsky M. Fine structure of substorm and geomagnetically induced currents // Annals of geophysics, 2020, Vol. 63, No. 2, GM219, PP. 1–21. DOI: [10.4401/ag-8198](https://doi.org/10.4401/ag-8198) WOS: 000536769500012
37. Lyubovtseva Y.S., Gvishiani A.D., Soloviev A.A., Samokhina O.O., **Krasnoperov R.I.** Sixtieth anniversary of the International Geophysical Year (1957–2017) – contribution of the Soviet Union // History of Geo- and Space Sciences, 2020, Vol. 11, No. 2, PP. 157–171. DOI: [10.5194/hgss-11-157-2020](https://doi.org/10.5194/hgss-11-157-2020) WOS: 000562955600001
38. Dobrovolsky M., Kudin D., **Krasnoperov R.** Unified Geomagnetic Database from Different Observation Networks for Geomagnetic Hazard Assessment Tasks // Data Science Journal, 2020, Vol. 19, No. 1, Art. No. 34, PP. 1–7. DOI: [10.5334/dsj-2020-034](https://doi.org/10.5334/dsj-2020-034)
39. Vorobev A.V., Pilipenko V.A., **Krasnoperov R.I.**, Vorobeva G.R., Lorentzen D.A. Short-term forecast of the auroral oval position on the basis of the “virtual globe” technology // Russian Journal of Earth Sciences, 2020, Vol. 20, No. 6, ES6001. DOI: [10.2205/2020ES000721](https://doi.org/10.2205/2020ES000721) WOS: 000595548100011
40. Khokhlov A.V., Pilipenko V.A., **Krasnoperov R.I.**, Nikolova Yu.I., Dobrovolsky M.N. Geomagnetic Field Variability Analysis Based on Polar Diagrams // Izvestiya, Physics of the Solid Earth, 2020, Vol. 56, No. 6, PP. 854–863. DOI: [10.1134/S1069351320060038](https://doi.org/10.1134/S1069351320060038) WOS: 000590042500010
41. Petrov V.G., **Krasnoperov R.I.** The aspects of K-index calculation at Russian Geomagnetic Observatories // Russian Journal of Earth Sciences, 2020, Vol. 20, No. 6, PP. 1–7. DOI: [10.2205/2020ES000724](https://doi.org/10.2205/2020ES000724) WOS: 000595548100004
42. Kaban M., Gvishiani A., Sidorov R., Oshchenko A., **Krasnoperov R.** Structure and Density of Sedimentary Basins in the Southern Part of the East-European Platform and Surrounding Area // Applied Sciences, 2021, Vol. 11, No. 2, 512, PP. 1–16. DOI: [10.3390/app11020512](https://doi.org/10.3390/app11020512)

Publications in edited volumes and conference proceedings

1. Berezko A., Soloviev A., **Krasnoperov R.**, Rybkina A. Intellectual analytical geoinformation system “Earth Science Data for the Territory of Russia” // Environment. Technology. Resources: Proceedings of the 7th International Scientific and Practical Conference, Rezekne, June 25–27, 2009. – Rezekne, Latvia: Rēzeknes Augstskola, Rēzekne, RA Izdevniecība. Vol. 1, 2009. PP. 215–221. (*In Russian*) DOI: [10.17770/etr2009vol1.1122](https://doi.org/10.17770/etr2009vol1.1122)
2. Berezko A., Gvishiani A., Soloviev A., **Krasnoperov R.**, Rybkina A., Lebedev A. Intellectual GIS “Earth Science Data for the Territory of Russia” / in vol. Problems of protection of population and territories against emergencies. – Moscow, Russia: EMERCOM. 2010. PP. 210–218. (*In Russian*) <http://elibrary.ru/item.asp?id=15549564>
3. Berezko A., Gvishiani A., Soloviev A., **Krasnoperov R.**, Rybkina A., Lebedev A. Multidisciplinary GIS in Earth sciences // Applied problems in geology, geophysics, and geoecology in connection with modern information technologies. Proceedings of international conference. May 16–20, 2011. – Maikop, Russia: Publishing house “Marinin O.G.” 2011. PP. 37–44. (*In Russian*) <http://elibrary.ru/item.asp?id=23479189>
4. Berezko A., Gvishiani A., Soloviev A., **Krasnoperov R.**, Lebedev A., Rybkina A. Geoinformation system for mineralogical research support. // Mineralogical prospective. Proceedings of international mineralogical workshop. Syktyvkar, Russia, May 17–20, 2011. – Syktyvkar, Russia: Institute of Geology, Komi SC of URAS. 2011. PP. 19–21 (*In Russian*) <http://elibrary.ru/item.asp?id=21292502>
5. Berezko A., Lebedev A., Soloviev A., **Krasnoperov R.**, Rybkina A. Intellectual Geoinformation System for Earth Sciences // Environment. Technology. Resources: Proceedings of the 8th International Scientific and Practical Conference, Rezekne, June 20–22, 2011. – Rezekne, Latvia: Rēzeknes Augstskola, Rēzekne, RA Izdevniecība. Vol. 2, 2011. PP. 48–54. DOI: [10.17770/etr2011vol2.966](https://doi.org/10.17770/etr2011vol2.966)
6. Kaftan V., **Krasnoperov R.**, Yurovsky P. Geodetic proof of elastic rebound theory in connection to Parkfield earthquake (California, US, 28.09.2004, M6) // Problems of seismotectonics. Proceedings of XVII international conference, September 20–24, 2011 / Editors: Acad. A.O. Gliko, Dr. E.A. Rogozhin, Dr. Yu.K. Shchukin, Dr. L.I. Nadezhka. – Moscow, Russia: Institute of Physics of the Earth RAS. 2011. PP. 246–250. (*In Russian*) <http://elibrary.ru/item.asp?id=21742531>

7. Rybkina A., **Krasnoperov R.**, Pyatygina O., Shibaeva A. Geoinformation system with algorithmic shell as a new tool for Earth sciences // Proceedings of 1st Czech-Russian Forum of Young Scientists, 19–22 April 2012. – Plzen, Czech Republic: University of West Bohemia. 2012. PP. 17–18. <http://elibrary.ru/item.asp?id=21292962>
8. Lyubovtseva Yu., Makosko A., Voronova E., Pyatygina O., Shibaeva A., **Krasnoperov R.** Medical geoinformation system for Russia in connection to climate change // Proceedings of international conference «Space weather influence on a man in space and on the Earth» (Space Research Institute RAS, Moscow, Russia, June 4–8, 2012). – Moscow, Russia: SRI RAS. 2013. PP. 435–449. (*In Russian*) <http://elibrary.ru/item.asp?id=21292418>
9. Gvishiani A., Lyubovtseva Yu., **Krasnoperov R.**, Zgurovsky M., Pyatygina O., Shibaeva A., Yefremov K. Creation of a multipurpose GIS “Russia-Ukraine” for assessment of the prospective coordinated socio-economic development of Russia and Ukraine in the European context // In: “Prospective of coordinated socio-economic development of Russia and Ukraine in the European context”. Materials of the 1st International scientific and practical conference / RAS. INION. Dept. of international cooperation. Executive ed.: Yu.S. Pivovarov. – Moscow, Russia: INION RAS. 2013. PP. 517–523. (*In Russian*)
<http://elibrary.ru/item.asp?id=21291480>
10. Dokukin P., Kaftan V., **Krasnoperov R.** GNSS network triangles shape influence on the Earth crust deformation determination / In: Physical Geodesy (TsNIIGAiK’s Scientific and Technical Volume). – Moscow, Russia: Nauchny Mir. 2013. PP. 115–121. (*In Russian*)
<http://elibrary.ru/item.asp?id=21244526>