

CURRICULUM VITAE

ALEXANDER MKRTCHIAN, PhD

Leibniz-Institut für Agrarentwicklung in Transformationsökonomien (IAMO)

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<https://www.researchgate.net/profile/Alexander-Mkrtchian-2>

Born 1977

Education

March 2007

PhD on Physical Geography

November 1999 – June 2002

Postgraduate student (doctoral program in Geography), Ivan Franko National University of L'viv

September 1994 – June 1999

Undergraduate student at Ivan Franko National University of L'viv, Diploma of Specialist in Geography.

Work experience

2022 – present

Research Associate at Leibniz-Institut für Agrarentwicklung in Transformationsökonomien (IAMO)

2010 – 2022

Associate professor, Ivan Franko National University of L'viv. Teaching a number of ecological and geographical disciplines for undergraduate and postgraduate students.

2003 – 2010

Assistant lecturer, Ivan Franko National University of L'viv. Taught various ecological disciplines for undergraduate students.

Research Interests Landscape ecology, GIS and ecosystem modeling, geostatistics, geospatial data mining, climatology, climate change and its ecological impacts, species distribution modeling, quantitative terrain analysis.

Selected publications

Mkrtchian, A. (2021). Modeling present and prospective distribution of *Phyteuma* genus in Carpathian region with machine learning techniques using open climatic and soil data. *GEOLINKS International Conference Proceedings, Book 2: Ecology and Environmental Studies* (pp. 139–148). Burgas, Bulgaria.

<https://doi.org/10.32008/GEOLINKS2021/B2/V3/17>

Mkrtchian, A. (2020). Features of ecological geomorphometry as a prospective field of study, its main concepts and methods. *Problems of Geomorphology and Paleogeography of the Ukrainian Carpathians and Adjacent Areas*, 1(11), 140–155. <https://doi.org/10.30970/gpc.2020.1.3205>
<http://publications.lnu.edu.ua/collections/index.php/carpathians/article/view/3205>

Mkrtchian, A. & Kovalchuk, I. (2019). Terrain morphology as factor of local temperatures distribution in Ukrainian Carpathians. *Problems of Geomorphology and Paleogeography of the Ukrainian Carpathians and Adjacent Areas*, 1(9), 62–72. <https://doi.org/10.30970/gpc.2019.1.2803>

Kovalchuk, I. P. & Mkrtchian O. S., Kovalchuk A. I. (2018). Modeling the distribution of land surface temperature for Bystrytsia river basin using Landsat 8 data. *Journal of Geology, Geography and Geoecology*, 27(3), 453–465.

<https://doi.org/10.15421/111869>

Mkrtchian, A. (2017). Assessment of spatial significance and error of correlation coefficients calculated for spatially distributed data accounting for spatial autocorrelation. *Proceedings of GIS-FORUM 2017*. Kharkiv : University Printing house (pp. 18–21).

https://www.researchgate.net/publication/318116811_Assessment_of_Statistical_Significance_and_Error_of_Correlation_Coefficients_Calculated_for_Spatially_Distributed_Data_Accounting_for_Spatial_Autocorrelation

Mkrtchian, A. (2016). Annual precipitation data processing and interpolation for the weather stations of Western Ukraine. *Proceedings of GeoMLA, Geostatistics and Machine Learning, Application in Climate and Environmental Sciences* (pp. 61–66). Belgrade : Faculty of Civil Engineering, University.

http://geomla.grf.bg.ac.rs/site_media/static/Proceedings%20of%20GeoMLA%202016%20Conference.pdf

http://geomla.grf.bg.ac.rs/site_media/static/presentations/day_2/4/Presentation_Mkrtchian.pdf

Mkrtchian, A. & Svidzinska, D. (2016). Quantifying landscape changes through land cover transition potential analysis and modelling (on the example of the Black Tisza river basin). *Landscape and Landscape Ecology. Proceedings of the 17th International Symposium on Landscape Ecology* (pp. 141–150). Bratislava : Slovak Academy of Sciences, Institute of Landscape Ecology.

https://www.researchgate.net/publication/346137625_Quantifying_Landscape_Changes_through_Land_Cover_Transition_Potential_Analysis_and_Modeling_on_the_example_of_the_Black_Tisza_river_basin

Mkrtchian, A. & Svidzinska, D. (2014). Modeling the location of natural cold-limited treeline and alpine meadow habitats in the Ukrainian Carpathians. *Local responses to global challenges. Proceedings of Forum Carpathicum 2014* (pp. 96–102). Lviv: Ukrayinskyy Bestseller.

https://www.researchgate.net/publication/342318843_Modeling_the_location_of_natural_cold-limited_treeline_and_alpine_meadow_habitats_in_the_Ukrainian_Carpathians

Mkrtchian, A. (2013). Using habitat quality and diversity measures to assess conservation priorities for sites in the Ukrainian Carpathians. *The Carpathians: Integrating Nature and Society Towards Sustainability*, 655–667.

https://doi.org/10.1007/978-3-642-12725-0_46

Mkrtchian, A. (2013). The relations between land surface morphometry and spectral characteristics of ecosystems in the Ukrainian Carpathians. *Ekológia (Bratislava)*, 32(1), 87–94.

https://www.researchgate.net/publication/277922310_The_relations_between_land_surface_morphometry_and_spectral_characteristics_of_ecosystems_in_the_Ukrainian_Carpathians

Mkrtchian, A. (2004). Spatial interpolation of field data on plant abundance. *Natural Forests in the Temperate Zone of Europe – Values and Utilisation. Proceedings of international conference 13-17 October 2003* (pp. 314–321). Birmensdorf, Swiss: Federal Research Institute WSL.

https://geography.lnu.edu.ua/wp-content/uploads/publications/mkrtchian_2.pdf

100+ other publications (mostly in Ukrainian language) in journals and Conference proceedings, for a period of 2000-2021.

Conference presentations

“Modeling present and prospective distribution of *Phyteuma* genus in Carpathian region with machine learning techniques using open climatic and soil data”. 6th Forum Carpathicum: Linking the Environmental, Political and Societal Aspects for Carpathian Sustainability (21–25 June 2021), Brno, Czech Republic.

“Ecologically meaningful geospatial structures as a pivotal subject of landscape ecology”. *Landscape Science and Landscape Ecology*:

Considering Responses to Global Challenges. 1st International IALE-Russia online conference (14–18 September 2020), Moscow, Russia.

“Impact of prospective climate changes on future distribution of ecoclimate belts in Ukrainian Carpathians”. 5th Forum Carpaticum: Adapting to environmental and social risk in the Carpathian mountain region. (15–18 October 2018), Eger, Hungary.

“Assessment of spatial significance and error of correlation coefficients calculated for spatially distributed data accounting for spatial autocorrelation”. GIS-FORUM 2017 (22–24 February 2017), Kharkiv, Ukraine.

“Annual precipitation data processing and interpolation for the weather stations of Western Ukraine”. GeoMLA: Geostatistics and Machine Learning, Application in Climate and Environmental Sciences (21–24 June 2016), Belgrade, Serbia.

“Quantifying landscape changes through land cover transition potential modelling (on the example of the Black Tisza river basin)” (with Svidzinska D.) The 17th International Symposium on Landscape Ecology: Landscape and Landscape Ecology (27–29 May 2015), Nitra, Slovakia.

“Modeling the location of natural cold-limited treeline and alpine meadow habitats in Ukrainian Carpathians” (with Svidzinska D.) Forum Carpaticum 2014: Local Responses to Global Challenges (16–18 September 2014), Lviv, Ukraine.

“The analysis of relations between land surface morphometry and spectral characteristics of ecosystems in Ukrainian Carpathians”. Forum Carpaticum 2012: From Data to Knowledge, from Knowledge to Action (30th May – 2nd June 2012), Stará Lesná, High Tatras, Slovakia.

“The methodology for the integrated assessment and mapping of the appropriateness for assigning protected status for the sites in the Ukrainian Carpathians”. 1st Forum Carpaticum: Integrating Nature and Society Towards Sustainability (15–18 September 2010), Kraków, Poland.

Memberships

A member of Ukrainian geographical society;

A member of the Ukrainian branch of the International Society of Landscape Ecology (IALE)

Professional Skills

Expert in geospatial, statistical and geostatistical analytic methods and techniques, machine learning methods, spatial images processing and analysis, species distribution modeling; experienced user of GIS, statistical analysis and machine learning software (R, QGIS, ArcGIS, Saga, Google Earth Engine, Python, Matlab, Octave, Statistica, etc.); mastering programming skills (R, Python, JavaScript); experienced in academic writing and oral presentations; skilled and experienced in university lecturing and teaching to undergraduate and postgraduate students.

Languages

Russian (native speaker),
Ukrainian (fluent),
English (excellent command),
German (basic)