Publication list

Lucian- Daniel Drăguţ **February 2025**

ISI journals

1. Popov, A.B., Minár, J., **Drăguţ, L.,** 2025. Physically-based digital geomorphological mapping: Case study of glacial and karst topography. *Geomorphology*, 109539, https://doi.org/10.1016/j.geomorph.2024.109539
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4. Newman, D. R., Saurette, D. D., Cockburn, J. M. H., **Drăguţ, L**., & Lindsay, J. B., 2023. Assessing spatially heterogeneous scale representation with applied digital soil mapping. *Environmental Modelling & Software*, 160, 105612. https://doi.org/10.1016/j.envsoft.2022.105612
5. Dornik, A., Cheţan, M. A., **Drăguţ, L**., Iliuţă, A., & Dicu, D. D., 2022. Importance of the mapping unit on the land suitability assessment for agriculture. *Computers and Electronics in Agriculture*, *201*, 107305. https://doi.org/10.1016/J.COMPAG.2022.107305
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8. Dornik, A., Cheţan, M. A., **Drăguţ, L**., Dicu, D. D., & Iliuţă, A., 2022. Optimal scaling of predictors for digital mapping of soil properties. *Geoderma*, *405*. https://doi.org/10.1016/j.geoderma.2021.115453
9. Pleșoianu, A.-I., Stupariu, M.-S., Șandric, I., Pătru-Stupariu, I., **Drăguț, L**., 2020. Individual tree-crown detection and species classification in very high-resolution remote sensing imagery using a deep learning ensemble model. *Remote Sensing,* 12 (15), 2426.
10. Hegyi, A., Vernica, M.M., **Drăguţ, L**., 2020. An object-based approach to support the automatic delineation of magnetic anomalies. *Archaeological Prospection,* 27, 3-12.
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12. **Drăguț, L**., Belgiu, M., Popescu, G., Bandura, P., 2019. Sensitivity of multiresolution segmentation to spatial extent. *International Journal of Applied Earth Observation and Geoinformation*, 81, 146-153.
13. Sărășan, A., Józsa, E., Ardelean, A.C., **Drăguţ, L.,** 2019. Sensitivity of geomorphons to mapping specific landforms from a digital elevation model: A case study of drumlins. *Area*, 51(2), 257-267.
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19. Walz, U., Hoechstetter, S., **Drăguţ, L**., Blaschke, T., 2016. Integrating time and the third spatial dimension in landscape structure analysis. *Landscape Research*, 41 (3), 279-293.
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24. Belgiu, M. & **Drăguţ, L.**, 2014. Comparing supervised and unsupervised multiresolution segmentation approaches for extracting buildings from very high resolution imagery. *ISPRS Journal of Photogrammetry and Remote Sensing*, 96, 67-75.
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26. Belgiu, M., **Drăguţ, L.,** Strobl, J., 2014. Quantitative evaluation of variations in rule-based classifications of land cover classes in urban neighbourhoods

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29. d'Oleire-Oltmanns, S., Eisank, C., **Drăguţ, L.** and Blaschke, T., 2013. An Object-Based Workflow to Extract Landforms at Multiple Scales From Two Distinct Data Types. *IEEE Geoscience and Remote Sensing Letters* 10: 947-951.
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31. Verhagen, P. and **Drăguţ, L.**, 2012. Object-based landform classification from DEMs for archaeological predictive mapping, *Journal of Archaeological Science* 39: 698-703 doi: 10.1016/j.jas.2011.11.001.
32. **Drăguţ, L.**, Eisank, C. and Strasser, T., 2011. Local variance for multi-scale analysis in geomorphometry, *Geomorphology* 130: 162-172 doi:10.1016/j.geomorph.2011. 03.011.
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35. **Drăguţ, L.**, Schauppenlehner, T., Muhar, A., Strobl, J. and Blaschke, T., 2009. Optimization of scale and parametrization for terrain segmentation: an application to soil-landscape modeling, *Computers & Geosciences* 35: 1875-1883, doi:10.1016/j.cageo.2008.10.008.
36. Luscier, J.D, Thompson, W.L, Wilson, J.M, Gorham, B.E. and **Drăguţ, L.D.**, 2007. Techniques for determining percent ground cover – Reply, *Frontiers in Ecology and the Environment* 5: 240-240.
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1. Newman, D. R., Cockburn, J. M. H., Drăguţ, L., & Lindsay, J. B. (2022). Evaluating Scaling Frameworks for Multiscale Geomorphometric Analysis. *Geomatics*, *2*(1). https://doi.org/10.3390/geomatics2010003
2. Jozsa, E., Loczy, D., Soldati, M., **Drăguţ, L.** and Szabo, J., 2019. Distribution of landslides reconstructed from inventory data and estimation of landslide susceptibility in Hungary. *Hungarian Geographical Bulletin* 68: 255-267.
3. Eisank, C., **Drăguţ, L.**, Götz, J. and Blaschke, T., 2010. Developing a semantic model of glacial landforms for object-based terrain classification - the example of glacial cirques. In: *GEOBIA 2010-Geographic Object-Based Image Analysis*, edited by Addink, E.A. and Van Coillie, F.M.B. Book Series: International Archives of the Photogrammetry Remote Sensing and Spatial Information Sciences Volume: 38-4-C7.
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2. **Drăguţ, L.** and Blaschke, T., 2008. Terrain segmentation and classification using SRTM data. In *Advances in Digital Terrain Analysis*, edited by Zhou, Q., Lees, B. and Tang, G.A. Series Lecture Notes in Geoinformation and Cartography, Springer, pp. 141- 158.
3. Muntean, O.L., **Drăguţ, L**., Baciu, N., Man, T., Buzilă, L. and Ferencik, I., 2007. Environmental impact assessment as a tool for environmental restoration (a case study: Copşa-Mică area, Romania). In *Use of Landscape Sciences for the Assessment of Environmental Security*, edited by Petrosillo, I., Müller, F., Jones, K.B., Zurlini, G., Krauze, K., Victorov, S., Li, B.-L., Kepner, W.G. Springer, pp. 461-474.
4. **Drăguţ, L**. (2003), *Cap. 3.1.- Cadrul teoretic,* În: ”*Analiza peisajelor geografice din partea de vest a Câmpiei Transilvaniei”,* Eds. Schreiber, W., Drăguţ, L., Man, T. (Cluj-Napoca, Presa Universitară Clujeană), pp. 10-12.
5. **Drăguţ, L**., Man, T. (2003), *Metode de analiză şi evaluare a peisajului ca entitate globală*, În: ”*Analiza peisajelor geografice din partea de vest a Câmpiei Transilvaniei”,* Eds. Schreiber, W., Drăguţ, L., Man, T. (Cluj-Napoca, Presa Universitară Clujeană), pp. 12-29.

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7. Schreiber, W., **Drăguţ, L.** (2003), *Tipuri de peisaje geografice*, În: ”*Analiza peisajelor geografice din partea de vest a Câmpiei Transilvaniei”,* Eds. Schreiber, W., Drăguţ, L., Man, T. (Cluj-Napoca, Presa Universitară Clujeană), pp. 106-109.
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Articles in national and international refereed journals

1. Peter Bandura, Jozef Minár, **Lucian Drăguţ,** 2019. Morphometrical-morphostructural subdivision of the Western Carpathians by Object-based image analysis. *Geomorphologia Slovaca et Bohemica* 19 (1): 5-104.
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13. **Drăguţ, L**., Eisank, C., Strasser, T. and Blaschke, T., 2009. A comparison of methods to incorporate scale in geomorphometry. *Proceedings of Geomorphometry2009*, 133-139.
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23. **Drăguţ, L.**, Man, T., Schreiber, W. E. (2001), *A landscape study using the analysis of elementary landscape units: Ţaga community case study,* Publicationes Instituti Geographici Universitatis Tartuensis, 92, "Development of European Landscapes", vol. II, Tartu, p. 662-665.
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25. **Drăguţ, L.** (2000), *Evaluarea peisajelor geografice din teritoriul administrativ al municipiului Cluj-Napoca*, Studia Universitatis Babeş-Bolyai, Geographia, XLV, 1, p.11-15.
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27. **Drăguţ, L.,** Komlosi, Iuliana, Ianoş, Gh., Cardoş, T., Lăzureanu, A. (1994*), Cercetări privind poluarea atmosferei oraşului Timişoara cu pulberi sedimentabile*, Analele Univ. Timişoara, vol. IV, p. 119-124.

Published contributions to academic conferences

1. Dornik, A., Drăguț, L., Chețan, M.A., Oguchi, T., Hayakawa, Y., Micu, M., 2020. Towards a consistent set of land-surface variables for landslide modelling. Proceedings of the Geomorphometry 2020 Conference, Perugia, Italy.
2. Dornik, A., Drăguț, L., Oguchi, T., Hayakawa, Y., Micu, M., 2020. Altitude as an indicator of biased sampling design in landslide prediction. 22nd EGU General Assembly, held online 4-8 May, 2020, id.11304
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14. **Drăguţ, L.**, Blaschke, T., Eisank, C. and Strasser, T., 2008. Scales and hierarchies in landform classification. The SCALA project. Proceedings Mitteleuropäische Geomorphologietagung 2008, Salzburg.
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16. **Drăguţ, L.** and Blaschke, T., 2008. 3D landscape units for analysis of landscape structure. Methodology of Landscape Research, Sosnowiec-Krynica, Poland, pp. 25.
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24. V. Cristea, **L. Drăguţ**, C. Baciu and Gafta, D., 2003. A multidisciplinary approach to the sustainable development of the peri-urban area of the city of Cluj-Napoca, *Proceedings ENUPA workshop*, October 23-24, 2003, Gargnano, Italy.
25. Blaschke, T. and **Drăguţ, L.,** 2003. Integration of GIS and object-based image analysis to model and visualize landscapes, ISPRS workshop "Challenges in Geospatial Analysis, Integration and Visualization II", September 8- 9, 2003, Stuttgart, Germany, 18-23.
26. Urdea, P., **Drăguţ, L.** (2000), *New data concerning the glacial and periglacial landforms in the Şureanu Mountains*, in Abstracts Book "The XVIIIth Symposium of Geomorphology", Sighetu Marmaţiei, 28-30 September 2000.

27. Surd, V., Vrabete, Mihaela, Zotic, V., Mureşan, Alina, **Drăguţ, L.** (1997), *Spaţiul şi acţiunile violente asupra sa. Cazul teritoriului administrativ al municipiului Cluj-Napoca*, in Abstract Book "Geography within the Context of Contemporary Development, Cluj-Napoca, 6-7 June 1997.

28. **Drăguţ, L.** (1996), *Consideraţii asupra reliefului climatic din Munţii Şureanului*, în vol. "Cercetări în spaţiul carpato-danubian", Timişoara, p. 99-106.

29. **Drăguţ, L.** (1994), *Aspecte ale reliefului carstic din Munţii Şureanului*, Noosfera, "Geografia în anul 300 al Universităţii Bucureşti", p. 55-56.

INVITED LECTURES

1. **Drăguţ, L.,** *Object-oriented geomorphometry*. Keynote lecture, International Conference Geomorphometry 2015, Poznan, Polonia, June 22-26, 2015.
2. **Drăguţ, L.,** *Land-surface segmentation: progress and further challenges towards objective geomorphological mapping.* Keynote lecture, IAG/AIG International Workshop on "Objective Geomorphological Representation Models: Breaking through a New Geomorphological Mapping Frontier", Salerno, Italy, October 15-19, 2012.
3. **Drăguţ, L.,** *Scale and pattern in quantification of landscape structure*. Keynote lecture, International Conference „Environment – Landscape – European Identity", Bucharest, Romania, November 4-6, 2011.
4. **Drăguţ, L.,** *Digital Elevation Models in Landscape Ecology*. Invited lecture and hands-on sessions, GISLERS Summer School 2011 on "Bridging GIS, Landscape Ecology and Remote Sensing for Landscape Planning", Salzburg, Austria, July 2011.
5. **Drăguţ, L.,** *Digital Elevation Models in Landscape Ecology*. Invited lecture and hands-on sessions, GISLERS Summer School 2010 on "Bridging GIS, Landscape Ecology and Remote Sensing for Landscape Planning", Salzburg, Austria, July 2010.
6. **Drăguţ, L.,** *Is there any secret in writing a successful Marie Curie proposal?* Invited lecture, Training 4: PEOPLE: Marie-Curie-Förderungen im RP7, Salzburg, Austria, October 15, 2009.
7. **Drăguţ, L.,** *Digital Elevation Models in Landscape Ecology*. Invited lecture and hands-on sessions, GISLERS Summer School 2009 on "Bridging GIS, Landscape Ecology and Remote Sensing for Landscape Planning", Salzburg, Austria, July 2009.
8. **Drăguţ, L.** and Blaschke, T., *3D landscape units for analysis of landscape structure*. Keynote lecture, IALE Polish Chapter Conference "Methodology of Landscape Research", Krynica, Poland, March 2008.
9. **Drăguţ, L.,** *Landscape assessment using GIS.* Invited lecture, the 1st Firtos Summer School, Inlăceni, Romania, August 2007.
10. **Drăguţ, L.,** *Classification of Landform Elements Using Object-based Image Analysis*. Public lecture, University of Arkansas, USA, March 2006.
11. **Drăguţ, L.,** *Spatial Patterns in Landscape Ecology: From 2D to 3D Approach*. Occasional Lecturer Program (OLP), University of California, Davis, USA, January 2006.
12. **Drăguţ, L.,** *Landscape units for deriving landscape indicators*. Invited lecture, JRC-AgriEnv, Ispra, Italy, May 2005.

13. **Drăguţ, L.,** *Automated Classification of Landform Elements using Object-based Image Analysis*. Invited lecture, UNIGIS Summer School in Digital Terrain Modeling, Salzburg, Austria, September 2004.

Presentations (partial listing; presenter in **bold)**

1. **Vernica, M.M**., Hegyi, A., Drăguţ, L.D., 2018. Automatic identification and delineation of archaeological magnetic anomalies using object-based image analysis, GEOBIA 2018-From pixels to ecosystems and global sustainability.
2. **Sirbu, F**., Dragut, L., Oguchi, T., Hayakawa, Y., 2018. The influence of data scaling in modelling landslide scarps, EGU General Assembly Conference Abstracts, pp. 7894.
3. **Drăguţ, L.** and Eisank, C., 2010. Hierarchical mapping of landforms from Digital Elevation Models (DEMs). XIX Congress of the Carpathian-Balkan Geological Association, Thessaloniki, Greece, 23-26 September 2010.
4. **Drăguţ, L.**, Tiede, D. and Levick, S., 2010. ESP: a tool to estimate scale parameters for multiresolution image segmentation of remotely sensed data. GEOBIA 2010, Ghent, Belgium, 29 June-02 July 2010.
5. **Drăguţ, L**. and Eisank, C., 2010. Multi-scale object representation for mapping landforms from Digital Elevation Models (DEMs). 14th Joint Geomorphological Meeting (JGM), Bucharest-Sinaia, Romania, May 2010.
6. **Drăguţ, L**., Eisank, C. and Strasser, T., 2009. Cells vs. objects and scale issues in terrain-based environmental modeling. Poster. International Cartography Conference 2009, Santiago, Chile, November 2009.
7. **Drăguţ, L**., Eisank, C., Strasser, T. and Blaschke, T., 2009. A comparison of methods to incorporate scale in geomorphometry. Geomorphometry2009, Zurich, Switzerland, September 2009.
8. **Eisank, C**. and **Drăguţ, L**., 2009. Multi-scale analysis of slope gradient using local variance graphs. Poster. GI Forum Salzburg, Austria, July, 2009.
9. **Drăguţ, L**., Strasser, T. and Eisank, C., 2009. Incorporating scale into digital terrain analysis. Poster. European Geosciences Union General Assembly 2009, Vienna, Austria, April 2009.
10. **Drăguţ, L.**, Blaschke, T., Eisank, C. and Strasser, T., 2009. Scale issues in landscape representation from Digital Elevation Models. The 1st International symposium of geography "Landscapes: perception, understanding, awareness and action", Bucharest, Romania, April 2009.
11. **Drăguţ, L.** and Blaschke, T., *Landform classification in the Hochkalter area, National Park Berchtesgaden, Germany*. GI Forum, Salzburg, Austria, July, 2007.
12. **Drăguţ, L.** and Blaschke, T., *Towards integrating terrain information into landscape classification*. Landscape classification: theory and practice, Warsaw, Poland, June 2007.
13. **Drăguţ, L.** and Blaschke, T., *Landform classification in the Hochkalter area, National Park Berchtesgaden, Germany*. Poster. International Symposium "Landform – structure, evolution, process control", Bonn, Germany, June 2007.
14. Flügel, W. A., Bongartz, K., Janauer, G., **Drăguţ, L**., Zeil, P., Kienberger, S., *Comparative analysis of climate change impacts in the Yarlung Tsangpo (Upper Brahmaputra) and Upper Danube river basins – the BRAHMATWINN Project*. European Geosciences Union General Assembly 2007, Vienna, Austria, April 2007.

15. **Drăguţ, L.** and Kienberger, S., *Daily Interpolation of Temperature and Precipitation Data for 20 years in Europe and Asia*. Geostatistics course and workshop "Merging GIS and Spatial Statistics", Naples, Italy, February 2007.
16. **Drăguţ, L.**, Klug, H. and Schöpfer, E., *Brahmatwinn-Physical modelling*. Brahmatwinn WP4 Stakeholder Meeting, Salzburg, Austria, December 2006.
17. **Drăguţ, L.** and Blaschke, T., *Landform classification using SRTM data and object-based image analysis*. TADTM Conference, Nanjing, China, November 2006.
18. **Drăguţ, L.** and Blaschke, T., *Geomorphometry and object-based image analysis for delineating complex landscape units*. Environment&Progress, Cluj-Napoca, Romania, October 2006.
19. **Drăguţ, L.** and Blaschke, T., *CLUE - Complex Landscape Units for Environmental assessment and modelling*. Poster. 9th International Symposium on High Mountain Remote Sensing Cartography (HMRSC-IX), Graz, Austria, September 2006.
20. Luscier, J.D, Thompson, W.L, Wilson, J.M, Gorham, B.E. and **Drăguţ, L.D.,** *Using digital photographs and object - based image analysis to estimate percent ground cover in vegetation plots.* Poster. 1st International Conference on Object-based Image Analysis, Salzburg, Austria, July 2006.
21. **Drăguţ, L**., Schreiber, E.W., Muntean, O.L. and Man, T., *Landscape Consequences of Demographic Change in the Transylvanian Plain (Romania)*. NATO/CCMS Pilot Study Meeting "Linkages among Landscape Assessment, Quality of Life and Environmental Security", Lecce, Italy, September 2004.
22. **Drăguţ, L.**, *Glimpses of the Romanian Planning System*, Institutul de Ştiinţe Aplicate din Nürtingen, aprilie 2004, în cadrul programului ERASMUS.
23. V. Cristea, **L. Drăguţ,** C. Baciu, D. Gafta, *A multidisciplinary approach to the sustainable development of the peri-urban area of Cluj-Napoca city*, ENUPA workshop, Gargnano (Italia), 23-24 octombrie 2003.
24. **Drăguţ, L**., *Landscape units as basis for landscape delineation and evaluation*, Prezentare în cadrul seminarului de cercetare „Landscape Analysis & Geoinformatics", Salzburg, 10 ianuarie 2003.
25. Muntean, L., **Drăguţ, L**., Baciu, N, *GIS Approaches for Environmental Assessment (A Case Study : Copsa Mica Area, Romania),* NATO/CCMS workshop, Debe (Polonia), 1-3 septembrie, 2003.
26. Blaschke, T., **Drăguţ, L.**, *Integration of GIS and object-based image analysis to model and visualize landscapes*, ISPRS workshop "Challenges in Geospatial Analysis, Integration and Visualization II", September 8- 9, 2003, Stuttgart, Germany.
27. **Drăguţ, L.,** Man, T., *Surse de date (modele digitale de elevatie si imagini satelitare) pentru aplicatii in geografie: achizitie, probleme tehnice si posibile utilizari*, Simpozionul GD, Cluj-Napoca, 11-14 septembrie, 2003.
28. **Drăguţ, L.,** *Automated classification of landform elements using object-based image analysis*, Universitatea Liberă din Bruxelles, decembrie 2003, în cadrul programului ERASMUS.
29. **Drăguţ, L.,** *Landscape analysis*, Universitatea din Leipzig, mai 2002, în cadrul programului ERASMUS.