

Scientific contributions - dr. Andrei Dornik

Research articles in ISI journals

1. **Dornik, A.**, Drăguț, L., Urdea, P., 2018, Classification of Soil Types Using Geographic Object-Based Image Analysis and Random Forest, *Pedosphere* (IF 2017 - 2.43), **28:6**, 913-925, [https://doi.org/10.1016/S1002-0160\(17\)60377-1](https://doi.org/10.1016/S1002-0160(17)60377-1)
2. Chețan, M., A., **Dornik, A.**, Urdea, P., 2018, Analysis of recent changes in natural habitat types in the Apuseni Mountains (Romania), using multi-temporal Landsat satellite imagery (1986–2015), *Applied Geography* (IF 2017 - 3.117), **97**, 161-175, <https://doi.org/10.1016/j.apgeog.2018.06.007>.
3. **Dornik, A.**, Drăguț, L., Urdea, P., 2016, Knowledge-based soil type classification using terrain segmentation, *Soil Research* (IF 2016 - 1.606), **54:7**, 809-823, **DOI:** 10.1071/SR15210.
4. Drăguț, L., **Dornik, A.**, 2016, Land-surface segmentation as a method to create strata for spatial sampling and its potential for digital soil mapping, *International Journal of Geographical Information Science* (IF 2016 - 2.502), **30:7**, 1359-1376, **DOI:** 10.1080/13658816.2015.1131828.

Books

1. **Dornik, A.**, 2017, Analiza geografică orientată-obiect pentru cartografierea digitală a solurilor în sud-vestul României, *Editura Universității de Vest*, ISBN: 978-973-125-566-8, 214 p.

Research articles in BDI journals

1. Chețan, M., A., **Dornik, A.**, Urdea, P., 2017, Comparison of Object and Pixel-based Land Cover Classification through three Supervised Methods, *ZfV - Zeitschrift für Geodäsie, Geoinformation und Landmanagement*, 142(5):265, **DOI:** 10.12902/zfv-0165-2017

Published contributions at international scientific conferences

1. Drăguț, L., **Dornik, A.**, 2013, Evaluation of land-surface segmentation as support for soil sampling, *Extended abstract, Geomorphometry Conference*, Nanjing, China.

Contributions at international scientific conferences

1. **Dornik A.**, Chețan M., Drăguț L., Cacovean H., 2019, A geographic information system for assessing the suitability of Romanian land to crops and land use, *United Nations/Romania International Conference on Space Solutions for Sustainable Agriculture and Precision Farming*, Cluj-Napoca, Romania, 06-10 May

2. Ion, C.M., **Dornik A.**, Pârvulescu L, 2018, Are Soil Properties Good Predictors in Distribution Modelling for Three European Crayfish?, *International Association of Astacology (IAA) 22th Symposium*, Pittsburgh, USA, 9-13 July
3. **Dornik A.**, Chețan, M.A., 2018, Soil type mapping using geographic object-based image analysis, *Soil Classification and Education Conference*, Toruń, Poland, 18-20 May
4. Keshavarzi A., **Dornik A.**, Bottega E. L., Rodrigo-Comino J., 2018, Comparison of Statistical and Geostatistical Methods to Assess the Soil Pollution in Iran: A Critical Review, 4th International Conference on Environmental Engineering, May 2018, Teheran, Iran.
5. Chețan, M.A., **Dornik, A.**, 2017, Recent changes of habitat types in the Natura 2000 site Apuseni-Vlădeasa Mountains, *3rd Workshop on Geoinformatics, 19th International Symposium on Symbolic and Numeric Algorithms for Scientific Computing (SYNASC 2017)*, September 21 – 24, Timisoara, Romania.
6. **Dornik, A.**, 2016, A new methodology for digital soil mapping using geographic object-based image analysis and Random Forests, *European Society for Soil Conservation Conference “Soil - Our Common Future”*, June 15-18, Cluj-Napoca, Romania.
7. **Dornik, A.**, 2015, A comparison of pixel-based and geographic object-based image analysis for the classification of soil types, *1st Workshop on Geoinformatics in the framework of SYNASC 2015, 17th International Symposium on Symbolic and Numeric Algorithms for Scientific Computing*, September 21 – 24, 2015, Timisoara, Romania.
8. **Dornik, A.**, 2015, Object based image analysis and data-driven techniques for soil type mapping, *Methodological challenges in Geography, International Conference of Geography*, 15-16 May 2015, Timisoara, Romania.
9. **Dornik, A.**, Drăguț, L., Urdea, P., 2014, An object-oriented methodology based on expert-knowledge for soil type prediction, *1st Workshop on GIS and Hydrologic Modeling in the framework of 16th International Symposium on Symbolic and Numeric Algorithms for Scientific Computing*, 22-25 September 2014, Timisoara, Romania.
10. Drăguț, L., **Dornik, A.**, 2013, Land-Surface Segmentation as sampling framework for soil mapping, *Geomorphometry 2013 Conference*, October 16-20, 2013, Nanjing, China.
11. Drăguț, L., Csillik, O., Ardelean, F., **Dornik, A.**, 2012, Partitioning a DEM into fundamental surface elements with land-surface segmentation, IAG/AIG International Workshop on “*Objective Geomorphological Representation Models: Breaking through a New Geomorphological Mapping Frontier*”, Salerno, Italia, 15 – 19 octombrie 2012.
12. Drăguț, L., Csillik, O., **Dornik, A.**, Ardelean, F., Zisu, I., 2012, Fundamental surface elements on digital elevation models, 2nd Forum Carpaticum “*From data to knowledge, from knowledge to action*”, Stara Lesna, Slovacia, 30 mai – 2 iunie 2012.

13. Drăguț, L., Csillik, O., Zisu, I., **Dornik, A.**, Ardelean, F., 2012, Fundamental surface elements on digital elevation models, GIS Ostrava 2012 „*Surface models for geosciences*”, Ostrava, Cehia, 23 – 25 ianuarie 2012.
14. Zisu, I., **Dornik, A.**, 2014, Lugoj Hills agricultural land quality and its current utilization, *International Conference, Academic Geography of Timisoara at the 55th Anniversary*, 16-17 May 2014.

Contributions at national scientific conferences

1. Drăguț, L., **Dornik, A.**, Zisu, I., 2012, Comparație între performanțele analizelor bazate pe celule și pe obiecte, pentru optimizarea procesului de eșantionare, în scopul predicției texturii solului, a-XX-a Conferință Națională de Știința Solului „*Starea de calitate a resurselor de sol și protecția mediului în oltenia*”, Craiova, România, 26 august – 1 septembrie 2012.
2. Drăguț, L., Ardelean, F., Csillik, O., **Dornik, A.**, Zisu, I., 2012, Elemente fundamentale ale suprafețelor Modelelor Digitale de Elevație, Simpozionul Național de Geomorfologie, Bara, România, 14 – 17 iunie 2012.

Projects and grants

1. *Postdoctoral researcher*, 2019, Project: **Semi-automated object-oriented landslide mapping**, CNCS – UEFISCDI, PN-III-P4-ID-PCE-2016-0222.
2. *Cartographer*, 2016, Project: **Strategia de dezvoltare a orașului Jimbolia**.
3. *Research Assistant*, 2011-2012, Project: **Fundamental surface elements on digital elevation models**, National Research Council PN-II-ID-PCE-2011-3-0499.