

List of publications

ISI articles

- Onaca, A., **Ardelean, F.**, Urdea, P., Magori, B., 2017, Southern Carpathian rock glaciers: Inventory, distribution and environmental controlling factors. *Geomorphology*, 293B, 391-404, doi.org/10.1016/j.geomorph.2016.03.032.
- Onaca, A., Ardelean, A.C., Urdea, P., **Ardelean, F.**, Sărășan, A., 2016, Genetic typologies of talus deposits derived from GPR measurements in the alpine environment of Făgăraș Mountains. *Carpathian Journal of Earth and Environmental Sciences*, in press.
- Chiroiu, P., Ardelean, A., Onaca, A., Voiculescu, M., **Ardelean, F.**, 2016, Assessing the anthropogenic impact on geomorphic processes using tree-rings: a case study in the Făgăraș Mountains (Romanian Carpathians). *Carpathian Journal of Earth and Environmental Sciences*, 11, 1, 27-36.
- Onaca, A., Ardelean, A. C., Urdea, P., **Ardelean, F.**, Sîrbu, F. 2015, Detection of mountain permafrost by combining conventional geophysical methods and thermal monitoring in the Retezat Mountains, Romania. *Cold Regions Science and Technology*, 119, 111-123 [doi:10.1016/j.coldregions.2015.08.001](https://doi.org/10.1016/j.coldregions.2015.08.001).
- **Ardelean, F.**, Drăguț, L., Urdea, P., Török-Oance, M., 2013, Variations in landform definition: a quantitative assessment of differences between five maps of glacial cirques in the Țarcu Mountains (Southern Carpathians, Romania), *Area* 45 (3), 348-357; [doi: 10.1111/area.12043](https://doi.org/10.1111/area.12043)
- Török-Oance, M., **Ardelean, F.**, 2012, Object-oriented image analysis for detection of the barren karst areas. a case study: the central sector of the Mehedinți Mountains (Southern Carpathians), *Carpathian Journal of Earth and Environmental Sciences*, 7 (2): 249-254
- Voiculescu, M., **Ardelean F.**, 2012, Snow avalanche disturbance of high mountain environment. Case study: the Doamnei glacial valley, Făgăraș Massif, Southern Carpathians, Romanian Carpathians, *Carpathian Journal of Earth and Environmental Sciences*, 7 (1): 95-108
- Voiculescu, M., **Ardelean, F.**, Onaca, A., Török-Oance, M., 2011, Analysis of snow avalanche potential in Bălea glacial area - Făgăraș massif, (Southern Carpathians - Romanian Carpathians), *Zeitschrift für Geomorphologie*, Stuttgart, 55 (3): 291-316, [doi:10.1127/0372-8854/2011/0054](https://doi.org/10.1127/0372-8854/2011/0054).

ISI Proceedings

- Hamar, J.B., Salberg, A. B., **Ardelean, F.**, Automated detection and mapping of avalanches in SAR images, 2016 IEEE International Geoscience and Remote Sensing Symposium (IGARSS), 689-692.
- Török-Oance, M., **Ardelean, F.**, Voiculescu, M., Urdea, P., Onaca, A. L., 2011, Object-Based Terrain Classification as Tool for Improving the Quality of the Digital Geomorphological Maps: a Case Study in Retezat - Godeanu Range (Southern Carpathians), *Annals of DAAAM for 2011 & Proceedings of the 22nd International DAAAM Symposium*, Published by DAAAM International, Vienna, Austria, 0865-0866
- Onaca, A., Urdea, P., Török-Oance, M., **Ardelean, F.**, 2011, Electrical resistivity measurements in sensitive periglacial environment from Southern Carpathians (Romania), *Annals of DAAM for 2011 & Proceedings of the 22nd International DAAM Symposium*, 21, 1, Viena, 885-886
- Török-Oance, M., **Ardelean, F.**, Onaca, A. L., Voiculescu, M., Urdea, P., 2010, The Evaluation of Different Types of Digital Elevation Models for Geomorphological Applications in Mountain Areas, *Annals of DAAAM for 2010 & Proceedings of the 21st International DAAAM Symposium*, 20-23rd October 2010, Zadar, Croatia, ISSN 1726-9679, ISBN 978-3-901509-73-5, Katalinic, B. (Ed.), 1413-1414, Published by DAAAM International Vienna.

Articles in refereed journals

- Voiculescu, M., **Ardelean, F.**, Török-Oance, M., Milian, N., 2016, Topographical factors, meteorological variables and human factors in the control of the main snow avalanche events in the Făgăraș Massif (Southern Carpathians - Romanian Carpathians): Case studies, *Geographica Polonica*, 89:1, 47-64, <http://dx.doi.org/10.7163/GPol.0045>

- **Ardelean, F.**, Török-Oance, M., Voiculescu, M., 2015, Snow avalanche tracks mapping in Bâlea glacial valley (Făgăraș Mountains) using semi-automated detection methods, *Forum geografic*, XIV (2),
- Katona, O., Sipos, G., Onaca, A., **Ardelean F.**, 2012, Reconstruction of palaeo-hydrology and fluvial architecture at the Orosháza palaeo-channel of river Maros, Hungary, *Journal of Environmental Geography*, 5 (1–2): 29–38
- **Ardelean, F.**, Török-Oance, M., Urdea, P. and Onaca, A., 2011, Application of object based image analysis for glacial cirques detection. Case study: the Țarcu Mountains (Southern Carpathians), *Forum geografic, S.C.G.P.M.*, 10(1): 20-26, [doi:10.5775/fg.2067-4635.2011.007.i](https://doi.org/10.5775/fg.2067-4635.2011.007.i)
- Voiculescu, M., Onaca, A., Milian, N., **Ardelean, F.**, Török-Oance, M., Stăncescu, M., 2010, Analysis of Snow Avalanche from Mars, 07, 2007 within the Călțun-Negoiu Area, in the Făgăraș Massif (Southern Carpathians), *Analele Universității din Oradea – Seria Geografie*, XX, 1, 22-33
- Török-Oance, M., **Ardelean, F.**, Onaca, A., 2009, The semiautomated identification of the planation surfaces on the basis of the digital terrain model. Case study: The Mehedinți Mountains (Southern Carpathians), *Forum Geografic. Studii și cercetări de geografie și protecția mediului*, 8: 5-13.

Book chapters

- Török-Oance, M., **Ardelean, F.**, Voiculescu, M., Salberg, A.B., Milian, N., 2017, *Snow avalanche inventory and hazard assessment in Fagaras Mountains, Southern Carpathians* (chapter 7), in Stăncălie, G. (Ed.), Remote sensing, model and in-situ data fusion for snow-pack parameters and related hazards in a climate change perspective, Ed. Printech, Bucuresti, 147-161.
- Salberg, A.B., **Ardelean, F.**, Török-Oance, 2017, *Avalanche detection in remote sensing images* (chapter 6), in Stăncălie, G. (Ed.), Remote sensing, model and in-situ data fusion for snow-pack parameters and related hazards in a climate change perspective, Ed. Printech, Bucuresti, 135-146.
- Onaca, A., Urdea, P., Ardelean, A.C., Șerban, R., **Ardelean, F.**, 2017, Present-day periglacial processes in the alpine zone (chapter 7), in Rădoane, M. & Vespremeanu-Stroe, A. (editors), *Landform dynamics and evolution in Romania*, Springer, 147-176.
- Urdea, P., Onaca, A., **Ardelean F.**, Ardelean, M., 2011, New Evidence on the Quaternary Glaciation on the Romanian Carpathians (Chapter 24) în *Developments in Quaternary Science*, vol. 15 (Quaternary Glaciations - Extent and Chronology), ed.: J. Ehlers, P.L. Gibbard, P.D. Hughes, Elsevier, 305-323, [doi:10.1016/B978-0-444-53447-7.00024-6](https://doi.org/10.1016/B978-0-444-53447-7.00024-6);
- Kiss, T., Urdea, P., Sipos, G., Sümeghy, B., Katona, O., Tóth, O., Onaca, A., **Ardelean, F.**, Timofte, F., Ardelean, C., 2012, *The past of the river in Past, Present, Future of the Maros/Mureș River*, Editura Universității de Vest din Timișoara, 33-64 / 167-178
- Sipos, G., Právetz, T., Katona, O., **Ardelean, F.**, Timofte, F., Onaca, A., Kiss, T., Kovács, F., Tobak, Z., 2012, *The ever changing river in Past, Present, Future of the Maros/Mureș River*, Editura Universității de Vest din Timișoara, 65-106 / 179-192

International conferences

- Török-Oance, M., **Ardelean, F.**, Potential of operational Sentinel-2 images for middle and small size snow avalanches detection, *19th International Symposium on Symbolic and Numerical Algorithms for Scientific Computing – SYNASC*, Timișoara, 21-24.09.2017
- Voiculescu, M., **Ardelean, F.**, Török-Oance, M., New findings related to snow avalanches and related hazard in Southern Carpathians. Case study: Făgăraș Mts., *Romanian Geomorphology Symposium*, 33rd Edition, Iași, 11-14.05.2017
- Salberg, A.B., Hamar, J.B., **Ardelean, F.**, Török-Oance, M., Avalanche detection in very high resolution optical satellite images, *Final Workshop on Remote sensing, model and in-situ data fusion for snowpack parameters and related hazards in a climate change perspective– SnowBall*, 27-28.04.2017, Bucharest, Romania.
- Salberg, A.B., Reksten, J.H., **Ardelean, F.**, Change-detection based mapping of avalanches in Sentinel-1 images, *Final Workshop on Remote sensing, model and in-situ data fusion for snowpack parameters and related hazards in a climate change perspective– SnowBall*, 27-28.04.2017, Bucharest, Romania.

- Török-Oance, M., **Ardelean, F.**, Voiculescu, M., Milian, N., Salberg, A.B., Snow avalanche inventory and hazard assessment in Fagaras Mountains, *Final Workshop on Remote sensing, model and in-situ data fusion for snowpack parameters and related hazards in a climate change perspective– SnowBall*, 27-28.04.2017, Bucharest, Romania.
- **Ardelean, F.**, Török-Oance, M., Salberg, A.B., Voiculescu, M., Milian, N., Irimescu, A., Numerical simulation of documented snow avalanche events in Făgăraș Mountains, *18th International Symposium on Symbolic and Numerical Algorithms for Scientific Computing – SYNASC*, Timișoara, 24-27.09.2016.
- Török-Oance, M., Irimescu, A., Milian, N., Diamandi, A., **Ardelean, F.**, Voiculescu, M., Snow avalanche hazard assessment in Făgăraș Mountains, Southern Carpathians, *18th International Symposium on Symbolic and Numerical Algorithms for Scientific Computing – SYNASC*, Timișoara, 24-27.09.2016.
- Salberg, A.B., Hamar, J.B., **Ardelean, F.**, Johansen, T., Kampffmeyer, M., Automatic detection and segmentation of avalanches in remote sensing images using deep convolutional neural networks, *18th International Symposium on Symbolic and Numerical Algorithms for Scientific Computing – SYNASC*, Timișoara, 24-27.09.2016.
- Hamar, J.B., Salberg, A. B., **Ardelean, F.**, Automated detection and mapping of avalanches in SAR images, *IEEE International Geoscience and Remote Sensing Symposium (IGARSS)*, Beijing, China, 10-15.07.2016.
- Török-Oance, M., **Ardelean, F.**, Voiculescu, M., Milian, N., A First Snow Avalanche Inventory In The Romanian Carpathians Based On Very High-Resolution Satellite Images, *36th EARSEL Symposium: Frontiers in Earth Observation*, Bonn, Germania, 20-24.06.2016
- **Ardelean, F.**, Török-Oance, M., Voiculescu, M., Milian, N., *Snow avalanche inventory based on remote sensing. A case study from Făgăraș Mountains*, Conferința internațională „Perspectives of geographical approach on territorial development: Theories, methods and practices”, 13-14.05.2016, Timișoara
- Voiculescu, Mircea, **Ardelean, F.**, Chiroiu, Patrick, Onaca, Alexandru, Spatio-temporal reconstruction of snow-avalanche activity using dendrogeomorphologic approach in Capra glacial valley - Făgăraș Mountains (Southern Carpathians), Romanian Carpathians, *Fifth EUGEO Congress on the Geography of Europe*, Budapest, Hungary, 30.08-02.09.2015
- **Ardelean, F.**, Török-Oance, M., Voiculescu, M., *Snow avalanche tracks detection using high resolution DEM and object based terrain analysis in Făgăraș Mountains, Romania*, Conferința internațională GEOBALCANICA, Skopje, Macedonia, 5-7.06.2015
- **Ardelean, F.**, Török-Oance, M., Voiculescu, M., *An alternative solution for avalanche tracks mapping using semi-automated methods. A case study from Făgăraș Mountains*, Conferința internațională „Methodological challenges in geography”, 15-16.05.2015, Timișoara
- Onaca, A., Ardelean, A., Urdea, P., **Ardelean, F.**, Investigations regarding the internal structure of rock glaciers and alpine talus slopes from Southern Carpathians assessed by Ground-Penetrating Radar (GPR) *Conferința internațională EUCOP4, 4th European Conference on Permafrost*, Evora, Portugal, 18–21.06.2014
- **Ardelean, F.**, Drăguț, L., Török-Oance, M., Urdea, P., *Towards an objective mapping of glacial cirques. A case study from Țarcu Mountains, Southern Carpathians*, Conferința internațională „Academic geography of Timișoara at the 55th anniversary”, Timișoara, 16-17.05.2014
- Urdea, P., Onaca, A., **Ardelean, F.**, Puțan, R., Geophysical investigations in the periglacial belt of the central area of Făgăraș Mountains, *Carpatho-Balkan-Dinaric Conference on Geomorphology*, Stara Lesna, Tatranska Lomnica, 24-28.06.2013
- Katona, O., Sipos, G., Onaca, A., **Ardelean, F.**, Reconstruction of palaeo-hydrology and fluvial architecture at the Orosháza palaeo-channel of river Maros River, Hungary, *Carpatho-Balkan-Dinaric Conference on Geomorphology*, Stara Lesna, Tatranska Lomnica, 24-28.06.2013
- Právetz, T., Sipos, G., Katona, O., Kiss, T., Urdea, P., **Ardelean, F.**, Onaca, A., Investigation of bed sediment household on the lowland section of River Maros, Romania-Hungary, *Carpatho-Balkan-Dinaric Conference on Geomorphology*, Stara Lesna, Tatranska Lomnica, 24-28.06.2013

- Drăguț, L., Csillik, O., Dornik, A., Zisu, I., **Ardelean, F.**, Fundamental surface elements on digital elevation models, GIS Ostrava, *Surface models for geosciences*, Ostrava, Cehia, 23-25.01. 2012
- **Ardelean, F.**, Török-Oance, M., Drăguț, L., Object-based detection of planation surfaces from Digital Elevation Models. Case study Țarcu Mountains, Southern Carpathians, Romania, *Forum Carpathicum-From data to knowledge, from knowledge to action*, Stara Lesna, Slovacia, 30.05 - 02.06. 2012
- Urdea, P., Onaca, A., **Ardelean, F.**, Ardelean, M., Török-Oance M., Aspects of the Thermal Regime on the Periglacial Belt of Southern Carpathians (Romania), TICOP, *Tenth. Intern. Conf. on Permafrost*, Salekhard, 25-29.06.2012
- **Ardelean, F.**, Drăguț, L., Urdea, P., Török-Oance, M., What is a glacial cirque on a map? Preliminary results on differences in mapping glacial cirques, *IAG/AIG International Workshop on "Objective Geomorphological Representation Models: Breaking through a New Geomorphological Mapping Frontier"*, Salerno, Italia, 15-19.10. 2012
- Drăguț, L., Csillik, O., **Ardelean, F.**, Dornik, A., 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, 15-19.10.2012
- **Ardelean, F.**, Török-Oance, M., Drăguț, L., Object-based detection of planation surfaces from Digital Elevation Models. Case study Țarcu Mountains, Southern Carpathians, Romania, *Forum Carpathicum-From data to knowledge, from knowledge to action*, Stara Lesna, Slovacia, 30.05-02.06.2012
- Drăguț, L., Csillik, O., Dornik, A., Zisu, I., **Ardelean, F.**, Fundamental surface elements on digital elevation models, GIS Ostrava – *Surface models for geosciences*, Ostrava, Cehia, 23-25.01.2012
- Urdea, P., **Ardelean, F.**, Onaca, A., Ardelean, M., Török-Oance, M., Geomorphological and geophysical investigations on earth hummocks and fossil patterned ground of Țarcu Mountains (Romania), *Second Symposium on Mountain and Arid land Permafrost*, [Institute of Geography, Mongolian Academy of Science](#), Ulaanbaatar, Mongolia, 22 – 26.08.2011
- Török-Oance, M., **Ardelean, F.**, Onaca, A., Object-oriented image analysis for Geomorphological mapping of the karst landforms. An exploratory case study: The Mehedinți Mountains (Southern Carpathians, Romania), *Carpatho-Balkan-Dinaric conference of Geomorphology*, Ostravice, Cehia, 17-20.10. 2011
- **Ardelean, F.**, Landforms detection using DEMs and remote sensing imagery. Case study: alpine level of Țarcu Mountains (Southern Carpathians), *The first Romanian-Bulgarian-Hungarian-Serbian Conference, "Geographical Research and Cross-Border Cooperation within the lower Basin of the Danube"*, Craiova, 23–26.09.2010
- Urdea, P., **Ardelean, F.**, Onaca, A., Ardelean, M., Török-Oance, M., Geomorphological mapping of some periglacial landforms from Southern Carpathians, Romania, *EUCOP III, The University Center in Svalbard, Longyearbyen*, 13-17.06. 2010
- Török-Oance, M., Török-Oance, R., Onaca, A., **Ardelean, F.**, Voiculescu, M. Recent changes of the timberline and treeline in the Southern Carpathians (Romania), *Global Change and the World's Mountains*, Perth, Marea Britanie, 26-30.09.2010
- Urdea, P., Onaca, A., **Ardelean, F.**, Ardelean, M., DC resistivity investigations in glacial deposits of Transylvanian Alps (Romania), *BSG Annual Meeting 2009*, Durham University (UK), 6-10.09.2009.

Member in Research projects

- European cooperation project SEE Romania-Norway EEA-JRP-RO-NO-2013-1-0285, **Remote sensing, model and in-situ data fusion for snowpack parameters and related hazards in a climate change perspective** (SnowBall), project coordinator: dr. Gheorghe Stancalie, National Meteorological Administration, 2014-2017
- HURO Grant, cross-border cooperation project Romania-Hungary, **Development of complex Geocronological and Geophysical laboratories for saving Archaeological heritage and solving environmental problems (EnviArch)** HURO/1101/126/2.2.1, project coordinator: dr. Sipos György, University of Szeged, 2011-2014

- HURO Grant, cross-border cooperation project Romania-Hungary, **Research of past, present and FUTUre Lower MARos / Mures River in relation with climatic change and sustainable management, FUTUMAR** HURO/0901/266/2.2.2, project coordinator: dr. Sipos Gyorgy, University of Szeged, 2011-2012
- IPA grant, cross-border cooperation project Romania-Serbia, **Cross-border network for advanced training and research in environmental protection RosNet**, project coordinator: dr. Adriana Isvoran, West University of Timișoara, 2011-2012
- National Research Council project, **FuSE-DEM Fundamental surface elements on Digital Elevation Models**, project coordinator: dr. Lucian Drăguț, West University of Timișoara, 2011-2012
- CNCSIS National Research Council Grant, **Methods for digital terrain analysis and automatic classification of the relief in the mountain area based on digital terrain models and remote-sensed data**, project coordinator: dr. Marcel Török-Oance, West University of Timișoara, 2008-2011
- CNCSIS National Research Council Grant, **Complex method to generate the digital geomorphological map of Romania using GIS/Remote sensing techniques, GEOMORF**, project coordinator: dr.ing. Alexandru Badea, Romania Space Agency, 2008-2011
- Research, developing and consultance contract, **Development of the Timis County GIS geodatabase for the protected areas, hazard phenomena, historical landscape, potential for tourism activities and natural resources** 8780/2008, S.C. GEOTOP S.R.L. Odorheiu Secuiesc, project coordinator: dr. Marcel Török-Oance, West University of Timișoara, 2008-2011
- CEEX, National Research Council Grant, **The impact of climatic changes upon the Holocen and present dynamics of the alpine environment from the Romanian Carpathians. Implications in the risk management and landscape`s management**, project coordinator: dr. Petru Urdea, West University of Timișoara, 2006 – 2008

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