

## Analysis and Forecasting of Romania Seismicity (AFROS) Project: Meeting presentations and scientific papers

Updated: 2022/12/07

### *Presentations at scientific meetings:*

#### **2021**

Dinescu, R., Ivan, M., Munteanu, I., Radulian, M. (2021). Seismic discrimination of anthropic and tectonic events in the Targu-Jiu quarry area (Romania), ESC 2021, online, (poster presentation).

Dinescu R., Ghica D., Popa M., Munteanu I., Radulian M. (2021). Discrimination between tectonic and anthropic events in Targu-Jiu quarry region (Romania), 11th Congress of the Balkan Geophysical Society, 2021 (oral presentation).

Enescu, B. and Takeda, Y. (2021). Systematic Investigation of Dynamic Earthquake Triggering in Japan, *EGU General Assembly 2021*, 19–30 Apr 2021, EGU21-2548, <https://doi.org/10.5194/egusphere-egu21-2548> (online meeting).

Enescu, B., Takeda, T., and Miyazawa, M. (2021). Dynamic Triggering of Earthquakes in Volcanic and Geothermal Areas Before and After the 2011 M9.0 Tohoku-oki Earthquake, December 2021, *AGU Meeting*, S41A-02 (oral presentation).

Enescu, B., Moldovan, I-A., Ionescu, C., and the AFROS Team (2021). Analysis and Forecasting of Romanian Seismicity (AFROS) Project: Aim and Preliminary Results, *AGU Meeting*, NH25A-0542 (poster presentation).

Mihai. A., Moldovan, I-A., Toader V. E. Radulian. M. (2021). The geomagnetic field variations recorded in Vrancea zone during 2000-2008 and the seismic energy release, *Bucharest University, Faculty of Physics 2021 Meeting, Atmosphere and Earth Science*, (online meeting).

Mihai, A. Roban, R.D., Toader, V.E., Lingvay, I., Ciogesc, O. (2021). Downhole lithological profile of Ramnicu Valcea seismic site based on drill cuttings, *XXI International Multidisciplinary Scientific GeoConference SGEM 2021* (oral presentation).

Opris, A., Kundu, S., Hatano, T. (2021). Imaging the spatio-temporal variations in deep tremor activity using cluster analysis techniques, *EGU General Assembly 2021*, NH4.4, (online meeting).

Placinta, A.O., Borleanu, F., Popescu, E., Radulian, M. (2021). Source parameters, clustering and scaling properties for the Vrancea (Romania) subcrustal earthquakes recorded between 2016 and 2018, *XXI<sup>th</sup> International Multidisciplinary Scientific GeoConference Surveying, Geology and Mining, Ecology and Management – SGEM 2021* (poster presentation).

Ghita C., Raicu R., Constantinescu E. G., Moldovan I. A., (2021). Estimating the magnitude of completeness and spatial variation of seismic *b* value for Vrancea area (Romania), crustal earthquakes for the last three decades, *XXI<sup>th</sup> International Multidisciplinary Scientific GeoConference Surveying, Geology and Mining, Ecology and Management – SGEM 2021* (poster presentation).

## 2022

Armeanu I., Borleanu F., Radulian M., (2022). Quarry blasts identification in Maramures and Bucovina (Romania) areas using statistical and cross-correlation techniques, *The 3rd European Conference on Earthquake Seismology and Engineering, Bucharest, Romania, September 4-9, 2022*.

Borleanu F., Petrescu L., Seghedi I., Thomas C., De Siena L., (2022). Crustal structure of the East European Craton beneath the Carpathian Orogen revealed by attenuation tomography, *The 3rd European Conference on Earthquake Seismology and Engineering, Bucharest, Romania, September 4-9, 2022*.

Borleanu F., Petrescu L., Seghedi I., Thomas C., DeSiena L., (2022). Seismic attenuation tomography in the Carpathian-Pannonian region from ambient seismic noise analysis, *EGU 2022, Viena, Austria/23–27 May 2022* (oral presentation).

Coman A., Borleanu F., Petrescu L., Placinta A., Enescu B., Poiata N., Radulian M., (2022). High-resolution Analysis of the Intermediate-depth Seismicity Patterns in the Vrancea region (Romania): towards a better Assessment of Earthquake Risk, *The 16th Workshop of International Lithosphere Program Task Force Sedimentary Basins & 7<sup>th</sup> Geoscience*, 6-8 October 2022, București, România.

Constantin A. P., Diaconescu M., Manea L. (2022). Macroseisology in Romania: past and present practice, *The 16th Workshop of International Lithosphere Program Task Force*

*Sedimentary Basins & 7<sup>th</sup> Geoscience*, 6-8 octombrie 2022, București, România (poster presentation)

Constantin A. P., Manea L., Moldovan I. A., Ionescu C., (2022). Analysis of recent macroseismic data collected through online and classic questionnaires: uncertainties, discrepancies and limitations, *The 3rd European Conference on Earthquake Seismology and Engineering, Bucharest, Romania, September 4-9, 2022*, 4992 - 4998.

Constantin A. P., Moldovan I. A., Diaconescu M. (2022). Macroseismic studies in Romania, *The 20th International Balkan Workshop on Applied Physics and Materials Science - IBWAPP*, 12-15 Iulie, Constanta, România (poster presentation)

Enescu B., Moldovan I., Radulian M., Ghita C., Borleanu F., Placinta A.O., and Poiata N., (2022). Seismicity analysis for Vrancea region (Romania) using a z-value statistical approach, *The 3rd European Conference on Earthquake Seismology and Engineering, Bucharest, Romania, September 4-9, 2022*.

Ghita C., Diaconescu M., Constantinescu E.G., Moldovan I.A., (2022). Analysis of seismicity in north eastern part of Romania for the last three decades, *The 3rd European Conference on Earthquake Seismology and Engineering, Bucharest, Romania, September 4-9, 2022*.

Mihai. A, Toader V.E, Moldovan I.A., Relationship among seismic energy release and the anomalous geomagnetic field variations recorded at Muntele Rosu (Vrancea zone). *Geoscience*, 6-8 octombrie 2022, București, România (prezentare orala)

Opris A., Ariyoshi K., Hatano T., and Hori T., (2022). Imaging the changes in the clustering properties of deep low-frequency earthquakes caused by the occurrence of the 2010 long-term slow slip event in Western Shikoku, Japan, *The 3rd European Conference on Earthquake Seismology and Engineering, Bucharest, Romania, September 4-9, 2022*.

Placinta A.O., Borleanu F., Popescu E., Radulian M, Munteanu I. (2022). Earthquake source properties of a lower crust sequence generated in the Marasesti area (Romania), *The 20th International Balkan Workshop on Applied Physics and Materials Science - IBWAP*, 12-15 Iulie, Constanta, România.

Szakacs A., Kovacs I.J., and Radulian M., (2022). Precursor-based earthquake prediction: wishful thinking or real possibility?, *The 3rd European Conference on Earthquake Seismology and Engineering, Bucharest, Romania, September 4-9, 2022*.

Toader V.E., Moldovan I.A., and Mihai A., (2022). Analysis of the relationship between geochemical data and seismicity parameters for the development of a procedure for OEF,

*The 3rd European Conference on Earthquake Seismology and Engineering, Bucharest, Romania, September 4-9, 2022.*

Toader V.E., Ionescu C., Moldovan I.A., Marmureanu A., Lingvay I., Ciogescu O., (2022). Extension of the radon monitoring network in seismic areas in Romania, *EGU General Assembly 2022*, EGU22-2152, doi:10.5194/egusphere-egu22-2152.

Varzaru L., Borleanu F., (2022). Identifying anthropogenic seismic events generated in western Romania using statistical approaches and novel waveform processing techniques/ *EGU 2022*, Viena, Austria/23–27 May 2022 (online presentation).

*Papers published in research journals/proceedings (with peer-review):*

**2021**

Dinescu R., Ghica D., Popa M., Munteanu I., Radulian M., Discrimination between tectonic and anthropic events in Targu-Jiu quarry region (Romania), *Proceedings Conference: 11th Congress of the Balkan Geophysical Society*, DOI: 10.3997/2214-4609.202149BGS86, 2021 (**BDI**).

Ghita C., Raicu R., Constantinescu E. G., Moldovan I. A., (2022) Estimating the magnitude of completeness and spatial variation of seismic *b* value for Vrancea area (Romania), crustal earthquakes for the last three decades, *XXI<sup>th</sup> International Multidisciplinary Scientific GeoConference Surveying, Geology and Mining, Ecology and Management – SGEM 2021, Vol. 21*, (**BDI**).

Placinta, A.O., Borleanu, F., Popescu, E., Radulian, M., Munteanu, I. (2021), Earthquake source properties of a lower crust sequence and associated seismicity perturbation in the SE Carpathians, Romania, Collisional Setting. *Acoustics*, 3, 270–296 (Editor: C. W. Lim), <https://doi.org/10.3390/acoustics3020019> (**ISI**)

Placinta, A.O., Borleanu, F., Popescu, E., Radulian, M. (2022), Source parameters, clustering and scaling properties for the Vrancea (Romania) subcrustal earthquakes recorded between 2016 and 2018, *XXI<sup>th</sup> International Multidisciplinary Scientific GeoConference Surveying, Geology and Mining, Ecology and Management – SGEM 2021, Vol.. 21*. (**BDI**).

Shimojo, K., Enescu, B., Yagi, Y. and Takeda, T., Nucleation process of the 2011 northern Nagano earthquake from nearby seismic observations. *Scientific Reports*, **11**, 8143 (2021) (**ISI**). <https://doi.org/10.1038/s41598-021-86837-4>.

Toader, V-E; Mihai A.; Moldovan, I-A; Ionescu, C.; Marmureanu, A.; Lingvay, I.; (2021), Implementation of a Radon Monitoring Network in a Seismic Area. *Atmosphere*, **12**(8) 1041, Academic Editor: Cucos (Dinu) Alexandra, doi: 10.3390/atmos12081041 (ISI).

Zheng, Y., Enescu, B., Zhuang, J.C., and Yu, C. (2021). Data replenishment of five moderate earthquake sequences in Japan, with semi-automatic cluster selection, *Earthquake Science*, **34**, doi:[10.29382/eqs-2021-0030](https://doi.org/10.29382/eqs-2021-0030) (ISI)

## 2022

Armeanu I., Borleanu F., Radulian M., (2022). Quarry blasts identification in Maramures and Bucovina (Romania) areas using statistical and cross-correlation techniques, *The 3rd European Conference on Earthquake Seismology and Engineering, Bucharest, Romania, September 4-9, 2022*, 4671 - 4677, 2022 (book chapter).

Armeanu I., Borleanu F., Varzaru, Ghica D., Popa M., (2022). A reanalysis of the seismic activity at the western edge of the Eastern European Platform, submitted for publication to *Romanian Journal of Physics* (ISI).

Borleanu F., Petrescu L., Seghedi I., Thomas C., De Siena L., (2022). Crustal structure of the East European Craton beneath the Carpathian Orogen revealed by attenuation tomography, *Proceedings of the 3rd European Conference on Earthquake Seismology and Engineering, Bucharest, Romania, September 4-9, 2022*, 4671 - 4677 (book chapter).

Borleanu F., Petrescu L., Seghedi I., Thomas C., De Siena L., (2022). The seismic attenuation signature of collisional orogens and sedimentary basins within the Carpathian Orogen, submitted for publication to *Global and Planetary Change* (ISI).

Constantin A. P., Manea L., Moldovan I. A., Ionescu C., (2022). Analysis of recent macroseismic data collected through online and classic questionnaires: uncertainties, discrepancies and limitations, *Proceedings of the 3rd European Conference on Earthquake Seismology and Engineering, Bucharest, Romania, September 4-9, 2022*, 4992 - 4998 (book chapter).

Enescu B., Moldovan I., Radulian M., Ghita C., Borleanu F., Placinta A.O., and Poiata N., (2022). Seismicity analysis for Vrancea region (Romania) using a z-value statistical approach, *Proceedings of the 3rd European Conference on Earthquake Seismology and Engineering, Bucharest, Romania, September 4-9, 2022*, 4300 - 4305 (book chapter).

Ghita C., Diaconescu M., Constantinescu E.G., Moldovan I.A., (2022). Analysis of seismicity in north eastern part of Romania for the last three decades, *Proceedings of the*

*3rd European Conference on Earthquake Seismology and Engineering, Bucharest, Romania, September 4-9, 2022, 4362 - 4367 (book chapter).*

Ghita, C., Tuta, L., Moldovan, I.-A., Ionescu, C. and Nicolaescu, M., (2022). FastICA algorithm applied on Black Sea water level ultrasound measurements. *Atmosphere*, 13, 1973, <https://doi.org/10.3390/atmos13121973> (ISI).

Ishiyama, R., Fukuyama, E., and Enescu, B. (2022). Estimation of time-variable friction parameters using machine learning, submitted for publication to *Geophys. J. Int.* (ISI).

Opris A., Ariyoshi K., Hatano T., and Hori T., (2022). Imaging the changes in the clustering properties of deep low-frequency earthquakes caused by the occurrence of the 2010 long-term slow slip event in Western Shikoku, Japan, *Proceedings of the 3rd European Conference on Earthquake Seismology and Engineering, Bucharest, Romania, September 4-9, 2022, 4276-4283 (book chapter).*

Oros, E., Placinta, A.O., Moldovan, I.A., Popa, M. (2022), *The Parametric Earthquake Catalogue for the Intra-Carpathians Region (Romania) for the period 1223 to 1990*, Mendeley Data, V2, doi: 10.17632/p8rgkfhjbz.2 (database).

Szakacs A., Kovacs I.J., and Radulian M., (2022). Precursor-based earthquake prediction: wishful thinking or real possibility?, *Proceedings of the 3rd European Conference on Earthquake Seismology and Engineering, Bucharest, Romania, September 4-9, 2022, 3580-3583 (book chapter).*

Toader V.E., Moldovan I.A., and Mihai A., (2022). Analysis of the relationship between geochemical data and seismicity parameters for the development of a procedure for OEF, *Proceedings of the 3rd European Conference on Earthquake Seismology and Engineering, Bucharest, Romania, September 4-9, 2022, 4338-4345 (book chapter).*

Moldovan I.A., Popescu E., Radulian, M., Enescu B, Placinta A.O., Ghita C., Constantin A.P. (2022). Fractal properties of the spatial distribution of crustal and subcrustal Vrancea earthquakes, *Romanian Journal of Physics* - accepted (ISI).

Placinta A.O., Borleanu F, Moldovan I.A., Coman, A., (2022). *Correlation between changes in seismic propagation velocities and the occurrence of moderate earthquakes from Vrancea (Romania)*, *Acoustics*, 4(4), 934-947, <https://doi.org/10.3390/acoustics4040057> (registering DOI), (ISI)

Yagi, Y., Okuwaki, R., Enescu, B., and Lu, J., Irregular Rupture Process of the 2022 Taitung, Taiwan, Earthquake Sequence, (2022). submitted for publication to *Scientific Reports* (ISI).