

Lista de lucrări

A. Teza de doctorat

Titlul: Metode și tehnici de identificare și analiză a fumului din incendii petroliere utilizând date satelitare sinergice

Doctorand: Mereuță Alexandru

Conducător științific: Prof. univ. dr. ing. Ozunu Alexandru

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Domeniul: Știința Mediului

B. Articole studii publicate în reviste de specialitate de circulație internațională recunoscute sau în reviste din țară recunoscute de către CNCSIS (în ordinea datei de publicare)

1. Deaconu, L.T., Mereuță, A., Radovici, A., Ștefănie, H.I., Botezan, C. and Ajtai, N., 2024. Consistency of Aerosol Optical Properties between MODIS Satellite Retrievals and AERONET over a 14-Year Period in Central–East Europe. *Remote Sensing*, 16(10), p.1677. <https://doi.org/10.3390/rs16101677>
2. Irankunda, E., Torok, Z., Mereuta, A., Gasore, J., & Ozunu, A. (2024). Aermod evaluation for modelling the dispersion of particulate matter (pm10) in complex topography of kigali, rwanda. *Environmental Engineering and Management Journal*, 23(2), 249-264. Retrieved from <https://eemj.eu/index.php/EEMJ/article/view/4837>
3. Stavropoulou, F., Vinković, K., Kers, B., de Vries, M., van Heuven, S., Korbeň, P., ..., Mereuta, A., ..., et al., 2023. High potential for CH₄ emission mitigation from oil infrastructure in one of EU's major production regions. *Atmospheric Chem. Phys.* 23, 10399–10412. <https://doi.org/10.5194/acp-23-10399-2023>
4. Radovici, A., Ștefănie, H., Ajtai, I., Mereuță, A., Botezan, C., Ozunu, A., Ajtai, N., 2023. Is the analysis of territorial compatibility in the vicinity of road hazmat transport routes a necessity for developing countries? A case study of Romania. *Heliyon* 9, e19948. <https://doi.org/10.1016/j.heliyon.2023.e19948>
5. Ștefănie, H.I., Radovici, A., Mereuță, A., Arghiuș, V., Cămărășan, H., Costin, D., Botezan, C., Gînscă, C., Ajtai, N., 2023. Variation of Aerosol Optical Properties over Cluj-Napoca, Romania,

Based on 10 Years of AERONET Data and MODIS MAIAC AOD Product. *Remote Sens.* 15, 3072. <https://doi.org/10.3390/rs15123072>

6. Irankunda, E., Török, Z., Mereuță, A., Gasore, J., Kalisa, E., Akimpaye, B., Habineza, T., Shyaka, O., Munyampundu, G., Ozunu, A., 2022. The comparison between in-situ monitored data and modelled results of nitrogen dioxide (NO₂): case-study, road networks of Kigali city, Rwanda. *Heliyon* 8, e12390. <https://doi.org/10.1016/j.heliyon.2022.e12390>

7. Mereuță, A., Ajtai, N., Radovici, A.T., Papagiannopoulos, N., Deaconu, L.T., Botezan, C.S., Ștefănie, H.I., Nicolae, D., Ozunu, A., 2022. A novel method of identifying and analysing oil smoke plumes based on MODIS and CALIPSO satellite data. *Atmospheric Chem. Phys.* 22, 5071–5098. <https://doi.org/10.5194/acp-22-5071-2022>

8. Stefanie, H., Radovici, A., Mereuta, A., Camarasan, H., & Ajtai, N. (2022). Detection Of Local And Long-range Transported Aerosol Intrusions Over Cluj- napoca, Romania Using Multiwavelength Lidar Measurements In Spring 2022. *Sofia: Surveying Geology & Mining Ecology Management (SGEM)*. <https://doi.org/10.5593/sgem2022/2.1/s10.34>

9. Ajtai, N., Mereuta, A., Stefanie, H., Radovici, A., Botezan, C., Zawadzka-Manko, O., Stachlewska, I., Stebel, K., Zehner, C., 2021. SEVIRI Aerosol Optical Depth Validation Using AERONET and Intercomparison with MODIS in Central and Eastern Europe. *Remote Sens.* 13, 844. <https://doi.org/10.3390/rs13050844>

10. Modoi, A. P. D. C., Ajtai, I., Roba, A. P. D. C., & Mereuță, A. (2021). ANALYSIS OF THE NEAR INFRARED (NIR) SPECTROSCOPY METHOD USED FOR TEXTILE WASTE SORTING. *International Multidisciplinary Scientific GeoConference: SGEM*, 21(5.1), 11-17. <https://doi.org/10.5593/sgem2021/5.1/s20.003>

11. Amouzouvi, Y.M., Dzagli, M.M., Sagna, K., Török, Z., Roba, C.A., Mereuță, A., Ozunu, A., Edjame, K.S., 2020. Evaluation of Pollutants Along the National Road N2 in Togo using the AERMOD Dispersion Model. *J. Health Pollut.* 10, 200908. <https://doi.org/10.5696/2156-9614-10.27.200908>

12. Török, Z., Petrescu-Mag, R.-M., Mereuță, A., Maloș, C.V., Arghiuș, V.-I., Ozunu, A., 2020. Analysis of territorial compatibility for Seveso-type sites using different risk assessment methods and GIS technique. *Land Use Policy* 95, 103878. <https://doi.org/10.1016/j.landusepol.2019.02.037>

13. Ajtai, N., Ștefănie, H., Mereuță, A., Radovici, A., Botezan, C., 2020. Multi-Sensor Observation of a Saharan Dust Outbreak over Transylvania, Romania in April 2019. *Atmosphere* 11, 364. <https://doi.org/10.3390/atmos11040364>

14. Mereuță, A., Ajtai, N., Ștefănie, H., Botezan, C., Ozunu, A., 2019. ANALYSIS OF A SAHARAN DUST PLUME OVER CLUJ-NAPOCA, ROMANIA, USING REMOTE SENSING TECHNIQUES. *Int. Multidiscip. Sci. GeoConference SGEM* 19, 441–447. <https://doi.org/10.5593/sgem2019/2.2/S10.054>.

C. Studii publicate în volumele unor manifestări științifice internaționale recunoscute din țară și din străinătate (cu ISSN sau ISBN)

1. Irankunda, E., Török, Z., Mereuta, A., Ozunu, A., Gasore, J., Kalisa, E., ... & Munyampundu, G. (2022). POTENTIAL SOURCE IDENTIFICATION OF SO₂ AND COMPARISON BETWEEN MODELLING RESULTS WITH IN-SITU MONITORING DATA: STUDY CASE, ROAD NETWORKS OF KIGALI-RWANDA. Bulletin of Romanian Chemical Engineering Society, 9(1), 131-142, ISSN 2360-4697.
2. Ozunu, A. L. E. X. A. N. D. R. U., Radovici, A. N. D. R. E. I., Mereuță, A., Piștea, I., & Torok, Z. O. L. T. A. N. (2021). Technological risk mitigation for the resilient cities. Technical Sciences, 6(1), 71-76, ISSN 2601-6699.
3. AMOUZOUVI, M. Y., DZAGLI, M. M., ȘTEFĂNIE H., ROBA, C. A., MEREUȚĂ A., OZUNU, A., & SAPPOR, S. (2019). DESCRIPTION AND COMPARISON OF AEROSOL PROPERTIES OVER CLUJ-NAPOCA - ROMANIA AND KOFORIDUA – GHANA, USING AERONET NETWORK DATA. Studia Universitatis Babeș-Bolyai Ambientum, 64(1), 5–17, ISSN 2065-9490. <https://doi.org/10.24193/subbambientum.2019.1.01>
4. ȘTEFĂNIE, H., BOTEZAN, C., AJTAI, N., RADOVICI, A., MEREUȚĂ A., PÂRLOAGĂ, R., & BELEGANTE, L. (2019). OPTIMIZATION OF LIDAR SYSTEMS MEASUREMENTS FOR DETECTION OF CLEAR AIR TURBULENCE. Studia Universitatis Babeș-Bolyai Ambientum, 64(1), 81–89, ISSN 2065-9490. <https://doi.org/10.24193/subbambientum.2019.1.06>
5. OZUNU, A., MEREUȚĂ, A., TÖRÖK, Z., & LITERAT, L. (2017). A national hazard analysis and mapping for seveso establishments. Technical Sciences, 2(3), 93-102, ISSN 2601-6699.

D. Proiecte de cercetare-dezvoltare-inovare pe bază de contract/ grant (membru de echipă)

1. Proiect POC/448/1/1/126436 (01.10.2023 – 31.12.2023) - Dezvoltarea infrastructurii ACTRIS-UBB cu scopul de a contribui la cercetarea pan-europeana privind compoziția atmosferei și schimbările climatice.
2. Proiect ACTRIS-ROC (15.03.2021 - 15.10.2023) - Consolidarea participării consorțiului ACTRIS-RO la infrastructura pan-europeana de cercetare ACTRIS (ACTRIS-ROc)
3. Proiect CONTUR (15.10.2018 - 01.03.2021) - Tehnologii Emergente pentru Contracararea Efectelor Induse de Curgerile Turbulente ale Mediilor Fluide
4. Proiect ROMEO (01.02.2022-01.05.2022) - MEMO 2 (MEthane goes MOBILE – MEasurements and MOdelling)
5. Proiect ISABEL (01.12.2017 - 31.08.2019) - Software inteligent pentru clasificarea aerosolilor bazat pe date de observare a Pământului, măsurători de teledetecție și modelare de transport
6. Proiect RO-RISK (01.03.2016 - 01.01.2017) - Evaluarea riscurilor de dezastre la nivel național - Codul SIPOCA 30.

E. Alte lucrări (prezentate în cadrul unor conferințe internaționale și naționale)

1. Mereuta, A., Ajtai, N., Radovici, A., Botezan, C., Stefanie, H., Camarasan, H., Costin, D.: Understanding oil smoke plumes through CALIPSO measurements, Cluj-Napoca, Romania, 13-15 Sept, 2023.
2. Mereuta, A., Ajtai, N., Radovici, A., Botezan, C., Stefanie, H., Camarasan, H., Costin, D., and Ozunu, A.: Oil smoke plumes as seen through MODIS and CALIPSO, EGU General Assembly 2023, Vienna, Austria, 24–28 Apr 2023, EGU23-147, <https://doi.org/10.5194/egusphere-egu23-147>, 2023.
3. A. Mereuță, A. Radovici, N. Ajtai, C. Botezan, L. Deaconu, A. Ozunu, Oil Smoke Plumes as Seen Through Satellite Remote Sensing, The 30th International Laser Radar Conference, 2022.
4. A. Mereuță, A. Radovici, N. Ajtai, C. Botezan, H. Stefanie, L. Deaconu, A. Ozunu, Earth observations as support tools for disaster response, The 12th International Conference of the International Society for the INTEGRATED DISASTER RISK MANAGEMENT (IDRiM2022), 2022.
5. A. Mereuță, A. Ozunu, A. T. Radovici, N. Ajtai, C. Botezan, H. Stefanie, L. Deaconu, How earth observations can aid in disaster response actions. Case studies involving petrochemical smoke plumes. Romanian Chemical Engineering Society (SICHEM 2022), 2022.
6. A. Mereuta, H. Stefanie, C. Botezan, A. Ozunu, L. Deaconu, A. Radovici, N. Ajtai, Early seasonal dust intrusions over Central and Eastern Europe observed using ground based lidar systems and satellite products, European Laser Conference, 2021.
7. A. Mereuta, H. Stefanie, A. Radovici, C. Botezan, N. Ajtai, A. Ozunu, Analysis Of A Major Saharan Dust Outbreak Over Transylvania, Romania In April 2019 Using Remote Sensing Instruments, European Laser Conference, 2020.
8. A Mereuta, A Radovici, H Ștefănie, N Ajtai, A Ozunu, L Belegante, A Radu, First results of the CONTUR-1 LIDAR measurement campaign focused on detecting wake turbulences, Geophysical Research Abstracts . 2019, Vol. 21, p1-1. 1p. 2019.
9. A. Mereuță, N. Ajtai, H. Ștefănie, C. Botezan, A. Ozunu, Analysis of a saharan dust plume over cluj-napoca, romania, using remote sensing techniques, International Multidisciplinary Scientific GeoConference (SGEM), 2019.
10. A. Mereuță, N. Ajtai, H. Stefanie, L. Belegante, A. Ozunu, A desert dust intrusion over cluj-napoca, romania identified using remote sensing techniques, The Days of the Academy of Technical Sciences of Romania 13th edition Energy and environment (ASTR), 2018.
11. A Mereuță, H. Ștefănie, C. Botezan, A. Ozunu, C. Ficuț, E. Cârstea, T. Savu, N. Ajtai, Intelligent software for aerosol typing based on earth observation products, remote sensing measurements and transport modelling – ISABEL, Environment & Progress, 2017.