

Director CSUD,
Prof. dr. Anca-Mirela ANDREICA

Director SD Știința mediului,
Prof. univ. dr. Laurențiu – Călin BACIU

FIȘA DE VERIFICARE

a îndeplinirii standardelor minimale și obligatorii pentru conferirea titlurilor didactice din învățământul superior și a gradelor profesionale de cercetare – dezvoltare

Domeniul Științific – Comisia de Științele Pământului

Dr. Doina-Nicoleta Nicolae

Criteriul 1: Articole științifice ca autor principal

Nr.	Articol	AIS jurnal (la data publicării)
1.	Nicolae, D. , Ciocan, G.-A., Nemuc, A., Nicolae, V., Talianu, C., Vasilescu, J., Dandocsi, A., Radu, C., Cazacu, M.-M., Vulturescu, V., and Belegante, L. (2026). Examining the characteristics of aerosols: a statistical analysis based on a decade of lidar and photometer observations at the Eastern border of ACTRIS, <i>ATMOSPHERIC MEASUREMENT TECHNIQUES</i> , 19, 1179–1199. https://doi.org/10.5194/amt-19-1179-2026	1,031
2.	Talianu, C, Vasilescu, J., Nicolae, D* , Ilie, A., Dandocsi, A., Nemuc, A., Belegante, L. (2025). High-resolution air quality maps for Bucharest using a mixed-effects modeling framework. <i>ATMOSPHERIC CHEMISTRY AND PHYSICS</i> , 9(25), 4639-4654. https://doi.org/10.5194/acp-25-4639-2025	1,626
3.	Nicolae, D. , Talianu, C., Vasilescu, J., Dandocsi, A. M., Belegante, L., Nemuc, A., Toanca, F., Ilie, A., Dandocsi, A. V., Nicolae, S. M., Ciocan, G., Vulturescu, V., & Tudose, O. G. (2025). How Does the Location of Power Plants Impact Air Quality in the Urban Area of Bucharest? <i>ATMOSPHERE</i> , 16(6), 636. https://doi.org/10.3390/atmos16060636	0,534
4.	Nicolae, D. , Vasilescu, J., Talianu, C., Biniotoglou, I., Nicolae, V., Andrei, S., Antonescu, B. (2018). A neural network aerosol-typing algorithm based on lidar data. <i>ATMOSPHERIC CHEMISTRY AND PHYSICS</i> , 19(18), 14511-14537. https://doi.org/10.5194/acp-18-14511-2018	1,595
5.	Cazacu, M. M., Tudose, O., Boscornea, A., Buzdugan, L., Timofte, A., Nicolae*, D. (2017). Vertical and temporal variation of aerosol mass concentration at Magurele - Romania during EMEP/PEGASOS campaign. <i>ROMANIAN REPORTS IN PHYSICS</i> , 69(2), https://www.webofscience.com/wos/alldb/full-record/WOS:000402495900016	0,255
6.	Nicolae, D. , Nemuc, A., Müller, D., Talianu, C., Vasilescu, J., Belegante, L. (2013). Characterization of fresh and aged biomass burning events using multiwavelength Raman lidar and mass spectrometry. <i>JOURNAL OF GEOPHYSICAL RESEARCH-ATMOSPHERES</i> , 118(7), 2956–2965, https://doi.org/10.1002/jgrd.50324	1,406
Total (≥3,5)		6,447

Articole BDI ca autor principal:

1. **Nicolae, D.**, Talianu, C., Vasilescu, J., Nicolae, V., Stachlewska, I.S. (2018). Strengths and limitations of the NATALI code for aerosol typing from multiwavelength Raman lidar observations. *EPJ Web of Conferences*, 176. <https://doi.org/10.1051/epjconf/201817605005>
2. **Nicolae, D.**, Vasilescu, J., Talianu, C., Dandocsi, A. (2016). Independent retrieval of aerosol type from lidar. *EPJ Web of Conferences*, 119. <https://doi.org/10.1051/epjconf/201611918002>
3. **Nicolae, D.**, Nemuc, A., Belegante, L. (2010). Mix of volcanic ash and Saharan dust over Romania, during Eyjafjallajokull eruption. *Proceedings of SPIE*, 7832. <https://doi.org/10.1117/12.869021>
4. **Nicolae, D.**, Belegante, L., Nemuc, A. (2010). Laser remote sensing in atmosphere investigation. *Optoelectronics and Advanced Materials, Rapid Communications*, 4(12), 1946-1951, <https://www.webofscience.com/wos/alldb/full-record/WOS:000286043400005>
5. **Nicolae, D.**, Vasilescu, J., Carstea, E., Stebel, K., Prata, F. (2010). Romanian Atmospheric research 3D Observatory: synergy of instruments. *ROMANIAN REPORTS IN PHYSICS*, 4(62), 838-853, <https://www.webofscience.com/wos/alldb/full-record/WOS:000286575200017>
6. **Nicolae, D.**, Talianu, C., Nemuc, A., Carstea, E. (2008). Benefits and drawbacks of laser remote sensing in atmospheric research. *UNIVERSITY POLITEHNICA OF BUCHAREST SCIENTIFIC BULLETIN-SERIES A-APPLIED MATHEMATICS AND PHYSICS*, 4(70), 5-14, <https://www.webofscience.com/wos/alldb/full-record/WOS:000262993700002>
7. **Nicolae, D.**, Talianu, C., Mamouri, R.-E., Carstea, E., Papayannis, A., Tsaknakis, G. (2008). Air mass modification processes over the Balkans area detected by aerosol Lidar techniques. *Optoelectronics and Advanced Materials, Rapid Communications*. 2. 394-402, <https://www.webofscience.com/wos/alldb/full-record/WOS:000257145000017>
8. **Nicolae, D.**, Talianu, C., Radu, C., Stefan, S. (2007). Combining OPAC and lidar. *Proceedings of SPIE*, 6750. <https://doi.org/10.1117/12.737900>
9. **Nicolae, D.**, Talianu, C., Nemuc, A., Carstea, E., Ciuciu, J., Cristescu, C. (2006). A numerical model to improve the derivation of aerosols optical parameters from elastic backscatter lidar data. *Proceedings of SPIE*, 6367. <https://doi.org/10.1117/12.714436>
10. **Nicolae, D.**, Talianu, C., Ciuciu, J., Ciobanu, M., Babin, V. (2006). LIDAR monitoring of aerosols loading over Bucharest. *Journal of Optoelectronics and Advanced Materials (JOAM)*, Vol. 8, No. 1, pp. 242-246, <https://www.webofscience.com/wos/alldb/full-record/WOS:000236107300053>

Cărți cu ISBN

1. **Nicolae, D.** (2013). Tehnici lidar pentru caracterizarea aerosolilor din atmosfera joasă (Lidar techniques for the characterization of aerosols in the low atmosphere). *Ed. Tehnopress, Iasi*, ISBN 978-973-702-973-7.
2. **Nicolae, D., Talianu, C., Belegante, L.** (2013). Introduction to atmospheric remote sensing. Lecture notes. *Ed. Tehnopress, Iasi*, ISBN 978-973-702-982-9.
3. **Nicolae, D., Talianu, C.** (2010). Chapter 1: Atmospheric lidar and retrieval of aerosol optical characteristics. Published in *Recent Advances in Atmospheric Lidars, INOE Publishing House*, ISSN 1584-5508.

Criteriul 2: Vizibilitatea articolelor științifice (Indicele Hirsch \geq 4):

- Indice h (Web of Science) = 19 (excluzând auto-citările).

Criteriul 3: Capacitatea de susținere a activităților de cercetare (A. Director/Lider de proiect/ grant în 2 proiecte/ granturi naționale sau responsabil de proiect/ grant în 3 proiecte/ granturi de cercetare naționale sau B. Director/ Lider la 1 proiect/ grant internațional sau responsabil de proiect/ grant în 2 proiecte/granturi de cercetare internaționale):

A. Director/Lider de proiect/ grant în 2 proiecte/ granturi naționale sau responsabil de proiect/ grant în 3 proiecte/ granturi de cercetare naționale:

Director proiecte naționale

- 1 **EXIST** (2010-2013) - Extension of the R&D infrastructure of INOE 2000 for environmental assessment and optoelectronics, PNCDI2 ctr. 76/CP/I
- 2 **ROLINET** (2007–2010) - Romanian LIDAR Network: modern tool for monitoring the air quality and the atmosphere's physics, PNCDI II – Parteneriate ctr. 31002/2007
- 3 **CAPESA** (2012-2015) – Clouds and aerosols profiling in support of ESA's Sentinel 4 and 5 missions, ROSA-STAR Program, ctr. 38/2012
- 4 **CARESSE** (2013-2016) – Centre for atmospheric remote sensing and space Earth observation, ROSA-STAR Program ctr. 55 / 2013
- 5 **RO-CEO** (2016-2019) – Romania cluster for Earth observation, ROSA-STAR Program ctr. 109/2016
- 6 **CEO-TERRA** (2016–2021) - Center of Excellence for Earth Observations In-Situ and Remote Sensing, POC-A.1-A.1.1.1 – F2015 ctr. 152/2016
- 7 **ACTRIS-ROc** (2020–2023) - Strengthening the Participation of the ACTRIS-RO Consortium in the Pan-European ACTRIS Research Infrastructure, POCIDIF/2014-2020/SINERGII MySMIS 107596 ctr. 337/2021
- 8 **RO-ACTRIS-ERIC** (2023–present) - Support for the operation of Romanian facilities within the ACTRIS ERIC research infrastructure, PCIDIF/144/PCIDIF_P1/OP1/RSO1.1/PCIDIF_A3-RO-ESFRI-ERIC MySMIS 309113

Responsabil proiecte naționale

1. **REMARKT** (2007-2010) - Strengthening institutional capacity of National R&D Institute for Optoelectronics to respond to market needs and authorities in environmental protection using remote sensing techniques, PNCDI2 ctr. 75/CP/II/2007
2. **DARLIOES** (2013-2016)- Fast Laser Imaging, Detection And Ranging Of Aerosol Emissions In Aircraft Plumes -ROSA STAR PROGRAM C2, ctr. 98/2013
3. **SIAFIM** (2012-2015) – Satellite images analysis for fire monitoring, ESA-STAR Program, ctr. 39/2012

B. Director/ Lider la 1 proiect/ grant internațional sau responsabil de proiect/ grant în 2 proiecte/granturi de cercetare internaționale:

Director proiecte internaționale

1. **RADO** (2009–2011) - Romanian Atmospheric 3D research Observatory, Norwegian Cooperation -Programme, ctr. 115266
2. **DELICE** (2009–2012) - Developing the emerging research potential of Romania Lidar Centre, FP7-REGPOT-2008-1, ctr. 229907
3. **NATALI** (2014–2016) - Neural network aerosol typing algorithm based on Lidar data, ESA/ESRIN ctr. 4000110671/14/I-LG
4. **ECARS** (2016–2019) - East European Centre for Atmospheric Remote Sensing, H2020-TWINN-2015, ctr. 692014
5. **MULTIPLY** (2014–present) - Development of a European HSRL airborne facility, ESA/ESTEC ctr. 4000112373/14/NL/CT
6. **DIVA** (2017–prezent) - Demonstration of an Integrated approach for the Validation and exploitation of Atmospheric missions, ESA/ESRIN ctr. 4000121773/17/I-EF

Responsabil proiecte internaționale

1. **DELICAT** (2009-2014) – Demonstration of lidar based clear air turbulence detection, FP7- AAT-2008-RTD-1, ctr. 233801
2. **ACTRIS** (2011-2015) - Aerosols, Clouds, and Trace gases Research Infrastructure Network, FP7-INFRASTRUCTURES-2010-1 ctr. 262254
3. **AEROS** (2011-2016) - Aerosols in Romania and Switzerland, Romanian-Swiss Research Programme RSRP ctr. IZERZO_142146
4. **ITARS** (2012–2016) - Initial Training network on Atmospheric Remote Sensing, P7-PEOPLE-2011-ITN, ctr. 289923
5. **GEOCRADDLE** (2016-2020) - Coordinating and integRating state-of-the-art Earth Observation Activities in the regions of North Africa, Middle East, and Balkans and Developing Links with GEO related initiatives towards GEOSS, H2020-SC5-2014-2015, ctr. 690133
6. **ACTRIS-PPP** (2017–2019) - Aerosols, Clouds and Trace gases Research Infrastructure Preparatory Phase Project, H2020-INFRADEV-2016-2, ctr. 739530
7. **ACTRIS-IMP** (2020–2024) - Aerosols, Clouds and Trace Gases Research Infrastructure Implementation Project, H2020- INFRADEV-2019-2 ctr. 871115
8. **ATMO-ACCESS** (2021–2025) - Solutions for Sustainable Access to Atmospheric Research Facilities, H2020-INFRAIA-2020-1 ctr. 101008004
9. **FRM4RADAR** (2018–2020) - 94GHz Miniature Network for EarthCARE Reference Measurements, ESA/ESTEC ctr. ESA-IPL-POE-EF-cb-LE-2017-11814758/17/I-EF
10. **SAMIRA** (2016–2019) - SATellite Based Monitoring Initiative for Regional Air Quality, ESA/ESRIN ctr. 4000117393/16/I-NB

11. **RI-URBANS** (2021–2025) - Research Infrastructures Services Reinforcing Air Quality Monitoring Capacities in European Urban & Industrial Areas, H2020-LC-GD-2020-6 ctr. 101036245
12. **CARGO-ACT** (2024-2027) - Cooperation and Agreements enhancing Global interoperability for Aerosol, Cloud and Trace gas research infrastructures, HORIZON-INFRA-2023-DEV-01-07 ctr. 101132093

Data:

10.04.2026

Semnatura:

FIȘĂ RECAPITULATIVĂ

Criteriul	Standard minimal	Realizat	Îndeplinit
Criteriul 1: Articole științifice			
5 articole ca autor principal în reviste cu factor de impact în baza de date Web of Science, cu AIS cumulată $\geq 3,5$	3,5	6,447	ÎNDEPLINIT
3 articole în reviste BDI	3	10	ÎNDEPLINIT
Criteriul 2: Vizibilitatea articolelor științifice (Indicele Hirsch ≥ 4)			
Indicele Hirsch WoS (excluzând auto-citările) ≥ 4	4	25	ÎNDEPLINIT
Criteriul 3: Capacitatea de susținere a activităților de cercetare (A. Director/Lider de proiect/ grant în 2 proiecte/ granturi naționale sau responsabil de proiect/ grant în 3 proiecte/ granturi de cercetare naționale sau B. Director/ Lider la 1 proiect/ grant internațional sau responsabil de proiect/ grant în 2 proiecte/granturi de cercetare internaționale)			
A. Director/Lider de proiect/ grant în 2 proiecte/ granturi naționale sau responsabil de proiect/ grant în 3 proiecte/ granturi de cercetare naționale	Director/Lider de proiect/ grant în 2 proiecte/ granturi naționale	8	ÎNDEPLINIT
	Responsabil de proiect/ grant în 3 proiecte/ granturi de cercetare naționale	3	
B. Director/ Lider la 1 proiect/ grant internațional sau responsabil de proiect/ grant în 2 proiecte/granturi de cercetare internaționale	Director/ Lider la 1 proiect/ grant internațional	6	
	Responsabil de proiect/ grant în 2 proiecte/granturi de cercetare internaționale	12	

Data:

10.04.2026

Semnătura:

Director CSUD,
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