

Tematici concurs:

1. Algoritmi de achiziție utilizati de senzori satelitari în cuantificarea proprietăților aerosolilor atmosferici. Tehnici actuale și perspective.
2. Validarea produselor satelitare specifice aerosolilor atmosferici prin măsurători la sol. Tehnici și bune practici
3. Clasificarea aerosolilor de fum prin intermediul senzorilor satelitari: provocări actuale.

Bibliografie**Tema 1**

- Carte:

S. Stefan, D. Nicolae, M. Caian, Secretele aerosolului atmosferic în lumina laserilor, Ed. Ars Docendi, 2008;

Lenoble, Jacqueline, Lorraine Remer, and Didier Tanré, eds. *Aerosol Remote Sensing*. Springer-Praxis Books in Environmental Sciences. Berlin ; New York : Chichester, UK: Springer ; Praxis, 2013.

- Articole:

1. Wei, Xiaoli, Ni-Bin Chang, Kaixu Bai, and Wei Gao. "Satellite Remote Sensing of Aerosol Optical Depth: Advances, Challenges, and Perspectives." *Critical Reviews in Environmental Science and Technology* 50, no. 16 (August 17, 2020): 1640–1725. <https://doi.org/10.1080/10643389.2019.1665944>.
2. Levy, R. C., S. Mattoo, L. A. Munchak, L. A. Remer, A. M. Sayer, F. Patadia, and N. C. Hsu. "The Collection 6 MODIS Aerosol Products over Land and Ocean." *Atmospheric Measurement Techniques* 6, no. 11 (November 6, 2013): 2989–3034. <https://doi.org/10.5194/amt-6-2989-2013>.
3. Young, Stuart A., Mark A. Vaughan, Anne Garnier, Jason L. Tackett, James D. Lambeth, and Kathleen A. Powell. "Extinction and Optical Depth Retrievals for CALIPSO's Version 4 Data Release." *Atmospheric Measurement Techniques* 11, no. 10 (October 18, 2018): 5701–27. <https://doi.org/10.5194/amt-11-5701-2018>.
4. Lyapustin, Alexei, Yujie Wang, Sergey Korkin, and Dong Huang. "MODIS Collection 6 MAIAC Algorithm." Preprint. *Aerosols/Remote Sensing/Data Processing and Information Retrieval*, May 17, 2018. <https://doi.org/10.5194/amt-2018-141>.

Tema 2

- Carte:

Kokhanovsky, Alexander A., and Gerrit De Leeuw, eds. *Satellite Aerosol Remote Sensing over Land*. Berlin, Heidelberg: Springer, 2009. <https://doi.org/10.1007/978-3-540-69397-0>.

- Articole:
 1. Gupta, Pawan, Lorraine A. Remer, Robert C. Levy, and Shana Mattoe. "Validation of MODIS 3 Km Land Aerosol Optical Depth from NASA's EOS Terra and Aqua Missions." *Atmospheric Measurement Techniques* 11, no. 5 (May 31, 2018): 3145–59. <https://doi.org/10.5194/amt-11-3145-2018>.
 2. Sayer, Andrew M., Yves Govaerts, Pekka Kolmonen, Antti Lippinen, Marta Luffarelli, Tero Mielonen, Falguni Patadia, et al. "A Review and Framework for the Evaluation of Pixel-Level Uncertainty Estimates in Satellite Aerosol Remote Sensing." *Atmospheric Measurement Techniques* 13, no. 2 (February 3, 2020): 373–404. <https://doi.org/10.5194/amt-13-373-2020>.
 3. Jethva, Hiren, Omar Torres, and Yasuko Yoshida. "Accuracy Assessment of MODIS Land Aerosol Optical Thickness Algorithms Using AERONET Measurements over North America." *Atmospheric Measurement Techniques* 12, no. 8 (August 9, 2019): 4291–4307. <https://doi.org/10.5194/amt-12-4291-2019>.
 4. Mhawish, Alaa, Tirthankar Banerjee, Meytar Sorek-Hamer, Alexei Lyapustin, David M. Broday, and Robert Chatfield. "Comparison and Evaluation of MODIS Multi-Angle Implementation of Atmospheric Correction (MAIAC) Aerosol Product over South Asia." *Remote Sensing of Environment* 224 (April 2019): 12–28. <https://doi.org/10.1016/j.rse.2019.01.033>.

Tema 3

- Carte:

Islam, Tanvir, Alex A. Kokhanovsky, Yongxiang Hu, and Jun Wang, eds. *Remote Sensing of Aerosols, Clouds, and Precipitation*. Amsterdam, Netherlands ; Cambridge, MA: Elsevier, [2018], n.d.

 - Articole:
 1. Ceolato, Romain, Andrés E. Bedoya-Velásquez, Frédéric Fossard, Vincent Mouysset, Lucas Paulien, Sidonie Lefebvre, Claudio Mazzoleni, Christopher Sorensen, Matthew J. Berg, and Jérôme Yon. "Black Carbon Aerosol Number and Mass Concentration Measurements by Picosecond Short-Range Elastic Backscatter Lidar." *Scientific Reports* 12, no. 1 (May 19, 2022): 8443. <https://doi.org/10.1038/s41598-022-11954-7>.
 2. "Radiative Properties of Soot Fractal Superaggregates Including Backscattering and Depolarization." *Journal of Quantitative Spectroscopy and Radiative Transfer* 247 (May 2020): 106940. <https://doi.org/10.1016/j.jqsrt.2020.106940>.
 3. Mather, T.A, R.G Harrison, V.I Tsanev, D.M Pyle, M.L Karumudi, A.J Bennett, G.M Sawyer, and E.J Highwood. "Observations of the Plume Generated by the December 2005 Oil Depot Explosions and Prolonged Fire at Buncefield (Hertfordshire, UK) and Associated Atmospheric Changes." *Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences* 463, no. 2081 (May 8, 2007): 1153–77. <https://doi.org/10.1098/rspa.2006.1810>.
 4. Najafi, and Hamzeh Valavi. "Aerosol Optical Properties in the Iranian Region Obtained by Ground-Based Solar Radiation Measurements in the Summer Of 1991." *Journal of Applied*

Meteorology and Climatology 35, no. 8 (August 1, 1996): 1265–78.
[https://doi.org/10.1175/1520-0450\(1996\)035<1265:AOPITI>2.0.CO;2](https://doi.org/10.1175/1520-0450(1996)035<1265:AOPITI>2.0.CO;2).