

**Short presentation of an expertise profile for the  
5<sup>th</sup> call Space in FP7**

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Public institution

Romania



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## **Draft Call Topics that we are interested in\***

### **Space-based applications at the service of European Society (GMES)**

- ***Support to the coordinated provision of observation data***
  - Climate Change – GMES service coordination

### **Strengthening the foundations of Space science and technology (SSF)**

- ***Research to support space science and exploration***
  - Exploitation of space science and exploration data

# Presentation of the National Institute of R&D for Optoelectronics

- Structure of the organisation
  - Public institution
  - Research institute
  - 5 departments related to use of optoelectronics in various applications: environment (remote sensing), medicine, nanotechnologies, art conservation/restoration, sensors
- Short history of the organisation and / or working group
  - The Institute: established in 1996
  - Remote sensing department:
    - Operational in international networks: EARLINET, AERONET, MWRNET
    - Promoter of the Romanian Atmospheric Observatory (<http://inoe.inoe.ro/RADO>), national scale
    - Expertise in active (lidar) and passive (microwave radiometry, sunphotometry, satellite imagery) remote sensing
- Experience with the EU Framework Programme
  - EARLINET-ASOS (<http://www.earlinet.org>): FP6- Structuring the European Research Area Specific Programme - Research Infrastructures Action, 025991
  - DELICE (<http://inoe.inoe.ro/DELICE>): FP7-REGPOT-2008-1, 229907
  - DELICAT (<http://www.delicat-fp7.org>): FP7-....
  - ACTRIS: FP7-INFRASTRUCTURES-2010-1, 262254

# Competencies

- List of competencies on the basis of the recent work programme Space
  - **Laser remote sensing:** backscatter, Raman and depolarization lidar; ozone lidar; fluorescence lidar
  - **Micrometeorology:** microwave radiometer, sodar, weather station
  - **Air quality:** in situ gas and particle analysers, AMS, APS, regional forecast
  - **Satellite imagery:** EUMETCAST
  - **Data:** collection, analysis, correlation
  - **Horizontal:** dissemination, education
- Reference projects
  - RADO (Romanian Atmospheric research 3D Observatory), Norway Grants STVES 115266
  - ACTRIS (Aerosols, Clouds and Trace gases Research InfraStructure Network), FP7-INFRASTRUCTURES-2010-1, 262254

# Intended Role in a Consortium

- Partner
- Possible work package leader (related to laser remote sensing, data analysis)

## Contact and further information (if any)

- Address data of the person to contact
  - Dr. Doina Nicolae, [nnicol@inoe.inoe.ro](mailto:nnicol@inoe.inoe.ro), +40-31-4053303
- Relevant links / references
  - Links:
    - <http://inoe.inoe.ro/Environment>
    - <http://inoe.inoe.ro/RADO>
  - References
    - D. Nicolae, C. Talianu, E. Carstea, C. Radu, 2009: Using classification to derive aerosol number density from lidar measurements, *J. Optoelectron. Adv. Mater.* 9(11), 3518-3521
    - Nicolae, D; Vasilescu, J; Carstea, E; Stebel, K; Prata, F, 2010: Romanian Atmospheric research 3D Observatory: Synergy of instruments, *Rom. Rep. Phys.*, 62 (4)
    - D. Nicolae, C. Talianu, T. Trickl, I. Serikov, V. Rizi, M. Iarlori, A. Comeron, C. Munoz, F. Rocadenbosch, A. Rodriguez, M. Sicard, S. Tomas, J. Pelon, P. McCormick, S.P. Palm, D.M. Winker, P.H. Flamant: 2010, Recent Advances in Atmospheric Lidars, *Optoelectronic Materials and Devices Series*, 1-86