

**P.1.15.**

**SOIL RESOURCES AND AGRICULTURAL CROPS  
VEGETATION STATUS MONITORING BY USING  
SPECIFIC AND PRECISION SENSORS**

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Increased demands on agricultural production, food security and safety, and environmental quality require improvement of agricultural management. This can be achieved through continuous monitoring and precise production factors (anthropic, biological, edaphic and climatic).

Progress in quality, reliability and diversification of contact and remote sensing sensors for monitoring soil resources and vegetation condition of crops, allow precision management efficiency and environment friendly.

The paper presents results from NIRDPSB Brasov using sensors for:

- monitoring "on the go" of soil resources (physical and chemical quality): Veris 3100 MSP Soil EC-NIR Spectrophotometer, Spectrum SC-900 Soil Compaction Meter, Spectrum TDR-300 Soil Moisture Meter;
- monitoring "on the go" vegetative status (physiological condition and health, water stress and plant nutrition) in crops: CropScan MSR-16R Multispectral Radiometer (400-1500nm), Spectrum CM-1000 NDVI;
- monitoring chemical composition of plants (the amount of chlorophyll and anthocyanin): Spectrum SPAD-502, Opti-Sciences ACM-200 Anthocyanin Content Meter.

All data collected by sensors mentioned are geo-referenced (GPS coordinates) and acquired continuously in a Geographic Information System (GIS) to obtain spatial maps of favourability and risk used in performance management of crops.

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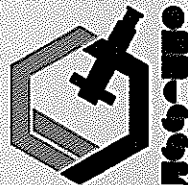
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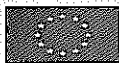
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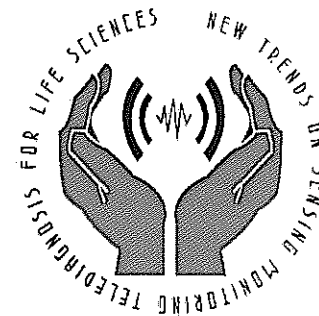
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# New Trends on Sensing - Monitoring - Telediagnosis for Life Sciences

NT SMT-LS 2014

Brasov, Romania, July 24-26, 2014

## BOOK OF ABSTRACTS



**Editors**

Mihaela BADEA  
Marius MOGA  
Patrizia RESTANI  
Jean-Louis MARTY

**LUX LIBRIS PUBLISHING HOUSE**

**International Conference**

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