

Remote Sensing and GIS Department

Space Research and Technology Institute -
Bulgarian Academy of Sciences

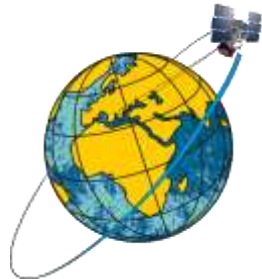
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Mission:

Development, improvement, and transfer of methods for environmental studies with integrated use of Earth observation technologies, geofomation systems and ground-based methods. Education of Master students, PhD students, and specialists in the field of RS.

Research directions:

Remote sensing applications in agriculture

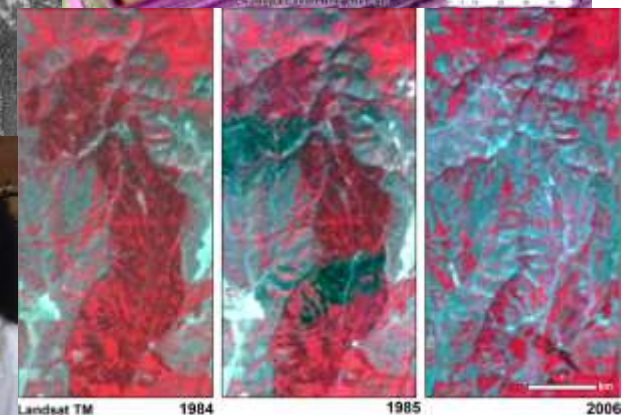
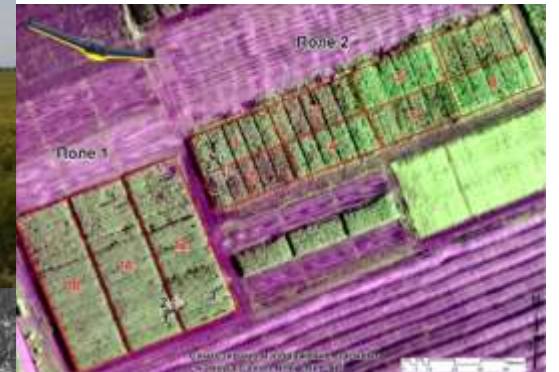
LCLU change detection and spatial planning

Assessment and monitoring of forest cover

Conservation of natural and cultural heritage

Introduction of RS in secondary education

Space greenhouse/Bioregenerative life support systems



Structure:

- RSGIS department has been established in 1974
- The team consist of 13 researchers and specialists: 2 Professors, 4 Associate Professors, 6 Assistants and 1 Technical Assistant, currently we have 8 PhD students.
- We have various qualifications: geographers, landscape ecologists, engineers, geologist, archeologist, biologists and biotechnologists.



Laboratories:

- Field Laboratory for Sub-Satellite Measurements:

Unmanned Aerial Vehicle (UAV) Sensefly, eBee Ag); Spectroradiometer FieldSpec 4; AccuPAR Ceptometer LP-80; infrared camera; GNSS system Leica GS08plus



- Laboratory of Space Biotechnology:

Portable Photosynthesis System for gas exchange and fluorescence LI-6400XTR; portable leaf area meter li 3000c; Analytical system for biochemical analysis

Bulgarian memberships:

- GEO since 2014
- ESA cooperating state since 2015

Recent projects:

- *Information Complex for Aerospace Monitoring of the Environment (ICASME)*. Grant Contract BG161PO003-1.2.04-0053-C0001, under OP *Development of the Competitiveness of the Bulgarian Economy 2007-2013* Project officer: Prof. Dr. Eugenia Roumenina.
- *Crop Monitoring using PROBA-V 100m S10 products on Zlatia test site – Bulgaria*. Project between SRTI-BAS and VITO, under PROBA-V 100 m Exploration Exercise 2014-2015.
- *Assessment of the potential and qualities of the forthcoming Sentinel-2 mission for precision agricultural applications based on SPOT 5 TAKE 5 experimental data on Zlatia test site*. Project officer: Assistant Vasil Vasilev, Ph.D.
- *Education in Earth observation for Bulgarian secondary schools*. Contract between European Space Agency (ESA), and RSG-SRTI-BAS under 1st Call under ESA PECS Agreement with Bulgaria. Project officer: Assoc. Prof. Lachezar Filchev, Ph.D.
- *Testing Sentinel-2 vegetation indices for the assessment of the state of winter crops in Bulgaria*. Contract between European Space Agency (ESA), and RSG-SRTI-BAS under 1st Call under ESA PECS Agreement with Bulgaria. Project officer: Assoc. Prof. Petar Dimitrov, Ph.D.



RSGIS department and SCERIN

- **2013** *Remote Sensing of Forest Cover and Change: Identifying Ecosystem Functions and Processes (RESFOR)*. COST, Principal investigator: prof. RNDr. Jana Albrechtová, Ph.D.
- **2016** Global land cover products validation and intercomparison in the SCERIN area.

SCERIN contribution:

- Partnerships for international projects (H2020, bilateral agreements)
- Student mobilities opportunities (ERASMUS+, Marie Skłodowska-Curie)
- Participation in GOFC-GOLD Programs (Data Training Initiative, Workshops)
- Access to RS and field data from the SCERIN area