

## UNIVERSITY OF NOVI SAD FACULTY OF TECHNICAL SCIENCES

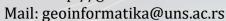




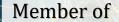
## Research activities

Geoinformatics Laboratory
PhD Miro Govedarica
PhD Dušan Jovanović
SCERIN 7 Capacity Building Workshop

WEB: http://geoinformatika.uns.ac.rs



















#### **Activities in the field of geoinformatics**



Student education

Research and scientific projects

Development of software solutions

Development and system realization

Consulting and other services

Process reengineering

Engineering staff education, specialization and certification

Organization of expert and scientific meetings

Cooperation and realization of joint projects with companies

















## **Areas of expertise**











GNSS and **Location Based** Services





Geoportals and Geospatial Services



Spatial Data Visualization



Spatial Databases



Big GeoData



Detection of Objects of Underground Infrastructure



Spatial Data Infrastructure













Member of













#### **Scientific Projects**



Geoinformation System of Serbian Republic Water Management Authority

- Ministry of Education, Science and Technological Development of Republic of Serbia
- 2004 2007
- Serbia

Flooding bank's structure modelling using geoinformation technologies and systems and ground penetrating radar

- Ministry of Education, Science and Technological Development of Republic of Serbia
- 2008 2011
- Serbia

Modelling the state and the structure of slope processes using GNSS, laser scanning technology and ground penetrating radar

- Ministry of Education, Science and Technological Development of Republic of Serbia
- 2011 present
- Serbia

**GEOWEB** 

- Erasmus+
- 2015 2018

**BESTSDI** 

- Erasmus+
- 2016 2019



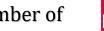
























#### **Scientific Projects**



TD1202 Mapping and the citizen sensor

• ICT COST

•2012-2016

TU1208 Civil engineering applications of ground penetrating radar

ICT COST

•2012-2017

Network of the permanent GPS stations in AP Vojvodina and full infrastrucutre network of geodata and geoservices

Faculty of Technical Sciences, Novi Sad

•2004

Network of the permanent GPS stations in AP Vojvodina

• Faculty of Technical Sciences, Novi Sad

•2004

DGNSS Correction data for real time navigation and GNSS observation data for post-processing positioning

• Faculty of Technical Sciences, Novi Sad

•2004

Oasis Innovation Hub for Catastrophe and Climate Extremes Risk Assessment

•H2020\_Insurance, Project Number: 730381

•2017 - 2020

• France, UK, Germany, Hong Kong, Denmark, Austria, Hungary, The Netherlands, Spain, Kenya and Serbia



























Technological Method for Developing Up-to-date Cartographic Base for Urbanism Based on Satellite and Airborne Remote Sensing

- Provincial Secretariat of Architecture, City Planning and Construction
- 2004 2006
- Serbia

Geographic Information System for the Ministry of Environmental Protection

- Ministry of Environmental Protection
- 2007 2008
- Serbia

Digital Spatial Model of the Riverside of the Danube

- Provincial Secretariate of Architecture, City Planning and Construction
- 2007-2008
- Serbia

Production of Digital Orotophoto and Digital Terrain Model for Irig 1: 1000

• Provincial Secretariat of Architecture, City Planning and Construction

Member of

- 2004
- Serbia



















Production of Digital Ortofoto and Digital Terrain Model for mountain Fruška Gora 1:5000 (area 142 000 ha)

- Provincial Secretariate of Architecture, City Planning and Construction
- 2004-2005
- Serbia

Production of Digital Ortofoto and Digital Terrain Model for Novi Sad 1:1000 and 1:5000 (area 70 000 ha)

- Provincial Secretariate of Architecture, City Planning and Construction
- 2004-2005
- Serbia

Distribution and Application of Infrastructural Geospatial Data in Agricultural GIS of Autonomous Province of Vojvodina (APV)

- Provincal Secretariat for Agriculture, Water Management and Forestry
- 2007-2008
- Serbia

New Technological Method for the Management of Agricultural Fields Purpose of AP Vojvodina – regulation of agricultural areas based on modern geoinformation technologies and systems

- Provincal Secretariat for Agriculture, Water Management and Forestry
- 2007-2008
- Serbia



















#### Development of GIS and Geoportal

- Republic Administration for Geodetic and Property Affairs
- 2007 2013
- Republic of Srpska

GIS for Local Authorities

- GTZ Montenegro
- 2006 2009

GIS for Land Administration in the Real Estate Cadastre and Land Registry

- Dept for Real Estate, Montenegro
- 2000 2005

















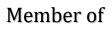
Remote Sensing in Forestry

• 2004 - Present

Remote Sensing in Agriculture

- Private companies in Serbia
- 2004 Present

















GPR Scanning and GPS Mapping of Underground Mid-pressure Gas line Network in Kikinda (44 km)

- Srbijagas, Novi Sad
- Aug 2006 Sept 2006
- Serbia

GPR Scanning and GPS Mapping of Underground Utilities in Carlsberg Brewery in Čelarevo

- Carlsberg Brewery, Celarevo
- Nov 2005
- Serbia

GPR Scanning and GPS Mapping of Underground Mid-pressure Gas line Network in Novi Sad

- Srbijagas, Novi Sad
- Aug 2005 Sept 2005
- Serbia

GPR Profile Scanning and GPS Mapping of Primary and Secondary Telecommunications Network in Čelopek, Bosnia and Herzegovina (43 km)

- Geomatik Bijeljina, Bosnia and Herzegovina
- Dec 2004
- Bosnia and Herzegovina



















#### Ortophoto and DTM using LiDAR

- Municipality Subotica
- 2016
- Serbia

Extraction of power lines and towers from the point cloud

- Elektroistok Projekt Biro d.o.o
- 2016, 2018
- Serbia

Ortophoto and DTM using LiDAR

- Novi Sad and Petrovaradin Fortress
- 2018
- Serbia

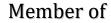
Orthophoto Serbia 2015-2016

- Republic Geodetic Authority RGZ
- 2016
- Serbia





















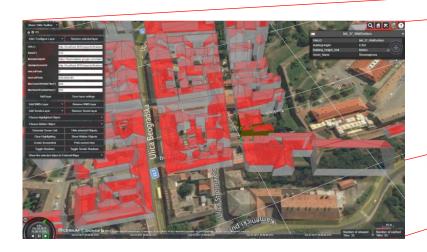
## **Spatial Data Visualization - Projects**

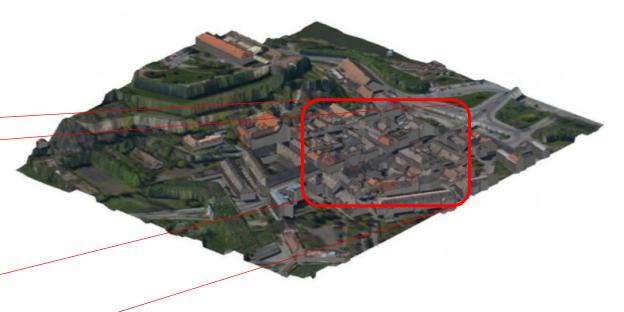


3D Map Clients

Virtual Reality Framework

**Augmented Reality** 



















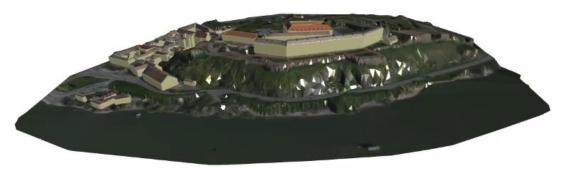


## **Spatial Data Visualization - Projects**













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## GEOINFORMATICS LABORATORY

Thank You for Your Attention!

WEB: http://geoinformatika.uns.ac.rs

Mail: geoinformatika@uns.ac.rs



