

# Tomaž Podobnikar – Curriculum Vitæ

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*academic and research, technical solutions, public service IT, space, environment and conservation sectors*

*I am fascinated by innovation and science. What could be nicer than solving something that someone claims is unsolvable? Understanding the natural and social phenomena in (geo-)space over time is paramount before discovering feasible technical solutions. Taking into account a very broad perspective, I discovered that art and science make excellent bedfellows.*

Geospatial Information Expert – **Scientific Councillor, Assoc. Prof.** (PhD, MSc, BSc Geodetic Engineering), **currently a Sustainable Development Officer with 25+ years of productive working experience** in the areas of geoinformatics and applied sciences including GIScience, **environmental and social sciences**, Earth observation, hazard and risk management, teaching and **supervising, project/programmes evaluation**, etc. at 13 academic, governmental, NGO, IGO (UN) and consulting organizations in 9 countries. **Simplifier and constructor** in the process of discovering new knowledge. I can build everything from the front-end to the back-end and everything in between. Career highlights include **strong leadership and people management** (head of the dept., GIS chief); fieldwork in ecological, archaeological, anthropological and geomorphological mapping, various geodetic survey; designed and delivered courses in management of spatial data quality, GIS and digital terrain modelling (DTM). Documented innovative methods and technical solutions: spatial data integration with semantic enrichment to **reduce the cost of DTM up to 25-times**, realized for the National DTM; geomorphological MVI techniques for spatial feature detection and recognition, visualization and photography enhancement, used in the Esri World Topographic Map. Awarded with over 25 competitive grants including **Fulbright** and Skolkovo Innovation Center.

## Core Skills and Qualifications

- **Team leader** (Head of the dept., Chief GIS and other leaderships) and **team player; cross-disciplinary and multicultural** involvements; governance.
- A proficient, self-motivated **researcher**, R&D, **teacher** (lecturer, supervisor), **trainer, consultant**, professional communicator.
- **Publications:** [Google Scholar](#), [Semantic Scholar](#), [ORCID](#), [ScopusID](#), [ResearcherID](#), [COBISS](#); **1450+ citations H-index 17** with the most cited paper being cited 113-times; **editorial board of the 7 journals**, edited 8 monographs/special issues, **reviewed 210+ papers**.
- **Designed and managed** 30+ and contributed to 90+ international projects, of which 18+ with industry.
- **Evaluated** 75+ scientific and industrial international projects.
- **Applied sciences** (natural, social, environmental, engineering), Geosciences, Geoinformatics, Geomatics, GIScience, Earth Observation Information Science, spatial analytics, geospatial data science, geostatistics, spatial statistics, SDI, spatio-temporal, geodesign, algorithm design, database design, GIS, remote sensing, geomorphometry, cartography, image processing, geovisual analytics, network analysis, location-based services, artificial intelligence (AI) and machine learning implementation, application development.
- **Applied fields:** Environmental geography, hazard and risk management, spatial modelling for conservation (environment, cultural heritage), climate change issues, landscape archaeology, palaeoenvironmental analysis, space research.
- **Quantitative and qualitative research** with the development of own methods: spatial data analysis, geostatistics; mathematical modelling; processing various spatial data layers, satellite imagery; Monte Carlo simulations; predictive analytics and spatial data mining; spatial data conflation, integration, and multi-method approaches; photographic processing, spatial generalization, digital photography/imagery enhancement, spatial reasoning, cognition and decision making.
- **Geodetic** (and GNSS) surveying and mapping, computer programming, spatial databases, cloud GIS, VM.
- **Computer applications:** CAD and database management since 1990, GIS, cartography and RS since 1994, (spatial) statistics since 1996, ALS since 2003, various visualization software since 1994; familiar with

programming languages to bring research ideas beyond the limits of common off-the-shelf analytical software.

- **Links:** [ResearchGate](#), [ACADEMIA](#), [Portfolio](#), [SCGIS](#)

## Professional Experience

**United Nations, ESCWA, Lebanon** 2021-09 – current  
*Sustainable Development Officer (GIS), Regional Advisor*

Currently work for ICTS (2022). Worked Cluster 4: Statistics, Information Society and Technology (2022), and Cluster 1: Arab Centre for Climate Change Policies; Climate Change and Natural Resource (2021). In particular, developed solutions for numerous projects aimed to deliver state-of-the-art GIS and remote sensing solutions. Prepared and provided training, lectures, and consultancy on numerous geospatial topics, from GIS roots and concerning cartography, geodesy, photogrammetry, remote sensing, image processing, databases development, analytics, geovisualization, visual analytics, etc. Collaboration with UN-GGIM – Arab States. Promote interdisciplinarity and cross-lateral solutions and systematic “geospatial reasoning”. Collaboration with many other UN agencies, especially in Lebanon in the fields of GIS, cartography and geodesy. Contribution with geospatial approach to the interdisciplinary project: ‘Human development, poverty and multiple shocks in the Arab region – A geospatial analysis’.

**University of Ljubljana, Slovenia** 2020-09 – 2021-09  
*Associate Professor*

Teaching in the doctoral study ‘Built Environment’, for two courses that I developed: “Digital terrain modelling for natural hazards assessment” (mainly for civil engineers); “Management of spatial data quality” (mainly for geodesists). Supervised international PhD students (ongoing).

**Faculty of Information Studies in Novo Mesto, Slovenia** 2008 – 2021-09  
*Associate Professor*

Lecturing, supervision and research in the postgraduate program. Deliver innovative and effective teaching, teaching curriculum (courses), and learning materials, attracting students from different disciplines and involve GIS in new disciplines curricula. Teaching activities, two courses: “Quality of Information” (lectures, tutorials, lab work); “Geographic Information Systems” (lectures, tutorials, lab work).

**United Nations, MINUSMA, Mali** 2020-01 – 2020-08  
*Chief GIS, Geospatial Information Officer*

Leadership and HR management. Taken responsibility for incorporating gender perspectives and ensuring the equal participation of women and men in all areas of work. Worked collaboratively with colleagues to achieve organizational goals. Solicited input by genuinely valuing others’ ideas and expertise. Supported and acted following final group decision, even when such decisions may not entirely reflect own position. Shared credit for team accomplishments and accepted joint responsibility for team shortcomings. Technological Awareness: Employed in-depth knowledge of the latest technological developments in GIS, image processing, internet of things (IoT), GNSS and web applications. Kept abreast of available technology. Understood applicability and limitation of technology to the work of the office. Actively sought to apply technology to appropriate tasks.

**United Nations Global Service Centre, Italy** 2019-05 – 2020-01  
*Geospatial Information Officer*

Managed geospatial databases and provided geospatial platforms, solutions and services to clients. Outreach, business partnerships and partnership with field missions and UNHQ. Supported NYHQ goals for the “Cloud-first” initiative and managed cloud instances as per guidance from NYHQ and SGITT. Employed efficient project and service management. Complied with organizational security regulations. Strengthen the institutionalization of FTS project/program management and associated Governance Process.

**University of Ljubljana, Slovenia** 2009-11 – 2019-06  
*Associate Professor*

Worked for Faculty of Civil and Geodetic Engineering, Research Institute of Geoenvironmental and Hydrological Threats – RIGHT (2014-2019), and Department of Geodetic Engineering (2009-2014). As a

researcher, developed advanced methods for spatial models, particularly in fields of geomorphometry, geostatistics, AI, georadar, and spatial data integration, mostly in the field of degradation of landscapes and hazard management due to climate changes. As a professor, developed courses and thought and supervised students at different levels, such as “Photogrammetry II” (tutorials for graduate students), and many others. Proposed research ideas in the field of flipped and collaborative learning.

**Oxford Policy Management Ltd, United Kingdom**

2013 – 2018

*External Consultant*

Consulting in the fields GIS, spatial predictive modelling, geostatistics, and environmental science for developing countries, e.g. for “Identifying Frontiers of Digital Financial Services in Tanzania”.

**School of Advanced Social Studies in Nova Gorica, Slovenia**

2008 – 2013

*Assistant Professor*

Delivered innovative and effective teaching, teaching curriculum (courses), and learning materials, attracting students and involve GIS in new disciplines curricula. Teaching activities: “Quality of Information” (lectures, tutorials, lab work).

**Scientific Research Centre of the Slovenian Academy of Sciences and Arts, Slovenia**

1995-11 – 2013-06

*Scientific Councillor (Research Advisor), Head of the Department*

Through leadership, management, mentoring, lecturing and supervising, conducted international teams, of researchers, students, technical staff and other stakeholders, and engaged them for projects, programmes, innovative advanced research, studies, applications, conferences, etc. Ensured development methods in the fields of natural and cultural environment spatial analysis in GIS, geomorphometry, advanced archaeological prediction modelling to optimise the fieldworks, integration of geodetic survey and GIS-based mapping techniques for the fieldworks, etc. Apart from delivered lectures for students, global public and professional audience and fellows, ensured educating the following subjects for individual postgraduate students: Cartography, GIS and environment, GIS and dialectology, GIS and habitats, at the Faculty of Civil and Geodetic Engineering, Biotechnical Faculty and the Faculty of Philosophy (University of Ljubljana), since 2008.

**Mura Regional Development Agency Ltd, Slovenia**

2012-10 – 2013-09

*Project Manager and Consultant*

A leader and consuler to applicate advanced research into regional development through EU development project “REG-NET, Slovenia – Hungary”. Preparing and running the project workshops.

**University of Nova Gorica, Slovenia**

2008-10 – 2011-08

*Assistant Professor*

As a fellow at the School of Environmental Sciences in higher education, developed and lectured two courses: “Environmental Information Systems and GIS” with tutorials for undergraduate students, and “Geographic Information Systems” with tutorials for postgraduate students. In addition, lead a team of researchers in an interdisciplinary field after successfully acquired an international project. Managed this project.

**Vienna University of Technology, Austria**

2007-01 – 2008-12

*Project Assistant*

With my expertise, I was employed to contribute as researcher, supervisor and project manager in the series ESA Mars Express projects, as well as in Christian Doppler Laboratory “Spatial Data from Laser Scanning and Remote Sensing”, at the Institute of Photogrammetry and Remote Sensing”. The main research topics were: planet Mars exploration, developing algorithms for enhanced digital terrain model (DTM) production and methods for lidar applications development. They included development methods for quality control, geomorphological extraction of different terrain features, and geovisualization. Other research activities included: remote sensing applications in invasive plants, applications in environmental archaeology, and natural hazards and risks management applications (launched all 3 projects).

*Civil Servant*

At the Surveying and Mapping Authority of the RS, involved in operative work, research and administration in various fields, such as geodesy, GIS, photogrammetry, land surveying, cartography, remote sensing, spatial database design and management, national coordinate systems transformation.

**International mobility (postdocs, research visits)**

Realized **9 research periods** of at least 1 month, altogether 15 months:

- **Fulbright Visiting Scholar Program** (grant); Department of Marine Geosciences - Rosenstiel School of Marine and Atmospheric Science, University of Miami, USA, 2019
- **Quality Researcher** (grant); C.N.R.S., Laboratoire de Chrono-écologie, Université de Franche-Comté, Besançon, France, 2006
- **Research Expeditions** (National Geographic Society CRE grant); South Campeche, Reserva de la Biósfera de Calakmul, Yucatán and Mexico City, Mexico, 2004 and 2005
- **Visiting Researcher** (grants); Institute of Photogrammetry and Remote Sensing, Vienna University of Technology, Austria, 1999, 2000 and 2001
- **Visiting Researcher** (grant); Faculty of Geodesy, Delft University of Technology, The Netherlands, 1997
- **Research Expedition** (grant); Island of Brač, Croatia, 1994

**Education**

**PhD (Doctor of Science)**

University of Ljubljana  
1998 to 2001

**MSc in Geodesy**

University of Ljubljana  
1995 to 1998

**BSc (Bachelor of Geodetic Engineering)**

University of Ljubljana  
1991 to 1995

**Professional Membership**

- **ELISE** (The European Location Interoperability Solutions for e-Government), since 2020
- **European AI Alliance**, since 2018
- **SCGIS** (Society for Conservation GIS), since 2015
- **IUGG** (Slovenian Association of Geodesy and Geophysics), since 2012
- Geomorphological Society of Slovenia, since 2010
- Section for Cartography at the Association of Surveyors of Slovenia, since 2009
- **ICA Commission on Cartography in Early Warning and Crises Management** (International Cartographic Association), since 2009
- **ICA Commission on Generalisation and Multiple Representation** (International Cartographic Association), since 2009
- **ICA Commission on Mountain Cartography** (International Cartographic Association), since 2007
- **EGU** (European Geosciences Union), since 2007
- **IAHS** (International Association of Hydrology Sciences), 2007-2010
- **AGILE** (Association Geographic Information Laboratories Europe), 1998-2012

**Leadership**

- **GIS Chief** of GIS Unit, Field Technology Section (FTS), United Nations, Mali, 2020
- **Co-founder** of Vedomec, Institute for the Spatial Culture, Slovenia (on my initiative), 2011-2015

- **Head of the Department of Environmental Studies** of the Institute of Anthropological and Spatial Studies, Scientific Research Centre of the Slovenian Academy of Sciences and Arts, Slovenia (established on my initiative), 2007-2013
- **Science Council** member of the Institute of Anthropological and Spatial Studies, Scientific Research Centre of the Slovenian Academy of Sciences and Arts, Slovenia, 2004-2008

## Editor

**Editorial Board** and member of the scientific committees: Remote Sensing journal, MDPI, [Topic Editor](#), since 2021, and Section Editor "[Remote Sensing in Geology, Geomorphology and Hydrology](#)", since 2019; Geoinformatics FCE CTU, since 2016; IJEES, since 2015; ISPRS Journal of Photogrammetry and Remote Sensing, 2013–2016; Journal of Geodesy, 2010–2014; Geographical Information Systems in Slovenia, since 1997 (also organized biennial symposiums). **Edited** following monographs and special issues:

- [Spatio-Temporal Analysis of Urbanization Using GIS and Remote Sensing](#), Special issue, MDPI, 2022
- [Perspectives on Digital Elevation Model Applications](#), special issue, MDPI, 2021
- [Advances in Global Digital Elevation Model Processing](#), special issue, MDPI, 2020
- [Universal Ontology of Geographic Space: Semantic Enrichment for Spatial Data](#), monograph, IGI Global, 2012
- Geographical Information Systems in Slovenia, monographic series, ZRC Publishing, 1998, 2000, 2002, 2004, 2006 (5 monographs)

## Expert tasks: Reviewer, Evaluator and Board Membership

**A reviewer** of 49 international journals. Reviewed 210+ papers. Refereed 2 monographs, 7 national and 5 international projects. An **evaluator and a referee** (wrote experts' reports) of **55+ national and 15+ international programmes and projects** (basic research, applied science and industry – R&D) since 2003 (Slovenia, Czech Republic, Belgium, Bulgaria, Croatia, France, Montenegro, Netherlands). Registered an active **expert, evaluator or board member** of:

- MCST (Malta Council for Science and Technology), 2021-2025 (evaluator board)
- Fulbright: Fulbright Senior Award, 2019, 2021 (evaluator board)
- IBF International Consulting, since 2018
- Montenegrin Ministry of Science, since 2018 (evaluator board)
- COST (European Cooperation in Science and Technology), since 2018 (expert board)
- MSCA-IF (Marie Skłodowska-Curie Individual Fellowships), 2017 call (evaluator board)
- Ministry of Economic Development and Technology, Slovenia, since 2017 (evaluator board)
- SPIRIT Slovenia (Public Agency for Entrepreneurship, Internationalization, Foreign Investments and Technology), since 2017 (evaluator board)
- Ministry of Science and Education, Croatia, since 2017 (evaluator board)
- CMEPIUS, 2016-2020 (evaluator board)
- REGIO (to support Cohesion Policy, regional and urban development) of the European Commission, since 2016 (experts board)
- Horizon 2020 Advisory Groups (European Commission), since 2014 (evaluator board)
- Ministry of the Environment and Spatial Planning of the Republic of Slovenia, "Preparation of the starting points for the recording terrain with lidar", 2010-2011 (Independent government consultant for the high-resolution lidar terrain models)
- ARRS (Slovenian Research Agency), 2003-2008 (evaluator board)

## Innovation

**Multi-source spatial data conflation** (merging with enrichment) novel methodology and computer application for digital elevation model (DEM) production with integration. I have built everything from front-end to back-end and everything in between. The derived landform map has been used nationwide in all high schools and integrated into the European model (EuroDEM – EuroGeographics) and Google Earth model. The reduced cost of the final product up to 25-times has been realized for the [National DEM of Slovenia](#) and Central Dalmatia. The improved solution received "Spatial data integration, Space Technologies and

Telecommunications” and “Information Technologies” grants with excellent scores from the Skolkovo Innovation Center.

**Multidirectional Visibility Index (MVI).** The generic and multimodal solution is based on a novel [geomorphic technique](#). I developed the MVI for analytical hill shading and adapted it for predictive modelling (alluvial fans/talus cones), feature recognition and description (mountain peaks, karst depressions), geovisualization (visual quality control) and photography (imagery enhancement with image processing). The solution for the recognition of the geomorphological peaks was used in the Esri World Topographic Map.

**Mapping process with real-time quality control** that employed surveying, GNSS, data sampling and spatial analytics. The [challenges](#) in conducting this method have been in poor resources. I developed that innovative method for ancient Maya settlements models and maps in the Yucatan, Mexico, which led to significantly better surveying accuracy and faster mapping.

**Time-series based algorithm** for generating GIS-layers that involve palaeo relief simulations, automated historical maps analysis and cartographic methods. The results were used for the film “Nature and the City”, produced by the City Museum of Ljubljana.

**Participatory management on the relation between individual and group tasks.** The method is based on spatial statistic pattern research, which was involved in crowdsourced data. The main findings were that individuals had better respond to constructive critical judgement, have a deeper understanding and a more useful approach to creative thinking. Groups are more successful in finding unique differences, where the synergy effect is an important factor. The findings have been used for didactics, mapping purposes, as well as better capacity building.

## Funding and Research Projects

Very successful in **obtaining research grants** at national, regional, EU and other international levels. Active participation as a major team player, in **90+ national and international cooperation projects** in Slovenia, Croatia, North Macedonia, Italy, Austria, Hungary, France, Russia, Mexico, as well as in a project covering the entire Earth and the planet Mars. Worked in different types of groups and alone. This has given me access to very good networks of people from EU countries and other parts of the world.

**Successfully designed and raised competitive research funds for 20+ projects, managed and executed them** (e.g. co-financed by the ERDF: FP6, FP7), and participated in **18+ joint cooperation projects with industry**, co-financed by Skolkovo Foundation, Telekom, DARS, etc. The work includes numerous basic research projects co-financed by FFG/ALR, ASAP, ARRS, etc. Highlighted projects with their acronyms: OBSERVE, PARAMount, TransEcoNet, TMIS.plus.II, TMIS.morph, CAENTI, SISTEMaPARC, Alpine Windharvest, AQUADAPT, ArchaeDyn, Adriatic Island Project, National Program of Water Management – in the framework of Interreg programs, Central Europe, Inter-American Development Bank, National Geographic (CRE grant).

Accepted **9 competitive start-up projects in the industry** on spatial data handling topics with the following acronyms: SmartDEM (UiG, 2021; Future 4.0, 2020; Skolkovo Foundation, 2014, 2017, 2018) and Top Topography (INiTS, 2019). Using project management tools (MS Project, PlantUML, Open Workbench, JIRA, etc.).

## Spatial analysis and survey-related studies

**Quantitative and qualitative** research with the development of my methods for spatial data analysis, geostatistics; mathematical modelling; the processing of various spatial data layers, satellite imagery; Monte Carlo simulations; predictive analytics and spatial data mining; spatial data conflation, integration, and multi-method approaches; digital photography/imagery enhancement; QC/QA and uncertainty management with my approaches to data/information and organizations.

**Spatial database** development and management: storage, access, transform, analyse, interpret, and implement for the massive amounts of data (spatial ETL – e.g., Power BI, RapidMiner, MS Access, ArcGIS); documentation. Good experience in establishing or maintaining a database containing large data sets and a multi-dimensional array of data (OLAP cubes), which is particularly evident in the setting up of a web GIS server platform for the Cultural and Natural Heritage Database in Slovenia (2002-2006), and a Web

GIS/Geostatistics portal for the Pomurje region, NE Slovenia (2012-2013), an Archaeological data base of Central Dalmatia, Croatia (1994-1998); geospatial metadata bases for ZRC SAZU (2001-2013), UN spatial metadata base (UNGSC 2019, ESCWA 2021-2022); Database for digital elevation models processing (since 1998); Standard fundamental spatial data themes data base from various sources for the Arab region (2022), and many others.

**Studies, based on various spatial databases:** geodetic **surveying** and mapping (total stations, levels, etc.) including satellite geodesy (GNSS) (since 1994); transformation of coordinate systems and map projection (since 1993); web design and development – now DNN, WordPress (since 1997); individual house design plans (since 1985); experience in working with AWS cloud-based servers (since 2017). Knowledge of design and implementation of the internet of things (IoT), and video surveillance and protection technology (since 2014). Initiated an idea of a COVID-19 (coronavirus) spatial platform in the UN and realized for Minusma on live **survey** data spatial dashboard (2020). Proposal and development of the statistical methods on **survey** data and research methodology for the project “Influence of daily individual meteorological parameters on the incidence of the acute coronary syndrome” (2018-2019). Contribution with a spatial approach to the ESCWA interdisciplinary project ‘Human development, poverty and multiple shocks in the Arab region – A geospatial analysis’ where I manipulate HDX, ACLED, DHS **survey** data, topographic data and highly pre-processed spatio-temporal data like as land cover (2022). From **survey** data in various countries (Croatia, Slovenia, Mexico, Albania, Austria) I modelled mental maps and maps from predictive models based on social and environmental variables (since 1994).

## Fieldwork and research expeditions

Having contributed to several fieldwork projects own scientific outputs were improved during the process. The main areas of fieldwork are **ecological, archaeological, anthropological** and **geomorphological mapping**, based on my **geodetic survey**, including various land cadastre, **GNSS** and **lidar measurements**, and other **survey** and **geospatial data**. The archaeological fieldworks (1994–2005) lasted between one and eight weeks and included geodetic measurements, online mapping using innovative GIS-based quality control, design and creation of databases, archaeological prospection, etc., all of which served as a basis for further spatial analysis. Also, participated in fieldwork (archaeological reconnaissance, anthropological survey, geodetic surveying and advanced mapping, ecological and speleological investigations, etc.): in particular on the island Brač, in Makarska, and Cetina Valley in Croatia (1994 and 1999); at Tonovcov grad in Slovenia (1996); and in South Campeche, Yucatán, Mexico (2004 and 2005). Other experiences with fieldwork included GNSS (GPS) campaigns in Slovenia and (North) Macedonia (1994–1998), which usually lasted 10 days: EUREF’94, Slovenia’95, EUREF MAK’96 to name a few. The other types of fieldworks included the measurement of trees position for lidar data calibration and making detailed relief measurements for lidar data control (2004), anthropological surveys in Albania (2007), mapping of invasive plants in Slovenia (*Fallopia japonica* and *Robinia pseudacacia*) (2009–2011), geomorphological survey (2014), and fieldwork for stabilization purposes in Mali (United Nations, 2020).

## Publications as Main Author

Written, participated in, or actively contributed in more than **55 original scientific papers** for journals, 27 monographs, 54 popular science articles, 7 national and 60 international conferences and meetings. A complete list of publications (currently 615 records) is documented in COBISS, [Personal Bibliographies](#). The representative publications in chronological order (all references are available upon request):

- Šarlah, N., **Podobnikar, T.**, Ambrožič, T., Mušič, B. 2020: Application of Kinematic GPR-TPS Model with High 3D Georeference Accuracy for Underground Utility Infrastructure Mapping: A Case Study from Urban Sites in Celje, Slovenia. *Remote Sens*, 12(8). DOI: [10.3390/rs12081228](https://doi.org/10.3390/rs12081228) (cited 10 times)
- Šarlah, N., **Podobnikar, T.**, Mongus, D., Ambrožič, T., Mušič, B. 2019: Kinematic GPR-TPS Model for Infrastructure Asset Identification with High 3D Georeference Accuracy Developed in a Real Urban Test Field. *Remote Sens*, 11(12). DOI: [10.3390/rs11121457](https://doi.org/10.3390/rs11121457) (highly accessed article in July and August 2019) (cited 10 times)
- **Podobnikar, T.**, Štefančič, M., Verbovšek, T. 2019: [A](#) GIS-based approach to karst relief cyclicity by using Fast Fourier transform. *AGILE 2019 – Limassol, June 17-20, 2019*, 5 p.

- **Podobnikar, T.** 2018: Palaeotopography concerning sea level changes to rethink past human activities in Central Dalmatian islands, Adriatic Sea. *Acta hydrotechnica*, 31(55), 143-156. DOI: [10.15292/acta.hydro.2018.09](https://doi.org/10.15292/acta.hydro.2018.09)
- Šturm, T., **Podobnikar, T.** 2017: A probability model for long term forest fire occurrence in the karst forest management area of Slovenia. *Int J Wildland Fire*, 26(5), 399-412. DOI: [10.1071/WF15192](https://doi.org/10.1071/WF15192) (cited 12 times)
- **Podobnikar, T.**, Székely, B. 2015: Towards the automated geomorphometric extraction of talus slopes in Martian landscapes. *Planet Space Sci*, 105, 148-158. DOI: [10.1016/j.pss.2014.11.019](https://doi.org/10.1016/j.pss.2014.11.019) (cited 7 times)
- **Podobnikar, T.** 2012: Detecting Mountain Peaks and Delineating Their Shapes Using Digital Elevation Models, Remote Sensing and Geographic Information Systems Using Autometric Methodological Procedures. *Remote Sens*, 4(3), 784-809. DOI: [10.3390/rs4030784](https://doi.org/10.3390/rs4030784) (cited 44 times)
- **Podobnikar, T.** 2012: Multidirectional Visibility Index for Analytical Shading Enhancement. *Cartogr J*, 49(3), 195-207. DOI: [10.1179/1743277412Y.0000000012](https://doi.org/10.1179/1743277412Y.0000000012) (cited 14 times)
- **Podobnikar, T.**, Vrečko, A. 2012: Digital Elevation Model from the Best Results of Different Filtering of a Lidar Point Cloud. *Trans GIS*, 16(5), 603-617. DOI: [10.1111/j.1467-9671.2012.01335.x](https://doi.org/10.1111/j.1467-9671.2012.01335.x) (cited 46 times)
- Dorigo, W., Lucieer, A., **Podobnikar, T.**, Čarni, A. 2012: Mapping invasive *Fallopia japonica* by combined spectral, spatial, and temporal analysis of digital orthophotos. *Int J Appl Earth Obs*, 19, 185-195. DOI: [10.1016/j.jag.2012.05.004](https://doi.org/10.1016/j.jag.2012.05.004) (cited 105 times)
- **Podobnikar, T.** 2009: Methods for visual quality assessment of a digital terrain model. *S.A.P.I.EN.S.*, special Issue 2(2), [15-24](#) (cited 113 times)
- **Podobnikar, T.** 2009: Georeferencing and quality assessment of Josephine survey maps for the mountainous region in the Triglav National Park. *Acta geod geophys Hung*, 44(1), 49-66. DOI: [10.1556/AGeod.44.2009.1.6](https://doi.org/10.1556/AGeod.44.2009.1.6) (cited 63 times)
- **Podobnikar, T.**, Schöner, M., Jansa, J., Pfeifer, N. 2009: Spatial analysis of anthropogenic impact on karst geomorphology (Slovenia). *Environ geol*, 58(2), 257-268. DOI: [10.1007/s00254-008-1607-3](https://doi.org/10.1007/s00254-008-1607-3) (cited 27 times)
- **Podobnikar, T.** 2005: Production of integrated digital terrain model from multiple datasets of different quality. *Int J Geogr Inf Sci*, 19(1), 69-89. DOI: [10.1080/13658810412331280130](https://doi.org/10.1080/13658810412331280130) (cited 90 times)

## Honours and Awards

Awarded with 25+ competitive grants including **Fulbright** and Skolkovo Innovation Center, as well as:

- Certificate of Outstanding Contribution in Reviewing of the ISPRS Journal of Photogrammetry and Remote Sensing, 2014
- Prešeren Award of University of Ljubljana for best students (as supervisor of Obu, J.), 2011
- Alumnus Optimus, Award for best student of School of Environmental Sciences, University of Nova Gorica (as supervisor of Jež, E.), 2010/2011
- Gisdata/Esri Award for exceptional students' results in the development and using of the geographical information systems (as supervisor of Obu, J.), 2010/2011
- First prize for the poster; Čeh, M., Smole, D., Podobnikar, T. Geodata: Are they accessible and usable?, 2004; 7th AGILE Conference on Geographic Information Science, Heraklion, Greece. The prize encouraged our team to pursue research on the topic of the universal ontology of geographic space. Proud to be asked to edit a monograph on the topic, which was published in 2012.