

# Curriculum Vitae

Liakos Leonidas

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## Personal information

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**Name:** Leonidas Liakos

**Date of birth:** 01 January 1979

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vCard QR code:



## Education

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- **Phd Diploma (award Oct.2021)**, Department of Planning and Regional Development, University of Thessaly, Scholarship of the State Scholarships Foundation (IKY), PhD Supervisor: Prof. Stathakis Demetris, Thesis: Urban sprawl models, monitoring through remote sensing of night time lights.
- **December 2000-November 2001:** University of Thessaly, Master's Degree (MSc) in Regional Planning and Development, (Grade: 8,4).  
*(My Thesis subject was: Trends of Change in Employment in Greek Prefectures).*
- **September 1996-December 2000:** University of the Aegean, Bachelor's degree in Geography (Grade: 7,75).  
*(My Thesis subject was: Changes in employment and in Gross Domestic Product (GDP) in Thesprotia during the periods 1971-1981 and 1981-1991. Study of changes using the method of Shift-Share Analysis).*

## Work experience

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- 30/06/2020 – 30/09/2022: **Unisystems: external contractor of the Joint Research Centre of the European Commission**, “Technology Expert to provide technical support for the geospatial modeling activities of the Natural Capital Project”, Ispra, Italy.
- 22/07/2020–23/07/2020: **Institute of the Greek Tourism Confederation**, “Geoprocessing and mapping services: matching real estate leased on Airbnb-Homeaway platforms with zip codes and administrative units of Kallikratis”, Athens, Greece.
- 01/11/2019–30/01/2020: **Institute of Historical Research of the National Hellenic Research Foundation (IHR/NHRF)**, “Processing of population and spatial data for the creation of thematic maps for the residential network of the Peloponnese during the years of the Revolution of 1821” within the framework of the Project “Documentation of history of the Greek settlements 15<sup>th</sup>-20<sup>th</sup> century”. Athens, Greece
- 01/11/2018–25/07/2020: **University of Thessaly**, 1<sup>st</sup> Call in order to support the Postdoctoral Researchers, Estimating Seasonal Population via Night-Time Satellite Image. Night-Lights Preprocessing, Volos, Greece.
- 11/2015-03/2016: **Institute of Historical Research/National Hellenic Research Foundation**, Kyrtau Plegmata: Networks of economy, power and knowledge in the Greek world from prehistoric times to the modern era: documentation – mapping – synthetic approaches, Athens, Greece. (Project “Krepis”, General Secretariat of Research and Technology, 2013-2015)
- 07/09/2015-15/10/2015: **Greek Research and Technology Network (GRNET S.A.)**, "3D Models for printing of greek mountains" in the context of sub-project 4 "Financial support for FOSS development projects" of the project "Electronic services for development and dissemination of Open Source Software" with the code MIS 292567 of the OP "Digital Convergence", Athens, Greece.
- 01/04/2015-30/10/2015: **University of Thessaly**, "Server's interconnection with the GPS that have installed in livestock holdings of the sample in Thessaly and data storage in GIS database" under the research project titled "LACTIMED-GT5", Volos, Greece.
- 01/11/2014-24/03/2015: **University of Thessaly**, "Spatial analysis of primary health care services in Greek territory and decision support of relocation based on the needs of the population", (Development of Information System, Applying methodologies of location), Volos, Greece.
- 11/10/2013-31/12/2014: **University of the Aegean**, Participation in the development of thematic databases concerning the mapping of all the borders of the traditional settlements and the calculation of the key indicators about the Operational

Programme «Traditional Settlements on the Aegean Islands- Factors that changed the character of the Traditional Settlement on the Aegean», Mytilene, Greece.

- 01/11/2012-30/11/2012: **University of Thessaly**, Spatial Data Infrastructure- Web mapping application, Volos, Greece.
- 02/12/2009-31/12/2009: **8<sup>th</sup> Ephorate of Prehistoric and Classical Antiquities**, Digitizing of topographic maps, Project correction and use of Geographic Information Systems (GIS) on the rescue excavations in Kanoni, Corfu, Greece.
- 19/5/2009-31/12/2009: **32<sup>nd</sup> Ephorate of Prehistoric and Classical Antiquities**, Supply of Digital geomorphological maps, Igoumenitsa, Greece.
- 17/09/2008-31/10/2008: **32<sup>nd</sup> Ephorate of Prehistoric and Classical Antiquities**, CD creation for the Presentation of archaeological data for the Project «Historical-Archaeological Atlas of Greek-Albanian border», Igoumenitsa, Greece.
- 14/12/2007-29/8/2008: **32<sup>nd</sup> Ephorate of Prehistoric and Classical Antiquities**, Scientific texts writing and GIS Mapping for the Project: «Historical Archaeological Atlas of Greek-Albanian border», Igoumenitsa, Greece.
- 12/09/2007-31/12/2007: **33<sup>rd</sup> Ephorate of Prehistoric and Classical Antiquities**, Planning, development and configuration application for management of spatial and descriptive archaeological data (GIS), Preveza, Greece.
- 17/08/2006-17/05/2007: **8<sup>th</sup> Ephorate of Prehistoric and Classical Antiquities**, Application of data management cultural and archaeological material-Electronic digital archaeological map (GIS), Igoumenitsa, Greece.
- 05/08/2005-05/02/2006: **5<sup>th</sup> Hunting Federation Epirus-Corfu**, Gamekeeper, Thesprotia, Greece.
- 17/05/2004-27/05/2005: **GeoValues E.E.**, Development of Geographic Information Systems (GIS) applications for the management of urban elements, public utility networks of municipalities and settlements, Athens, Greece.
- 13/10/2003-12/03/2004: **Epsilon SA**, Geographic Information Systems.
- Furthermore, I am working on Environmental Impact Assessments (EIA) and designing websites in addition to my business activity.

## Publications (in peer-reviewed journals)

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- Panagos, Panos, Martin Jiskra, Pasquale Borrelli, **Leonidas Liakos**, and Cristiano Ballabio. 2021. "Mercury in European Topsoils: Anthropogenic Sources, Stocks and Fluxes." *Environmental Research*, June, 111556. DOI: <https://doi.org/10.1016/j.envres.2021.111556>.
- Bezak, Nejc, Matjaž Mikoš, Pasquale Borrelli, **Leonidas Liakos**, and Panos Panagos. 2021. "An In-Depth Statistical Analysis of the Rainstorms Erosivity in Europe." *CATENA* 206 (November): 105577. DOI: <https://doi.org/10.1016/j.catena.2021.105577>.
- Stathakis, D., **Liakos, L.**, 2020. Median Shift Lunar Correction for VIIRS. *IEEE Geosci. Remote Sensing Lett.* 1–5. DOI: <https://doi.org/10.1109/LGRS.2020.3007965>
- Stathakis, D., **Liakos, L.**, 2019. Further adjustment of the Defense Meteorological Satellite Program—Operational Linescan System using radar data. *Journal of Applied Remote Sensing* 13 (3), DOI: <https://doi.org/10.1117/1.JRS.13.034507>
- Panagos, Panos, Cristiano Ballabio, Mihaly Himics, Simone Scarpa, Francis Matthews, Mariia Bogonos, Jean Poesen, and Pasquale Borrelli. 2021. "Projections of Soil Loss by Water Erosion in Europe by 2050." *Environmental Science & Policy* 124 (October): 380–92. <https://doi.org/10.1016/j.envsci.2021.07.012>. (*I'm listed in the Acknowledgements section for my contribution in data processing*).

## Conferences - Workshops

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- Stathakis, D, **Liakos L.**, and Baltas P., 2021. "Covid-19 Pandemic Assessment by Night-Lights." In *IEEE International Geoscience and Remote Sensing Symposium (IGARSS) 2021*. Brussels, Belgium.
- Stathakis D., **Liakos L.**, Tselios V., and Baltas P., 2021. "Night Light as an Indicator of the Pandemic's Impact on Economic Activity in Touristic Areas." In *60th ERSA Congress Territorial Futures – Visions and Scenarios to Cope with Megatrends in a Changing Europe*. Bolzano-Bozen, Italy, August 24-27, 2021.
- Baltas P., Stathakis D., **Liakos L.**, 2021. "Big data, human geography and spatial planning: Investigation of the scope", *Geography scientific conference: Geography in a Changing World*, department of Geography, University of Aegean, June 3-5, 2021, Lesvos
- Stathakis, D, **Liakos L.**, and Baltas P., 2021. "Medium Temporal Scale Night-Lights Data for Detecting Abnormal Events." In *NightLights Virtual Workshop 2021*. Virtual Event: Alba Orbital.
- Liakos, Leonidas. 2020. Workshop: "R language: calculating indicators by using night light images. Visualization in graphs and maps, HellasGI, Athens.

- Demetris Stathakis and Leonidas **Liakos**, 2020. "Time series formation based on VIIRS 24h data", Proc. SPIE 11535, Remote Sensing Technologies and Applications in Urban Environments V, 115350J (September 20, 2020), <https://doi.org/10.1117/12.2574346>
- Liakos Leonidas., 2019. Workshop "Raster and Raster Stack in R", 12<sup>th</sup> FOSSCOMM conference Oct. 11-13, 2019, University of Thessaly, Lamia, Greece.
- Baltas P., Stathakis D. and **L. Liakos**, 2019. Exploiting Social Media Data to Estimate Monthly Fluctuations of Seasonal Population in Island Regions of Greece, 59th ERSA congress, "Cities, regions and digital transformations: Opportunities, risks and challenges", August 27-30, 2019, Lyon, France (accepted for oral presentation).
- Stathakis D. and **L. Liakos**, 2019. VIIRS Lunar Radiance Removal by Dark object subtraction, 39th IGARSS, 2019 IEEE International Geoscience and Remote Sensing Symposium, July 28 - August 2, 2019, Yokohama, Japan. (accepted for oral presentation).
- Stathakis D., Baltas P., and **L. Liakos**, 2019. Preprocessing very high temporal resolution night-lights data for noise removal, 39th Annual EARSeL Symposium, July 1-4, 2019, Salzburg, Austria (accepted for oral presentation).
- Baltas, P., **Liakos, L.**, 2019. Coastal Cities Spatial Metrics : A new landscape monitoring indicator based on seasonal population estimates, in: 4th International Conference on "CHANGING CITIES: Spatial, Design, Landscape & Socio-Economic Dimensions." Presented at the Special session: Space, Pressures and The Management Of Coastal Cities Landscape, The Laboratory of Urban Morphology & Design, Department of Planning & Regional Development, University of Thessaly, Chania, Crete. (accepted for oral presentation).
- Baltas, P., **Liakos, L.**, 2019. Changing Landscapes: Population growth and land cover change of Greek Coastal Cities and Agglomerations over the last 20 years., in: 4th International Conference on "CHANGING CITIES: Spatial, Design, Landscape & Socio-Economic Dimensions." Presented at the Special session: Space, Pressures and The Management Of Coastal Cities Landscape, The Laboratory of Urban Morphology & Design, Department of Planning & Regional Development, University of Thessaly, Chania, Crete. (accepted for oral presentation).
- Stathakis, D., **Liakos, L.**, Chalkias, C., Pafi, M., 2018. A photopollution index based on weighted cumulative visibility to night lights, in: Remote Sensing Technologies and Applications in Urban Environments, SPIE Proceedings Vol. 10793, Berlin, Germany, <https://doi.org/10.1117/12.2500212>.
- **Liakos Leonidas**, and Stathakis, Demetris. 2018. "Raster processing with R." In FOSSCOMM 2018. Athens: Harokopio University.
- Stathakis D., **L. Liakos**, 2018. An improved DMSP/OLS times series based on adjusted data, 8th Annual EARSeL Symposium, Earth Observation Supporting Sustainability Research, July 9-12 , 2018, Chania, Crete, Greece.
- Spatial Analysis, GIS and Thematic Mapping Laboratory, Department of Planning and Regional Development, School of Engineering, University of Thessaly (**Liakos L.**, Faraslis

- I., Liotiris C., Demetris Stathakis), 2016, 3d models for 3d printing of greek mountains, FOSSCOMM 2016, University of Piraeus, Athens.
- **Liakos L.**, Vaseiliadis St., 2015, Site Catchment and travel routes in the broader region of Epirus and Southern Albania in ancient times, Day conference: "Historical Geography Identities", the Deanship of school of Philosophy in University of Ioannina and Laboratory Analysis and visualization of spatiotemporal data of Aegean University, September 23, 2015, Ioannina, Greece.
  - Tsilimigkas G., **Liakos L.**, Chatzikonstantinou A., 2014, *Spatial configuration of soil sealing: Cyclades islands case study*. In 1<sup>st</sup> International Geomatics Applications "GEOMAPPLICA" Conference, Skiathos, Greece, September 08-11, 2014. pp 165-171 [Conference proceedings in CDROM].
  - **Liakos L.**, Tsilimigkas G., Chatzikonstantinou A., 2014, *Legal framework spatial database for architectural heritage. FOSS application in Aegean islands traditional settlements*. In 1<sup>st</sup> International Geomatics Applications "GEOMAPPLICA" Conference, Skiathos, Greece, September 08-11, 2014.
  - Tsilimigkas G., Chatzikonstantinou A., **Liakos L.**, 2014, *Transformation factors of traditional settlements on the islands of the Aegean Sea. Mykonos case study*. In the 12th International Conference on Urban History Session: Managing Change in Historic Settlements, European Association for Urban History (EAUH) Nova University of Lisbon, Portugal; September 03-06, 2014, Lisbon, Portugal.
  - **Liakos L.**, Tsilimigkas G., Chatzikonstantinou A., 2014, QGIS plugin development for the management of the institutional framework for the Traditional settlements of Aegean islands, FOSSCOMM 2014, Technological Institute of Central Greece, Lamia, Greece.
  - **Liakos L.**, 2011, *Python, vector data and the Library ogr*, 1 Greek Users Meeting GRASS and GFOSS, HellasGI, FOSS, Department of Planning and Regional Development-University of Thessaly, Technological Educational Institute of Serres (Tei Serron), greek appendix of OSGeo, June 17-19, 2011, Argalasti, Pilio, Greece.
  - **Liakos L.**, 2010, a) *Stone Bridges mapping of Epirus*, b) *Online coordinate conversion from Hatt to Greek Greed '87*, GeoDataCamp 2010: open users' meeting, volunteers citizens, Hellenic Mapping and Cadastral Organization (HEMCO), Athens, (Presentation through video, URL of Conference: <http://www.geodata.gov.gr/geodatacamp/mediawiki/index.php/GeoDataCamp2010>).
  - **Liakos L.**, 2010, *GIS application open source in archaeology*, FOSS Conference: Entrepreneurship, Public sector, Education and Research, FOSS Corporation, National Technical University of Athens (NTUA).
  - **Liakos L.**, Vasileiadis S., 2008, *Determination of exploitation area and the movement corridors of ancient settlements in Thesprotia and South Albania using Cost Surface analysis and Xtent Model*, 10<sup>o</sup> National Mapping Conference: «The Mapping of Continental Region Boundaries – Barriers – Axes- Standards – Quility», Hellenic Cartographic Society, Ioannina.
  - **Liakos L.**, Riginos G., Drosou D., Sakkas D., Vlachopoulou R., 2008, *Record – documentation – preservation – promotion: Digital applications of the 33rd Ephorate*

of Prehistoric and Classical Antiquities for the management of archaeological data, Proceedings of national Conference: "The Digital Heritage in the new Knowledge Environment : common spaces & open access ways to cultural information", The National Archive of Monuments, Athens.

- **Liakos L.**, Kapaklis D., Nousi E., Feidas P., 2005, Urban Information Management Applications and *Technical Infrastructures (GEOVALUES GIS)*, *The Geographic Information Systems* in the service of the citizens (Prefectural and Local Authority), HellasGIS, Athens.

## Teaching experience

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09/2005-02/2011: **Technological Educational Institute of Epirus (TEI EPIRUS)**. Department of Tourism Management. Laboratory Associate (teaching staff with temporary contract), Courses: Tourism Geography I, Tourism Geography II:

26/09/2005-27/02/2006 (122 hours/semester)

07/03/2006-30/06/2006 (96 hours/semester)

09/10/2006-23/02/2007 (112 hours/semester)

05/03/2007-29/06/2007 (109 hours/semester)

01/10/2007-25/02/2008 (133 hours/semester)

03/03/2008-27/06/2008 (109 hours/semester)

01/10/2007-25/02/2008 (133 hours/semester)

16/10/2008-23/02/2009 (112 hours/semester)

03/03/2009-26/06/2009 (93 hours/semester)

01/10/2009-22/02/2010 (127 hours/semester)

01/03/2010-29/06/2010 (52 hours/semester)

01/10/2010-18/02/2011 (72 hours/semester)

15/12/2005-20/02/2006 (Duration: 54 hours): **Organisation of Tourism Education and Training (OTEK)**.

Courses: 1. Educational Services, 2. Tourism Geography.

01/12/2006-09/02/2007 (Duration: 42 hours): **Organisation of Tourism Education and Training (OTEK)**.

Courses: 1. Educational Services, 2. Tourism Geography.

16/2/2004-30/6/2004 (Duration: 30 hours): **Institute of Vocational Training in Chalandri, Attica**.

Courses: Manuals for the Ministry of Infrastructure, Transport and Networks.

15/1/2008-26/2/2008 (Duration: 25 hours): **Institute of Adult Continuing Education (ΙΑΕΚΕ)** Igoumenitsa, Thesprotia.

Courses: Water resource management.

16/02/2007–30/06/2007 (Duration: 42 hours): **Institute of Vocational Training in Igoumenitsa**, Thesprotia. Specialised training in: Technical surveying applications. Courses: Geographic Information Systems (GIS).

02/10/2006–15/02/2007 (Duration: 56 hours): **Institute of Vocational Training in Igoumenitsa**, Thesprotia. Specialised training in: Technical surveying applications. Courses: Automated and Thematic Mapping.

18/02/2008–30/06/2008 (Duration: 70 hours): **Institute of Vocational Training in Igoumenitsa**, Thesprotia. Specialised training in: Technical surveying applications. Courses: Raster GIS.

## Books

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Metallinou G. (Eds.), 2008, *Historical Archaeological Atlas of Greek- Albanian border* (collective project), Ministry of Culture and Sports & 32<sup>nd</sup> Ephorate of Prehistoric and Classical Antiquities, Athens [printed version and digital copy in CD-Rom]. (Participation in: (a) texts writing group and (b) making the maps (exclusively)).

## Certificates

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Professional license/certificate, Class: A, Category: 27 (Environmental), Registration Number: 18252, Hellenic Ministry for the Environment, Physical Planning and Public Works- Register Scholars Department.

## Personal skills

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Mother Tongue: *Greek*.

Other language: *English*. Certificates:

1. TEST OF ENGLISH FOR INTERNATIONAL COMMUNICATION (TOEIC), EDUCATIONAL TESTING SERVICE (ETS), TOEIC Listening&Reading score: 885 (CEFR Level B2), 2016.
2. First Certificate in English, Cambridge, GRADE C (CEFR Level B2), 1994.

## Computer skills

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- Operating Systems: GNU/Linux, MS Windows.
- Programming Languages: R, Python, latex, bash, SQL.
- Indicative use of software:



GIS/RS: QGIS, GRASS GIS, SNAP ESA/gpt, ESRI ARCGIS, MapWindow, gvSIG, ogr, gdal libraries, pytroll.

Databases: POSTGRESQL/Postgis, MySQL, Sqlite/Spatialite, Libre Base, MSACCESS.

Webmapping: geoserver, geonode, mapbender, geomoose, geodjango, drupal/cartaro, openlayers, leaflet, geoext.

Webpages: Joomla, Wordpress, Python/Django, Drupal, Pelican.

Statistical data analysis: R (*Coursera MOOCs: R Programming, The Data Scientist's Toolbox, Getting and Cleaning Data*).

- Special knowledge: JRC ONLINE First steps on the JRC Big Data Platform (JEODPP)
- European Computer Driving Licence (ECDL) Core Certificate, 2007 (Databases, Basic Concepts of Informatics, Word Processing, Presentations, Web Services, Spreadsheets, Use of Computer and File Management).
- Introduction to Digital Currencies, MOOC 2018, University of Nicosia

## Member of Unions

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Member of Geographers Association of Greece (G.A.G) from 2002.