

CHRISTOS CHALKIAS

Professor, Applied Geography and GIS



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Department of Geography

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STUDIES

Undergraduate

-Department of Geology, School of Sciences of the National & Capodistrian University of Greece. Degree in Geology (1991)

Postgraduate

- Department of Geology, School of Sciences of the National & Capodistrian University of Greece. PhD in Geinformatics in Earth Science, (1996).

Fields of research interest

Geographic Information Systems & Science

Applied Geography

Spatial analysis-Spatial Pattern's Analysis

Health Geography

Recent Publications

Faka A., Kalogeropoulos K., Maloutas T., Chalkias C., (2022): Spatial Variability and Clustering of Quality of Life at Local Level: A Geographical Analysis in Athens, Greece, *ISPRS International Journal of Geo-Information*, 11, 5, 276, MDPI.

Kefalas G., Poirazidis K., Xofis P., Kalogirou S., Chalkias C., (2022): Landscape dynamics on insular environments of South-east mediterranean Europe, *Geocarto International*, 37, 6, 1813-1832, Taylor & Francis.

Tyrovolas S., Tsiampalis T., Morena M., Leung A., Faka A., Chalkias C., Tsiodras S., Panagiotakos D., (2022): COVID-19 Mortality in Europe, by Latitude and Obesity Status: A Geo-Spatial Analysis in 40 Countries, *Nutrients*, 14, 3, 471, MDPI.

Tsiampalis T., Faka A., Kouvari M., Psaltopoulou T., Pitsavos C., Chalkias C., Panagiotakos D., (2022): Geographical Variability of Sex-Specific, Health Related Determinants of Quality of Life in Athens Metropolitan Area: A Spatial Analysis in the Context of the ATTICA Epidemiological Study, *Applied Spatial Analysis and Policy*, 15, 3, 775-795, Springer, Netherlands.

Zampazas G., Karymbalis E., Chalkias C., (2022): Assessment of the sensitivity of Zakynthos Island (Ionian Sea, Western Greece) to climate change-induced coastal hazards, *Zeitschrift für Geomorphologie*, 183-200, Schweizerbart'sche Verlagsbuchhandlung.

Tsatsaris A., Kalogeropoulos K., Stathopoulos N., Louka P., Tsanakas K., Tsesmelis D., Krassanakis V., Petropoulos G., Pappas V., Chalkias C., (2021): Geoinformation Technologies in support of Environmental hazards monitoring under Climate Change: An extensive review ,*ISPRS International Journal of Geo-Information*, 10, 2, 94, MDPI.

Petropoulos, George P; Maltese, Antonino; Carlson, Toby N; Provenzano, Giuseppe; Pavlides, Andrew; Ciraolo, Giuseppe; Hristopulos, Dionissios; Capodici, Fulvio; Chalkias, Christos; Dardanelli, Gino; (2021): Exploring the use of Unmanned Aerial Vehicles (UAVs) with the simplified 'triangle' technique for soil water content and evaporative fraction retrievals in a Mediterranean setting *International Journal of Remote Sensing*, 42, 5, 1623-1642, Taylor & Francis.

Valkanou, Kanella; Karymbalis, Efthimios; Papanastassiou, Dimitris; Soldati, Mauro; Chalkias, Christos; Gaki-Papanastassiou, Kalliopi; (2021): Assessment of neotectonic landscape deformation in Evia Island, Greece, using GIS-based multi-criteria analysis, *ISPRS International Journal of Geo-Information*, 10, 3, 118, MDPI.

Tsiampalis, Thomas; Faka, Antigoni; Psaltopoulou, Theodora; Pitsavos, Christos; Chalkias, Christos; Panagiotakos, Demosthenes; (2021): The relationship of the built and food environments with the metabolic syndrome in the Athens metropolitan area: a sex-stratified spatial analysis in the context of the ATTICA epidemiological study, *Hormones*, 20, 4, 723-734, Springer International Publishing.

Faka, Antigoni; Kalogeropoulos, Kleomenis; Maloutas, Thomas; Chalkias, Christos; (2021): Urban Quality of Life: Spatial Modeling and Indexing in Athens Metropolitan Area, Greece, *ISPRS International Journal of Geo-Information*, 10, 5, 347, MDPI.

Tsemmelis, Demetrios E; Karavitis, Christos A; Kalogeropoulos, Kleomenis; Tsatsaris, Andreas; Zervas, Efthimios; Vasilakou, Constantina G; Stathopoulos, Nikolaos; Skondras, Nikolaos A; Alexandris, Stavros G; Chalkias, Christos; (2021): Development and Application of Water and Land Resources Degradation Index (WLDI), *Earth*, 2, 3, 515-531, MDPI.

Hadjikyriacou, Antonis; Papadias, Evangelos; Vradis, Christoforos; Chalkias, Christos; (2021): Combining historical maps and censuses of Cyprus from the sixteenth to the twentieth century: A geospatial approach, *Proceedings of the ICA*, 3, 7, Copernicus GmbH.

Tsiampalis, T; Faka, A; Psaltopoulou, T; Pitsavos, C; Chalkias, C; Panagiotakos, D; (2021): The spatial variability of the sex and age-specific 10-year incidence of cardiovascular diseases and its medical risk factors in Athens metropolitan area, *Atherosclerosis*, 331, e149-e150, Elsevier.

Lorilla, R.S., Poirazidis, K., Detsis, V., Kalogirou, S., Chalkias, (2020), C. Socio-ecological determinants of multiple ecosystem services on the Mediterranean landscapes of the Ionian Islands (Greece), *Ecological Modelling*, 422, Elsevier.

Chalkias, C., Polykretis, C., Karymbalis, E., Soldati, M., Ghinai, A., Ferentinou, M., (2020), Exploring spatial non-stationarity in the relationships between landslide susceptibility and conditioning factors: a local modeling approach using geographically weighted regression, *Bulletin of Engineering Geology and the Environment*, 79 (6), 2799-2814, Springer.

Kefalas G., Poirazidis, K., Xofis, P., Kalogirou, S., Chalkias, C., (2020): Landscape dynamics on insular environments of South-east Mediterranean Europe, *Geocarto International*, 37, 6, 1813-1832, Taylor & Francis.

Malhi, R., Kaur M., Anand, A., Srivastava, Prashant K. Kiran, G., Sandhya. P., Petropoulos, G., Chalkias, C., (2020): An integrated spatiotemporal pattern analysis model to assess and predict the degradation of protected forest areas, *ISPRS International Journal of Geo-Information*, 9, 9, 530, 2020, Multidisciplinary Digital Publishing Institute.

Polykretis, C., Kalogeropoulos, K., Andreopoulos, P., Faka, A., Tsatsaris, A., Chalkias, C., (2019), Comparison of statistical analysis models for susceptibility assessment of earthquake-triggered landslides: A case study from 2015 earthquake in Lefkada Island, *Geosciences (Switzerland)*, 9 (8), art. no. 350, MDPI.

Verdis, A., Kalogeropoulos, K., Chalkias, C., (2019), Regional disparities in access to higher education in Greece, *Research in Comparative and International Education*, 14 (2), pp. 318- 335.

Faka, A., Chalkias, C., Georgousopoulou, E.N., Tripitsidis, A., Pitsavos, C., Panagiotakos, D.B., (2019), Identifying determinants of obesity in Athens, Greece through global and local statistical models *Spatial and Spatio-temporal Epidemiology*, 29, pp. 31-41.

Kalogeropoulos, K., Stathopoulos, N., Tsatsaris, A., Chalkias, C., (2019), A survey of the Geoinformatics use for census purposes and the INSPIRE maturity within Statistical Institutes of EU and EFTA countries, *Annals of GIS*, 25 (2), pp. 167-178.

Petza, D., Chalkias, C., Koukourouli, N., Coll, M., Vassilopoulou, V., Karachle, P.K., Markantonatou, V., Tsikliras, A.C., Katsanevakis, S., (2019), An operational framework to assess the value of fisheries restricted areas for marine conservation, *Marine Policy*, 102, pp. 28-39.

Krikigianni, E., Tsiakos, C., Chalkias, C., (2019), Estimating the relationship between touristic activities and night light emissions, *European Journal of Remote Sensing*, 52 (sup1), pp. 233-246.

Polykretis, C., Chalkias, C., Ferentinou, M. (2019), Adaptive neuro-fuzzy inference system (ANFIS) modeling for landslide susceptibility assessment in a Mediterranean hilly area, *Bulletin of Engineering Geology and the Environment*, 78 (2), pp. 1173-1187.

Faka, A., Kalogeropoulos, K., Roumelis, S., Karamolegos, M., Chalkias, C., (2019), Exposure of the road network to direct sunlight: a spatiotemporal analysis using GIS and spatial video, *Annals of GIS*, 25 (1), pp. 9-17.

Pafi, M., Chalkias, C., Stathakis, D. (2018): cost-effective method for tranquility mapping using open environmental data, *Environment and Planning B: Urban Analytics and City Science*.

Chatzinikolaou, E., Chalkias, C., Dimopoulou, E., (2018), Urban microclimate improvement using ENVI-MET climate model, *International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences - ISPRS Archives*, 42 (4), pp. 69-76.

Polykretis, C., Chalkias, C., (2018), Comparison and evaluation of landslide susceptibility maps obtained from weight of evidence, logistic regression, and artificial neural network models, *Natural Hazards*, 93 (1), pp. 249-274.

Polykretis, C., Faka, A., Chalkias, C., (2018), Exploring the impact of analysis scale on landslide susceptibility modeling: Empirical assessment in northern Peloponnese, Greece, *Geosciences (Switzerland)*, 8 (7), art. no. 261.

Stathakis, D., Liakos, L., Chalkias, C., Pafi, M., (2018), A photopollution index based on weighted cumulative visibility to night lights, *Proceedings of SPIE - The International Society for Optical Engineering*, 10793, art. no. 1079304.

Faka, A., Chalkias, C., Montano, D., Georgousopoulou, E.N., Tripitsidis, A., Koloverou, E., Tousoulis, D., Pitsavos, C., Panagiotakos, D.B., (2017), Association of socio-environmental determinants with diabetes prevalence in the athens metropolitan area, greece: a spatial analysis, *Review of Diabetic Studies*, 14 (4), pp. 381-389.

Stathopoulos, N., Kalogeropoulos, K., Polykretis, C., Skrimizeas, P., Louka, P., Karymbalis, E., Chalkias, C., (2017), Introducing flood susceptibility index using remote-sensing data and geographic information systems: Empirical analysis in sperchios River Basin, Greece, *Remote Sensing of Hydrometeorological Hazards*, pp. 381-400.

Chalkias C., Polykretis C., Ferentinou M., Karymbalis E. (2016): Integrating Expert Knowledge with Statistical Analysis for Landslide Susceptibility Assessment at Regional Scale , *Geosciences*, 6(1):14.

Tsanakas, K., Gaki-Papanastassiou, K., Kalogeropoulos, K., Chalkias, C., Katsafados, P., Karymbalis, E. (2016): Investigation of flash flood natural causes of Xirolaki Torrent, Northern Greece based on GIS modeling and geomorphological analysis, *Natural Hazards*, 84 (2), pp. 1015-1033. DOI: 10.1007/s11069-016-2471-1

Karymbalis, E., Papanastassiou, D., Gaki-Papanastassiou, K., Ferentinou, M., Chalkias, C., (2016): Late Quaternary rates of stream incision in Northeast Peloponnese, Greece, *Frontiers of Earth Science*, 10 (3), pp. 455-478.

Research Programs (RECENT)

Participation in more than 40 Research Programms (1995 – 2022) Selection:

2013 – 2015: «Dynamic Management and Cartographic Representation of Social Data – SoDaMap» Coordination: Prof. T. Maloutas. ([www. https://panorama.statistics.gr/](http://www.panorama.statistics.gr/)). Harokopio University, Hellenic statistical Agency

2015: «Environmental Geoinformatics, Life-learning Program», Coordination: Prof. M. Vaitis (http://geoinformatics.aegean.gr/?page_id=4), Aegean Univeristy

2015-2016: «Cartographic Database and web application for the presentation of geographical information from the historic map of Cyprus published in (H.H. Kitchener, 1885). Funding: Sylvia Ioannou Foundation, Coordinator: Prof. C. Chalkias, (details): <https://gaia.hua.gr/kitchener/> (revised version 2021: <https://kitchener.hua.gr/>)

2018: Development of a Web-based spatial data infrastructure for the organization and output of geospatial data from Lemnos municipality, Funding: Municipality of Lemnos, Coordinator: Prof. Chalkias, Harokopio University, Department of Geography.

2018-2019 “Historical Representations of Cyprus” Funding: Sylvia Ioannou Foundation, Coordinator: Prof. C. Chalkias, (details): https://gaia.hua.gr/el/coastal_cyprus/

2019 - 2022 "Economy, environment, and landscape in the Cypriot longue durée" Coordinator: Prof. C. Chalkias, (details): <https://ecoland.hua.gr/en/>