M.Sc Erland Alla

Work: Papa Gjon Pali II Street, 1010, Tirana, Albania

Email address: erlandalla0@gmail.com

Website: www.lindimap.com

LinkedIn: https://www.linkedin.com/in/erland-alla/   **Research Gate:** https://www.researchgate.net/profile/Erland-Alla

Nationality: Albanian

ABOUT MYSELF

Geoinformatics Engineer with experience in geospatial analysis, satellite data processing, and the application of GIS technologies in national and international projects. Specialized in developing advanced geospatial products to support data-driven decision-making and interdisciplinary collaboration. Published researcher and active contributor to projects focused on cultural heritage preservation and territorial analysis.

EDUCATION & TRAINING

[20/10/2023 - 04/10/2024]

Master of Science in Geological Engineering – Geoinformatics Profile

Faculty of Geology and Mining, Polytechnic University of Tirana
http://www.upt.al/

Address: Rruga e Elbasanit, Tirana (Albania) | **Field(s) of study:** Geoinformatics Engineering | **Level in EQF:** 7 | **Type of credits:** ECTS | **Number of credits:** 120 | **Thesis:** Design and Implementation of a "WEB GIS" Application For Mapping and Documenting Archaeological sites, case study "Lubonja Korçë",Albania

[31/10/2019 - 08/10/2021]

Professional Master in Geological Engineering – Geoinformatics Profile

Faculty of Geology and Mining, Polytechnic University of Tirana
http://www.upt.al/

Address: Rruga e Elbasanit, 1010, Tirana (Albania) | **Field(s) of study:** Geoinformatics Engineering | **Level in EQF:** 7 | **National classification:** 7 | **Type of credits:** ECTS | **Number of credits:** 120

[15/09/2016 - 07/10/2019]

Bachelor in Geological Engineering – Geoinformatics Profile

Faculty of Geology and Mining, Polytechnic University of Tirana
http://www.upt.al/

Address: Rruga e Elbasanit, 1010, Tirana (Albania) | **Field(s) of study:** Geoinformatics Engineering | **Level in EQF:** 6 | **National classification:** 6 | **Type of credits:** ECTS | **Number of credits:** 180

WORK EXPERIENCE

State Authority for Geospatial Information of Albania   https://asig.gov.al

City: Tirana | **Country:** Albania | **Email:** info@asig.gov.al | **Name of unit or department:** Remote Sensing Data Processing Directorate

[01/09/2023 - Current]

Senior Satellite Imagery Processing Specialist

- Analyze large volumes of satellite imagery using AI and advanced processing algorithms.

- Extract actionable insights for agriculture, environmental monitoring, and urban planning.
- Generate geospatial products and reports to support decision-making.
- Automate image processing workflows using Python, machine learning, and GIS tools.

Albanian Academy of Sciences

City: Tirana | **Country:** Albania

[01/10/2024 - Current]   **Web GIS Developer, Invited Position**

Contribution to the "Mapping and Documentation of the Archaeological Areas of Lezha (Lissus 2025)" project:
- Applied advanced GIS and Web GIS (ArcGIS Online) for mapping and digital documentation of cultural heritage.
- Processed UAV, LiDAR data to produce high-resolution models.
- Developed StoryMaps and interactive tools for dissemination and public engagement.

Faculty of Geology and Mining, Polytechnic University of Tirana
https://fgjm.edu.al/

City: Tirana | **Country:** Albania | **Email:** info@fgjm.edu.al | **Name of unit or department:** Departament of GIS

[01/01/2024 - 15/11/2024]   **Web GIS Developer, Invited Position**

Contribution to the "Web GIS Application for Heritage Documentation – Lubonja, Korçë, Albania" project:
- Applied advanced GIS and Web GIS (ArcGIS Online) for mapping and digital documentation.
- Processed UAV, LiDAR, and laser scanning data to produce high-resolution models.
- Developed StoryMaps and interactive tools for dissemination and public engagement.

Freelance

City: Via Lecco, Monza, Milan | **Country:** Italy

[01/09/2023 - 14/03/2024]   **Cartographer**

- Process and analyze satellite imagery to identify roads, sidewalks, streetlights, and buildings.
- Create accurate digital maps to support urban planning and territorial management.
- Integrate geospatial data from multiple sources to produce structured and actionable datasets.

Municipality of Tirana   https://tirana.al/

City: Tirana | **Country:** Albania | **Email:** info@tirana.al

[01/07/2021 - 01/10/2021]   **GIS Intern**

- Updated and analyzed geospatial data to support urban planning and infrastructure management.
- Organized and maintained the national "address database" for public facilities and services.

- Assisted in generating digital maps for roads, buildings, and public utilities.

Key Service , Italia   https://www.digitalgroup.al

City: Tirana | **Country:** Albania | **Email:** hr@digitalgroup.al | **Name of unit or department:** Departament of GIS

[28/05/2020 - 31/08/2023]   **Geographic Information System Specialist**

- Led and trained teams over 3 years to deliver accurate geospatial solutions for land-use, agricultural land allocation, and urban planning.
- Developed and managed digital maps, geodatabases, and spatial datasets for institutions to support planning and decision-making.
- Applied GIS, remote sensing, satellite and aerial imagery, and AI-assisted image processing for data analysis.
- Organized project workflows, ensured quality, and delivered results on time.
- Shared knowledge and trained team members to strengthen geospatial skills and project efficiency.

SKILLS

Satellite Imagery Processing | ArcMap | ArcGIS Pro | ArcGIS Online | Google Earth Engine | CityEngine | QGIS | Global Mapper | Geospatial Data | WordPress Design | Canva | Microsoft Office | Python | Python Scripting | Geospatial Analysis | Remote Sensing | AI/machine learning | Data Visualization | Digital Mapping | Geospatial Data Integration | Urban Mapping | Data Management

LANGUAGE SKILLS

Mother tongue(s): Albanian

Other language(s):

English

LISTENING: C1 **READING:** C1 **WRITING:** B2

SPOKEN PRODUCTION: B2 **SPOKEN INTERACTION:** B2

Italian

LISTENING: B1 **READING:** B1 **WRITING:** B1

SPOKEN PRODUCTION: B1 **SPOKEN INTERACTION:** B1

CERTIFICATIONS

[ESRI, 03/08/2021]   **Arcgis Online Basics**

[ESRI, 28/03/2022]   **Cartography**

[ESRI, 19/05/2022]   **Going Places with Spatial Analysis**

[ESRI, 09/06/2022]   **Imagery in Action**

[Polytechnic University of Tirana, 18/11/2022]   **Certificate for Participation and Contribution to International GIS Day**

[CRDF Global, 26/06/2024]   **Comprehensive Training for Cyber Hygiene, Open-Source Intelligence (OSINT) and Social Engineering: Protection of Your Digital Presence**

[IAMO, 06/12/2025]   **Introduction to the Model Designer and Python Console in QGIS**

CONFERENCES & SEMINARS

[15/11/2024 - 15/11/2024] **Scientific Conference: Lubonja - A New Chapter in the Albanian Cultural and Natural Heritage** Albanian Academy of Sciences and the Commission of History and Archeology,Tirana, Albania

Scientific Conference "Lubonja – A New Chapter in Albanian Cultural Heritage," where my contribution centered on the design and development of a Web GIS application.This application was created to publish scientific information online while promoting the cultural and natural heritage of Lubonja as a tourism destination. By leveraging geospatial technology, the project aimed to provide accessible and interactive tools to highlight the unique values of the region, supporting both research dissemination and sustainable tourism development.

Link: https://www.youtube.com/watch?v=IKvPW12D974

[27/02/2025 - 27/02/2025] **Workshop: The Role of Transport Authorities and Operators in Smart Cities Organized within the framework of the SOFTMOVE project, supported by the Interreg IPA South Adriatic Programme 2021–2027.** Tirana, Albania

Contributed to a professional event with public, private, academic, and start-up sector experts, sharing experience in geospatial data processing and its application for improving mobility and traffic monitoring in smart cities. Presented the scientific paper: *"WebGIS Application for Spatial Mapping of Noise Levels in Urban Areas."*

Link: https://asig.gov.al/en/category/activities/projects/page/2/

[12/05/2025 - 15/05/2025] **Regional Seminar "Capacity Building for the National Forest Fire Information System (NFFIS) and Nature-Based Solutions"** Prizren, Kosovo

Participated in a regional seminar on building institutional capacity for the **National Forest Fire Information System (NFFIS)** and promoting nature-based solutions (Eco-DRR). Engaged with representatives from Albania, Kosovo, North Macedonia, Montenegro, and Bosnia and Herzegovina, sharing experiences in developing and using digital platforms for monitoring and managing fire and erosion risks, representing the **State Authority for Geospatial Information of Albania**.

Link: https://www.youtube.com/watch?v=mkNpN8yCchI

[27/06/2025 - 27/06/2025] **Meeting of the "Permanent Commission on Archaeology" at the Academy of Sciences of Albania** Albanian Academy of Sciences, Tirana, Albania

Presented preliminary results of a research project on the documentation of archaeological areas of Lezha (Lissus 2025), funded by the National Agency for Scientific Research and Innovation (AKKSHI). Discussed the development of the **Web GIS component**, an interactive platform for documenting, managing, and visualizing archaeological findings and spatial data, enabling structured storage and public access for researchers and the wider audience.

Link: https://www.linkedin.com/posts/erland-alla_webgis-gis-arkeologji-activity-734438425596 1018368-fYax?utm_source=share&utm_medium=member_desktop&rcm=ACoAAD9MVjQ BePk0gwra2Het_6b0MJ5kWhCgVcE

[21/10/2025 - 22/10/2025] **International Conference "60 Years of the National Institute of Cultural Heritage (IKTK),Albania"** Tirana, Albania

Invited as part of the working group for two research projects on the **Mapping and Documentation of Cultural and Natural Heritage Areas**: Lubonjë Village (Korçë) and Lissos Ancient City. Projects were developed through inter-institutional cooperation between the Faculty of Geology and Mining, Polytechnic University of Tirana, Academy of Sciences of Albania, and relevant local institutions, funded by the National Agency for Scientific Research and Innovation (AKKSHI). Contributed, together with Dr. Elva Leka, to the development of **Web GIS platforms** for the management and visualization of

cultural heritage data.

Link:
https://iktk.gov.al/2025/11/11/konferenca-nderkombetare-me-rastin-e-60-vjetorit/

[02/12/2025 - 06/12/2025] **Training Course "Introduction to the Model Designer and Python Console in QGIS,"**
Tirana, Albania

Completed the specialized training program *"Introduction to the Model Designer and Python Console in QGIS"* delivered by the **Leibniz Institute of Agricultural Development in Transition Economies (IAMO)** in collaboration with the **Agricultural University of Tirana**. Currently a member of the **GEO-WB6 Network**, a regional initiative aimed at strengthening geoinformation capacities in the Western Balkans.

Link:
https://www.linkedin.com/posts/ideas-lab-salzburg_geowb6-qgis-python-ugcPost-74044
65865162969088-c3we?utm_source=share&utm_medium=member_desktop&rcm=ACoA
AD9MVjQBePk0gwra2Het_6b0MJ5kWhCgVcE

PROJECTS

[01/01/2025 - Current] **Mapping and Documentation of the Archaeological Areas of Lezha – Lissus 2025**

The project *"Mapping and Documentation of the Archaeological Areas of Lezha – Lissus 2025"* , funded by the National Agency for Scientific Research and Innovation (AKKSHI), focuses on the discovery, documentation, and protection of cultural heritage sites in the Lezha area. The project applies advanced GIS technologies, integrating data from drones, LiDAR, and laser scanning to produce high-resolution digital terrain models and detailed spatial representations of archaeological areas. My contribution includes developing interactive Web GIS applications using ArcGIS Online and creating StoryMaps that combine maps, photographs, and multimedia content to present the historical and cultural significance of the study area, enhancing both scientific analysis and public accessibility.

Link: https://lezhaturistike.wordpress.com/

[01/01/2024 - 15/11/2024] **Mapping and Documentation of Archaeological Areas Using Advanced GIS, Drone, LiDAR, and Laser Scanner Technologies**

The project *"Mapping and Documentation of Archaeological Areas Using Advanced GIS, Drone, LiDAR, and Laser Scanner Technologies"* , funded by the National Agency for Scientific Research and Innovation (AKKSHI) and carried out in collaboration with the Polytechnic University of Tirana (Jan 2024 – Oct 2024), focused on the digital mapping and documentation of archaeological sites using advanced geospatial technologies. The work involved integrating data from drones, LiDAR, and laser scanning into GIS environments to produce high-resolution digital terrain models and accurate spatial representations of archaeological areas. My contribution included developing interactive Web GIS applications using ArcGIS Online and creating StoryMaps to present the historical and cultural significance of the Lubonja area through a combination of maps, imagery, and multimedia content, enhancing both scientific documentation and public accessibility.

Link: https://storymaps.arcgis.com/stories/43523107564d461fbb8ea118df18efd3

[01/12/2020 - 31/08/2023] **REFRESH Project – AGEA (Italy)**

The REFRESH project focused on updating and improving territorial data for agricultural farms across Italy to ensure accurate management and allocation of agricultural subsidies. The project utilized high-resolution aerial imagery and artificial intelligence algorithms for soil and land analysis. Key activities included the periodic reprocessing of aerial photographs every three years, multi-seasonal monitoring of agricultural parcels, and detailed mapping of land use and vegetation cover. As a result, the project significantly reduced errors and anomalies in subsidy distribution, created a reliable and

up-to-date agricultural database for farmers and public administrations, and strengthened support for precision agriculture and agricultural risk management..

[08/01/2021 - 08/10/2021] **The Level of Noise in the City of Tirana**

The project *"The Level of Noise in the City of Tirana"* focuses on the development of an interactive 2D and 3D Web GIS application to visualize and analyze noise pollution levels across the city of Tirana. The application will provide detailed information on acoustic pollution, include data filtering tools for specific areas of interest, and generate geostatistical predictive maps to identify spatial noise patterns. The project aims to raise public awareness of noise pollution, support urban planning and policymaking, and enhance access to environmental data through innovative digital solutions.

Link: https://arcg.is/1zfLbO

[01/06/2020 - 01/12/2020] **Xylella Disease**

A project based on Geographic Information Systems, which monitors, evaluates and manages the Xylella disease (a disease caused by a plant pathogen that has significantly affected agriculture in Italy, especially the southern part). Using satellite technology and drones, through image analysis and processing, it becomes possible to identify early signs of Xylella infection.

PUBLICATIONS

[2025] **Lubonja – A New Chapter in the Albanian Cultural and Natural Heritage**

Reference: Hoxha, E. R., Ceka, N., Hobdari, E., Leka, E., Alla, E., et al. (2025). Lubonja – Një kapitull i ri në trashëgiminë kulturore dhe natyrore shqiptare. DOI: 10.13140/RG.2.2.11689.92000
This study is part of the research project on the **Mapping and Documentation of Archaeological Areas Using Advanced GIS, Drone, LiDAR, and Laser Scanner Technologies**, funded by the National Agency for Scientific Research and Innovation (AKKSHI) and led by the **Polytechnic University of Tirana** in collaboration with national and local heritage institutions. The project focused on Lubonjë Village and surrounding areas, aiming to map, document, and preserve cultural and natural heritage. Contributions included **archaeological surveys, heritage documentation, natural monument assessment, and the development of a Web GIS platform** for data management, visualization, and public access. The study demonstrates how advanced geospatial technologies support archaeological research, heritage conservation, and interactive dissemination for experts and the public.

Journal Name: Technical Report | **Publisher:** Polytechnic University of Tirana

[2025] **Design and Implementation of a Web GIS Application for Heritage Documentation UsingDrones, Lidar, and Laser Scanning: The Case of Lubonja, Korçë, Albania**

Reference: Leka, E., Hoxha, E. R., Alla, E., Pekmezi, J., & Qose, E. (2025). Design and Implementation of a Web GIS Application for Heritage Documentation Using Drones, LiDAR, and Laser Scanning: The Case of Lubonja, Korçë, Albania.DOI: 10.3991/ijim.v19i13.5459
This study investigates the use of **Web GIS and advanced geospatial technologies** to document, manage, and promote the cultural heritage of Lubonja, a prehistoric village in Korçë, Albania. It highlights how GIS, 3D modeling, and interactive platforms support heritage preservation, enhance public accessibility and participation, and improve the management and dissemination of cultural assets, while addressing challenges in heritage promotion and tourism.

Journal Name: iJIM – International Journal of Interactive Mobile Technologies | **Volume, Issue and Pages:** Scientific Article, Vol. 19, No. 13, pp. 133–147 | **Publisher:** iJIM