# Dr. Alexandru HEGYI

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LINKURI	Research Gate	
ISTORIC PROFESIONAL		
Apr 2021 — Mar 2023	Digital Heritage Manager / Cercetător , CSEAS, Kyoto University, Japonia	Kyoto
Sep 2020 — Aug 2022	Director Proiect, Universitatea de Vest Timișoara	Timişoara
Ian 2020 — Aug 2020	Cercetător Postdoctoral, Digital Humanities GeoInformatics Laboratory, Archaeological Research Unit, University of Cyprus	Nicosia
Mar 2019 — Dec 2019	Cercetător Asociat, Universitatea de Vest Timișoara	Timişoara
Mar 2018 — Ian 2019	Cercetător Asociat, West University of Timisoara	Timişoara
Ian 2014 — Apr 2015	Manager Proiect, ArheoVest Association	Timişoara
EDUCAȚIE		
Oct 2014 — Mar 2018	Doctorat în Geoarheologie, Universitatea de Vest din Timișoara, Departamentul de Geografie	Timişoara
Oct 2012 — Iun 2014	Masterat în Arheologie Interdisciplinară, Universitatea de Vest Din Timișoara, LIT	Timişoara
Oct 2009 — Iun 2012	Licență în Istorie , Universitatea de Vest Din Timișoara, LIT	Timişoara
Oct 2009 — Iun 2013	Departamentul Pentru Pregătirea Cadrelor Didactice, Nivel 1, Universitatea de Vest din Timișoara	Timişoara
Oct 2013 — Iun 2014	Departamentul Pentru Pregătirea Cadrelor Didactice, Nivel 2, Universitatea de Vest din Timișoara	Timişoara
PROIECTE	Manager al Laboratorului Digital din cadrul proiectului Maritime Asia Heritage Survey, CSEAS derulat la Kyoto University, Japonia; 2021 - 2023;	
	Director Proiect: Prof. Michael Feener	
	2. Director Proiect, MEGA-FORTS PROJECT - The large Bronze Age fortifications from southwestern Romania - an interdisciplinary geoarchaeological approach, Universitatea de Vest din Timişoara.	
	3. Membru, Tibiscum Project, Diamond Grant, University of Warsaw, 2014-2016;	
	Director Proiect: Michal Pisz.	
	4. Membru voluntar, Enviarch Project, West University of Timisoara and Szeged University, C14 and TS/OSL laboratory development for geographical and archaeological studies. Director Proiect: Prof. Petru Urdea.	

Certificat Arheolog Specialist emis de către Ministerul Culturii

București

Mar 2017 — Prezent



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#### **EDUCATION**

From October 2014 to March 2018 Ph.D in Geoarchaeology

# West University of Timisoara, Geography Department Timișoara, Romania

My dissertation explored the application of several geo-methods in archaeology, ranging from geomorphology/micromorphology analysis and geophysics to complex GIS analyses and GEOBIA remote sensing. For example, I built an algorithm for automatic individualization and classification of geophysical anomalies using Ecognition. Additionally, this algorithm can be employed in a variety of fields of archaeological research for the purpose of generating geostatistical data using a GIS approach.

From October 2012 to June 2014 Master's degree in Interdisciplinary Archaeology

# West University of Timisoara, History Department

Timisoara, Romania

My Master's thesis examined the chronological relationships between Early Iron Age sites in southern Romania's Banat region.

From October 2009 to June 2012 Bachelor's degree in History (Archaeology specialization)

### West University of Timisoara, History Department

Timișoara, Romania

My bachelor thesis was a comprehensive survey of all Early Iron Age sites in the Banat region, totalling 734 pages and constituting the region's first comprehensive first complete repertoire of Early Iron Age sites.

From October 2009 to June 2014 Teaching qualifications (First and Second Level)

West University of Timisoara, Timișoara, Romania

#### WORK EXPERIENCE

From April 2021 to April 2023 Digital Heritage Manager / Program Specific Researcher

# Kyoto University, Center for Southeast Asian Studies $^{\mathrm{Kyoto}}$ , Japan

I was employed with Kyoto University's Center for Southeast Asian Studies. I am the Maritime Asia Heritage Survey Project's Digital Heritage Director (https://maritimeasiaheritage.cseas.kyoto-u.ac.jp). I managed the Digital Heritage Lab, which focuses on big data in archaeology and heritage (LiDAR, photogrammetry, automatic detection, and satellite remote sensing, among others).

From September 2020 to August 2022

West University of Timisoara, Romania

I am the Principal Investigator for the MegaFORTS project. The Romanian government is funding the initiative. The funds for the project were raised via a national competition. The project uses non-invasive and minimally intrusive approaches to investigate the fortification systems of Bronze Age fortifications in southwestern Romania.

Postdoctoral Researcher

Project Director

From January 2020 to July 2020

# University of Cyprus Nicosia

Postdoctoral position at Digital Humanities GeoInformatics (DigHumanities GeoInfo Lab), Archaeological Research Unit, University of Cyprus. Supervisor: Prof. Apostolos Sarris

Research associate From March European Space Agency Project at West 2019 to December University of Timisoara, Timisoara (Romania) 2019 Timișoara Advanced remote sensing - Optical and Synthetic Aperture Radar Research associate From March West University of Timisoara Timisoara, 2018 to January 2019 Romania Research and development department From manager January 2014 to April 2015 ArheoVest Association Timișoara, Romania Contracted archaeological surveyor From April National Banat Museum Timișoara, Romania 2010 to 2013

#### **SKILLS**

#### Archaeology

My archaeological fieldwork background knowledge includes a variety of excavation techniques, stratigraphy understanding, data recording, and more. Due to my few years of field experience on over 30 archaeological sites, I am capable of conducting an excavation or fieldwork activity from beginning to end.

#### Geophysics

Advanced knowledge of all geophysical methods (both terrestrial and aerial) used in archaeology, landscape archaeology or environmental approaches. This includes magnetometry (sensitive total field magnetometry or gradiometry - single or multichannel systems), Earth Resistance, Electrical Resistivity Tomography, Ground Penetrating Radar, Electromagnetic Induction and Thermography.

### Remote Sensing

Advanced knowledge of:

- a variety of satellite data (mid-range or high-range resolution), both optical and radar (SAR).
- GIS, image processing and automatic classification.
- · Large spatial databases.
- UAV (photogrammetry and LiDAR).
- LiDAR systems (both terrestrial and aerial)
- Topography (all instruments total stations, DGPS systems, RTK).

#### Digital Humanities

Heritage big data management, advanced 3D modelling and reconstruction, automatization and classification, machine learning related to geoarchaeology and heritage, dissemination of digital products on dedicated platforms.

#### Geoarcaheology and Geomoprphology

Drillings and sample collection, Grain sizing analyses of soils, Basic elemental analyses of materials (pXRF), Impact assessment of changes within archaeological sites caused by natural conditions, Predictive models

## PROJECTS AS PRINCIPAL INVESTIGATOR

The sleeping Giants. The large Bronze Age (2000/1900-900/800 BC) fortifications from southwestern Romania (MegaFORTS) – an interdisciplinary geoarchaeological approach

## TEACHING ACTIVITY

Introduction to Applied Geophysics (course and laboratories)
General Topography (course and laboratories)
GeoInformatics (course and laboratories)
\* for undergraduate and M.A students - Geography Department, West University of Timisoara.

