

# CURRICULUM VITAE

## PERSONAL INFORMATION

Last name **Pleniou**  
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## EDUCATION

2013-2007 **PhD**, School of Engineering, Department of Environmental Engineering, University of Patras, Greece.  
**PhD Dissertation:** Multiscale spectral evaluation and mapping of burned areas using satellite data".  
2007-2001 **BSc**, School of Forestry and Natural Environment, Aristotle University of Thessaloniki, Greece.

## FOREIGN LANGUAGES

Αγγλικά: Standard Certificate in English, Palso  
First Certificate in English, University of Cambridge  
Γερμανικά: Zertifikat Deutsch als Fremdsprache , GOETHE Institut  
Zentrale Mittelstufenprüfung, GOETHE Institut  
Ισπανικά: Diploma de Espanol como lengua extranjera (Nivel Intermedio), Instituto Cervantes

## WORK EXPERIENCE

04/2023-today Associate Researcher (Grade C), Research topic: Forest Fires, Forest Research Institute of Thessaloniki, ELGO-DIMITRA.  
08/2019-03/2023 Researcher (Grade D), Research topic: Forest Fires, Forest Research Institute of Thessaloniki, ELGO-DIMITRA.  
01-07/2019 Free Lancer at Hellenic Cadastre, Athens, Greece.  
10-12/2017 Free Lancer at Forest Administration of Ioannina, Greece.  
04-06/2017 Free Lancer at Municipality of Dodoni, Ioannina, Greece.  
2016-2019 Postdoc Researcher at School of Engineering, Department of Environmental Engineering, University of Patras, Greece.

01/2014-11/2015 Free Lancer at Hellenic Cadastre, Forest Administration of Ioannina, Greece.

## SELECTED RESEARCH PROJECTS

**Project title:** Nature based solutions for prevention and mitigation of natural disasters in the cross border area

**Duration:** 19/07/2022 - 15/12/2023

**Role:** Group member

**Funding:** E.U., European Regional Development Fund (ERDF) - INTERREG IPA CBC

**Project title:** Planning – rearranging management of grazing lands and grazing in North Evia

**Duration:** 01/11/2021 - 31/08/2022

**Role:** Responsible for a scientific action

**Funding:** Diazoma

**Project title:** Consequences on biodiversity from the abandonment of traditional land uses in mountainous areas

**Duration:** 30/03/2020 - 30/03/2023

**Role:** Group Member

**Funding:** Hellenic Foundation for Research and Innovation (H.F.R.I.)

**Project title:** IMPROVED FOREST DATA. Distributed, integrated and harmonized forest information for bioeconomy outlooks (DIABOLO)

**Duration:** 01/11/2017 - 28/02/2019

**Role:** Group Member

**Funding:** E.U., Horizon 2020

**Project title:** Forest fires under climate, social and economic changes in Europe, the Mediterranean and other affected areas of the world (FUME).

**Duration:** 16/01/2010 - 31/12/2012

**Role:** Group Member

**Funding:** E.U., Seventh Framework Programme (FP7)

## PUBLICATIONS

### International Journals

- **M. Pleniou**, F. Xystrakis, P. Dimopoulos & N. Koutsias (2012): Maps of fire occurrence – spatially explicit reconstruction of recent fire history using satellite remote sensing. Journal of Maps 8 (4) 499-506, DOI: 10.1080/17445647.2012.743866
- N. Koutsias, G. Xanthopoulos, D. Founda, F. Xystrakis, F. Nioti, **M. Pleniou**, G. Mallinis, M. Arianoutsou (2013): On the relationships between forest fires and weather conditions in

Greece from long-term national observations (1894–2010). *International Journal of Wildland Fire*, 22 (4), 493-507, DOI:10.1071/WF12003\_AC

- N. Koutsias, **M. Pleniou**, G. Mallinis, F. Nioti and N. Sifakis (2013). A rule-based semi-automatic method to map burned areas: exploring the USGS historical Landsat archives to reconstruct recent fire history. *International Journal of Remote Sensing* 34: 7049-7068, DOI: 10.1080/01431161.2013.816452
- **M. Pleniou**, N. Koutsias (2013). Sensitivity of spectral reflectance values to different burn and vegetation ratios: a multi-scale approach applied in a fire affected area. *ISPRS Journal of Photogrammetry and Remote Sensing* 79: 199-210, DOI: 10.1016/j.isprsjprs.2013.02.016
- N. Koutsias, **M. Pleniou** (2015). Comparing the spectral signal of burned surfaces between Landsat-7 ETM+ and Landsat-8 OLI sensors. *International Journal of Remote Sensing* 36: 3714-3732, DOI: 10.1080/01431161.2015.1070322
- N. Koutsias, **M. Pleniou** (2021). A rule-based semi-automatic method to map burned areas in Mediterranean using Landsat images – revisited and improved. *International Journal of Digital Earth* 14:11,1602-1623, DOI: 10.1080/17538947.2021.1962994
- D.A. Kiziridis, A. Mastrogianni, **M. Pleniou**, E. Karadimou, S. Tsiftsis, F. Xystrakis, I Tsiripidis (2022). Acceleration and Relocation of Abandonment in a Mediterranean Mountainous Landscape: Drivers, Consequences, and Management Implications. *Land*, 11, 406, DOI: 10.3390/land11030406
- D.A. Kiziridis, A. Mastrogianni, **M. Pleniou**, S. Tsiftsis, F. Xystrakis, I Tsiripidis (2023). Improving the predictive performance of CLUE-S by extending demand to land transitions: the trans-CLUE-S model. *Ecological Modelling*, 478, 110307, DOI: 10.1016/j.ecolmodel.2023.110307
- D.A. Kiziridis, A. Mastrogianni, **M. Pleniou**, S. Tsiftsis, F. Xystrakis, I Tsiripidis (2023). Simulating future land use and cover of a Mediterranean mountainous area: the effect of socioeconomic demands and climatic changes. *Land*, 12, 253, DOI: 10.3390/land12010253
- A. Mastrogianni, D.A. Kiziridis, E. Karadimou, **M. Pleniou**, F. Xystrakis, S. Tsiftsis, I. Tsiripidis (2023). Community-level differentiation of Grime's CSR strategies along a post-abandonment secondary successional gradient. *Flora*, 308.52399, DOI: 10.1016/j.flora.2023.152399
- A. Mastrogianni, D.A. Kiziridis, A. Eleftheriadou, M. Paradisiotis, **M. Pleniou**, F. Xystrakis, S. Tsiftsis, I. Tsiripidis (2024). Contribution to the functional flora of Greece: a case study in the northwestern Pindus Mountains. *Willdenowia*, 53 (3), DOI: 10.3372/wi.53.53306
- A. Mastrogianni, D.A. Kiziridis, **M. Pleniou**, F. Xystrakis, S. Tsiftsis, I. Tsiripidis (2024). Imprints of land use history and disturbance regime in phylogenetic diversity of Mediterranean plant communities. *Ecosphere*, 15 (8), DOI: 10.1002/ecs2.4972

- D. Spatharis, A. Tsaligopoulos, Y. Matsinos, I. Karmiris, **M. Pleniou**, E. Navarrete, E. Boikou, C. Astaras (2024). Monitoring Postfire Biodiversity Dynamics in Mediterranean Pine Forests Using Acoustic Indices. *Environments*, 11, 277, DOI: 103390/environments11120277

### International Conferences

- **M. Pleniou**, P. Dimopoulos, N. Koutsias (2009). Delineating unburned patches within fire scar perimeter: A case study with Modis, Landsat, Aster and Ikonos Satellite Data. 52nd International Symposium of the International Association for Vegetation Science. "Vegetation Processes and Human Impact in a Changing World". Κρήτη (Χανιά), Ελλάδα, 30/05-04/06.
- N. Koutsias, **M. Pleniou**(2009). Some notes on spectral properties of burned surfaces at sub-pixel level using multi-source satellite data. 7<sup>th</sup> International Workshop of the EARSeL Special Interest Group on Forest Fires (FF-SIG) on "Advances in Remote Sensing and GIS applications in Forest Fire Management. Towards an operational use of remote sensing in forest fire management". Matera, Italy, 02/09-05/09.
- G. Mallinis, **M. Pleniou**, N. Koutsias (2010). Object-based vs pixel-based mapping of fire scars using multi-scale satellite sensed data. GEOgraphic Object-Based Image Analysis. GEOBIA 2010. Ghent, Belgium, 29/06-02/07.
- N. Koutsias, **M. Pleniou**, F. Nioti, G. Mallinis (2010). Spectral signatures of burned surfaces: Evidence from Hyper-Spectral Remote Sensing Data. Hyperspectral Workshop 2010: from CHRIS / Proba to Prisma & EnMAP and beyond. The European Space Agency (ESA), the German Aerospace Center (DLR)/the German Research Center for Geosciences (GFZ) and the Italian Space Agency (ASI). ESA –ESRIN. Frascati, Italy, 17/03-19/03.
- N. Koutsias, G. Mallinis, **M. Pleniou**, I. Voukelatou, T. Pascali, P. Dimopoulos (2011). Object-based classification using a synergy of high spatial (IKONOS) and high spectral (ASTER) satellite data in a rural NATURA 2000 deltaic area. 2<sup>nd</sup> International Conference on Space Technology (ICST). Athens, Greece, 15/09-17/09.
- **M. Pleniou**, P. Dimopoulos, N. Koutsias (2011). Delineating unburned islands within fire scar perimeter: The role of spectral and spatial resolution of satellite data. 8th International Workshop of the EARSeL Special Interest Group on Forest Fires on "Advances in Remote Sensing and GIS applications in Forest Fire Management. From local to global assessment". Stresa, Italy, 20/10-21/10.
- **M. Pleniou**, N. Koutsias (2012). Sensitivity of spectral reflectance values at pixel level in respect to different burn and vegetation ratios. 32<sup>nd</sup> EARSeL Symposium. Mykonos, Greece, 21/05-24/05.
- **M. Pleniou**, N. Koutsias (2013). Sensitivity of vegetation indices to different burn and vegetation ratios using LANDSAT-5 satellite data. 1<sup>st</sup> International Conference on Remote Sensing and Geoinformation of the Environment. Paphos, Cyprus, 08/04-10/04.

- **M. Pleniou**, N. Koutsias (2013). Relationships between vegetation indices and different burn and vegetation ratios. A multi-scale approach applied in a fire affected area. 1<sup>st</sup> International Conference on Remote Sensing and Geoinformation of the Environment. Paphos, Cyprus, 08/04-10/04.
- Z. Stamou, **M. Pleniou**, N. Koutsias (2016). Spatial explicit reconstruction of recent fire history using USGS and ESA Landsat archives in Attica, Greece from 1984 to 2015. 3rd Workshop EARSeL SIG on Forestry, Krakow, Poland, 15/09-16/09.
- N. Koutsias, **M. Pleniou**, J. May, S. Solberg (2017). Current advances on mapping burned areas in Mediterranean with Sentinel-2 and Sentinel-1 data. IUFRO 125<sup>th</sup> Anniversary Congress, Freiburg, Germany, 18/09-22/09.
- N. Koutsias, **M. Pleniou**(2019). A rule-based semi-automatic method to map burned areas using Landsat images – revisited and improved. EGU General Assembly. Vienna, Austria, 07/04-12/04.
- N. Koutsias, **M. Pleniou**(2019). A rule-based semi-automatic method to map burned areas using Landsat and Sentinel-2 images - revisited and improved. 12th EARSeL Forest Fires SIG Workshop. Rome, Italy, 03/10-05/10.
- A. Mastrogianni, D.A. Kiziridis, E. Karadimou, **M. Pleniou**, F. Xystrakis, S. Tsiftsis, I. Tsiripidis (2021). Vegetation diversity in a rapidly changing landscape: investigating the effects of land abandonment on habitat conservation. In: Chytry M., Biurrun I., Atorre F., Agrillo E. (Eds.), 29th Conference of European Vegetation Survey: Revegetating Europe – Contributions of the EVS to the UN Decade on Ecosystem Restoration. European Vegetation Survey, Online conference, 06/09-07/09.
- D.A. Kiziridis, A. Mastrogianni, **M. Pleniou**, E. Karadimou, S. Tsiftsis, F. Xystrakis, I. Tsiripidis (2021). Accelerated and relocated abandonment in a Mediterranean mountainous landscape: drivers and consequences on vegetation succession. 63rd IAVS Symposium, Virtual Event, 20/09-23/09.
- Mastrogianni , D. A. Kiziridis, A. Eleutheriadou ,M. Paradisiotis, **M. Pleniou**, F. Xystrakis, S. Tsiftsis, I. Tsiripidis (2022). Understanding patterns of secondary succession after land abandonment, through the CSR approach. 30<sup>th</sup> Conference of the European Vegetation Survey: Plant communities in changing environment, Bratislava, Slovakia, 09/05–13/05.
- Astaras, D. Migli, I. Karmiris, **M. Pleniou**, G. Mitsainas, D. Youlatos (2022). Distribution and habitat use by sympatric dormice species in two Natura 2000 sites in central Macedonia, Greece. 11th International Dormice Conference 2022. Svilengrad, Bulgaria, 09/05–13/05.
- E. Boikou, C. Astaras, I. Karmiris, **M. Pleniou**, G. Karris (2022). Preliminary biodiversity assessment of burnt Mediterranean pine forests in Sithonia, Greece, using acoustic complexity indices. 15th International Congress on the Zoogeography and Ecology of Greece and Adjacent Regions. Mytilini, Lesvos, Greece, 12/10-15/10.

- N. Koutsias, I. Kalogeropoulou, A. Karamitsou, N. G. Mili, **M. Pleniou** (2022). A rule-based semi-automatic method to map burned areas using Landsat and Sentinel-2 images – incorporating vegetation indices into the mapping algorithm. 9 International Conference Forest Fire Research & 17th International Wildland Fire Safety Summit. Coimbra, Portugal, 11/11-18/11.

## INTENSIVE COURSES - SEMINARS

- 2016 Summer School “**Advanced Geomatics in modern forestry**” in module: UAV & Image-based 3D point clouds. 12/09/2016 – 14/09/2016, SIG on Forestry, EARSEL, Krakow, Poland.
- 2014 Educational project: “**Development of Spatial Data Services for the Protection of Forests and Forest Areas**”. 08/01/2014 – 17/01/2014, Hellenic Cadastre, Athens, Greece.
- 2010 COST FP0701 Training School “**Post-Fire rehabilitation**”. 13/04/2010 – 16/04/2010, Fundation CEAM / University of Castilla-La Mancha TBC, Valencia, Spain.
- 2009 Seminar: “**Training on object-based image processing software Definiens Developer 7.0**”. 02/02/2009 – 04/02/2009, Inforest Research O.C., Athens, Greece.
- 2008 Participation in «**Aforestation Project**” collaboration of University of Ioannina and University of Istanbul, 24/11/2008 – 27/11/2008, Ioannina, Greece.
- 2008 Seminar: “**Geographical Information Systems**”. 07/04/2008 – 07/07/2008, Greek Manpower Employment Organization, Agrinio, Greece (10/6/2008 – 04/07/2008).
- 2008 Seminar: “**Training on Remote Sensing software ENVI (Basic Education)**”. March 2008, Inforest Research O.C., Athens, Greece.

## TEACHING EXPERIENCE

- 2008-2013 Teaching, at undergraduate students, the courses :“**Environmental Informatics-Geographical Information Systems (GIS)**”, “**Methods of Spatial Analysis**”, “**Ecological Mapping**” και “**Remote Sensing**”, School of Engineering, Department of Environmental Engineering, University of Patras, Greece.
- 2021-2023 Teaching of the MSc course: “**Indicating and Monitoring - Data Analysis of Terrestrial Ecosystems**”, Department of Forestry and Management of the Environment and Natural Resources, Democritus University of Thrace, Greece.