

## **Curriculum Vitae**

*Efi Dimopoulou*



### **OFFICE:**

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**LANGUAGES:** Greek (mother language), English, excellent, French, excellent, German, poor

**SHORT BIOGRAPHY:** Efi Dimopoulou is Professor at the School of Rural and Surveying Engineering, NTUA, in the fields of Cadastre, Spatial Information Management & Land Policy, 3D Cadastres and 3D Modelling. She is the Programme Director of the N.T.U.A. Inter-Departmental Postgraduate Course «Environment and Development». President of the Hellenic Society for Geographical Information Systems (HellasGIs, - 2016).

### **1. EDUCATION POSTGRADUATE STUDIES AND TRAINING COURSES**

- Efi Dimopoulou graduated from the School of Rural and Surveying Engineering, National Technical University of Athens, Greece (NTUA) in 1983 and obtained her Ph.D. thesis entitled “*Use of Existing Cadastral Information*”, NTUA in 1996.
- Her postgraduate education and training courses in the field of “Cadastral and Spatial Information Management”, comprise:
  - Between 1984 and 1988, she has been trained at administrative agencies of the French Cadastre, on scholarship by the French government (ACTIM) on:
    - Techniques and processes concerning the compilation and automation of the French cadastral system (MAJIC and FIDJI Projects)
    - The development of the Urban LIS of Marseille by ICOREM
    - Photogrammetric procedures for the compilation and update of cadastral maps (St. Germain en Lay, Paris) and
    - At the “Ecole Nationale du Cadastre” in Toulouse.
  - Between 1993 and 1995, she has been trained at the German Cadastral administration on:
    - The program of cadastral resurvey and conversion into digital cadastral map (ALK) and GISManagement, State Survey Office and Celle, Lower Saxony
    - Planning and technological development, Lower Saxon Ministry of the Interior, Surveying and Cadastre Administration (VKV)
    - Cadastral reform program, Surveying and Cadastre Agency of Berlin.

In 1995 she visited and studied the topographical and cadastral organization in Bern, Switzerland.

In 1997 she attended training courses on Geographical Information Systems, ArcGIS for Land Records and ARCNFO Database Design, ESRI Professional GIS Class, at Redlands Learning Center, Redlands, California.

## **2. TEACHING ACTIVITIES**

Efi Dimopoulou has a continual teaching activity both at undergraduate and postgraduate level relevant to her field of expertise, comprising undergraduate and postgraduate courses in the fields of 3D Cadastre & 3D Modelling, Land Information Systems & Land Policy at the School of Rural and Surveying Engineering (SRSE), NTUA.

She has supervised over 50 diploma theses and 30 master theses, while she is currently principal supervisor of 6 Ph.D. theses, co-supervisor at Delft University (with Prof. P.v. Oosterom) and International Examiner PhD at Melbourne University.

## **3. RESEARCH PROJECTS**

Efi Dimopoulou has participated in 22 funded Research Projects in the fields of Cadastre, 3D LAS, GIS/LIS, DataBase Management and Systems' Development, Urban and Regional Planning. She has also participated in Scientific Committees of the Technical Chamber of Greece, the Hellenic Mapping and Cadastral Organization (HEMCO) and other Hellenic authorities, for the implementation of the Hellenic Cadastre Project, in FIG Comm3 Working Group 3.1 "Spatial Information Management, technical approaches" as well as in FIG joint Commission 3 and 7 on "3D-Cadastres".

Currently she is the Principal Investigator of the funded Research Program «*3D Modelling and Digital Visualization of the NTUA Zografos Campus*».

## **4. PROFESSIONAL ACTIVITIES**

In professional projects in the fields of Land Surveying, Cadaster, Photogrammetry, GIS development and urban reform:

- Photogrammetric Survey of the Athens Central Market (1988-89).
- Photogrammetric Survey of the Shipyards in Chania (1989-91).
- Development of Cartographic Infrastructure for the Urban Reform Project (1993-97).
- Reform of the Patras University Campus Master Plan (1998).
- Investigation of Land Use and Traffic System in Athens Metropolitan Area (2000).
- Implementation of a GISystem in Kefallinia Prefecture (2000).
- Consultant to ECHMES Environmental, Chemical and Metallurgical Ltd., providing surveying and photogrammetric services (2004-08).
- Consultant to the Hellenic Cadaster for the specification of technical and legislative guidelines for the Project.
- Consultant to the Architectural Project for the Reform and Development of Germanina Farm in Paphos, Cyprus (2011).

## 5. SCIENTIFIC PUBLICATIONS AND MONOGRAPHS

Efi Dimopoulou has published the following scientific books:

- RESEARCH AND DEVELOPMENT PROGRESS IN 3D CADASTRAL SYSTEMS, Efi Dimopoulou and Peter Van Oosterom (Eds.) *Publisher [S.I.]: MDPI AG, 2019, Print book: English ISBN: 3039210564 9783039210565*
- Lead author of Chapter 2. Initial Registration of 3D Parcels, FIG Publication Best Practices 3D Cadastres - Extended version, Editor: Peter van Oosterom, International Federation of Surveyors (FIG publication), Copenhagen, Denmark, March 2018 (ISBN 978-87-92853-64-6, ISSN: 2311-8423) pp 67-94
- "*ND Cadastre*", NTUA publ., 2015 p. 194
- Study Guide "Land Use and Land Policy" for the Post Graduate Program "Environmental Conservation and Management", following invitation of the Faculty of Pure and Applied Sciences, Open University of Cyprus, 2011, p.48
- Scientific monograph "Registration System, Cadastre and Development" (awarded), 1993, p.91
- She authored or co-authored the following scientific papers:
  - 60 papers in scientific journals on 3D-Cadastres, 3D modelling approaches, standardisation (LADM), urban planning and decision-support systems (4 under consideration)
  - 60 papers published in conference proceedings and special issues, after *double blind peer review* or extended abstract review
  - 22 congress presentations without proceedings
  - 10 papers announced, contained in abstract books and
  - 5 articles published in journals without peer review.
  - 3 editorials.

### 5.1 List of Recent Selected Peer Reviewed Publications

Kalogianni, E., Karel J., Kalantari, M., Dimopoulou, E., Bydłosz, J., Radulović, A., Vučić, N., Sladić, D., Govedarica, M., Lemmen, C., van Oosterom, P. Methodology for the development of LADM country profiles. *Land Use Policy* 105 (2021) 105380

E. Chatzinikolaou, I. Pispidikis, and E. Dimopoulou. A SEMANTICALLY ENRICHED AND WEB-BASED 3D ENERGY MODEL VISUALIZATION AND RETRIEVAL FOR SMART BUILDING IMPLEMENTATION USING CITYGML AND DYNAMIZER ADE. *ISPRS Ann. Photogramm. Remote Sens. Spatial Inf. Sci.*, VI-4/W1-2020, 53–60, <https://doi.org/10.5194/isprs-annals-VI-4-W1-2020-53-2020>.

D. E. Andrianesi and E. Dimopoulou AN INTEGRATED BIM-GIS PLATFORM FOR REPRESENTING AND VISUALIZING 3D CADASTRAL DATA. *ISPRS Annals of Photogrammetry, Remote Sensing & Spatial Information Sciences*. 2020, Vol. 6 Issue 4/W1, p3-11. 9p.

Kalogianni, E.; van Oosterom, P.; Dimopoulou, E.; Lemmen, C. 3D Land Administration: A Review and a Future Vision in the Context of the Spatial Development Lifecycle. *ISPRS Int. J. Geo-Inf.* 2020, 9(2), 107; doi:10.3390/ijgi9020107

Kalogianni, E., Dimopoulou, E., Thompson, R., Lemmen, C. H. J., Ying, S., & van Oosterom, P. J. M. (In press). Development of 3D spatial profiles to support the full lifecycle of 3D objects. *Land use policy*, [Available online 22 January 2020, 104177] <https://doi.org/10.1016/j.landusepol.2019.104177>

Kitsakis, Dimitrios, and Efi Dimopoulou. "Assessing the Environmental Impact of 3d Public Law Restrictions. *Land use policy*, [Available online 22 January 2020, 104151] doi: 10.1016/j.landusepol.2019.104151

Eftychia KALOGIANNI, Mohsen KALANTARI, Efi DIMOPOULOU and Peter VAN OOSTEROM LADM country profiles development: aspects to be reflected and considered. *Proc. 8th International FIG workshop on the Land Administration Domain Model*. 1-3 October 2019, Kuala Lumpur, Malaysia <https://doi.org/10.4233/uuid:2650a466-308a-40ca-b655-a9ff3f48a70c>

Kitsakis, Dimitrios, Mohsen Kalantari, Abbas Rajabifard, Behnam Atazadeh, and Efi Dimopoulou. "Exploring the 3rd dimension within public law restrictions: A case study of Victoria, Australia" *Land use policy* 85, 1 2019: 195-206. doi: 10.1016/j.landusepol.2019.03.024

Pispidikis, I. and Dimopoulou, E.: CONCEPTUAL MODEL OF CITYGML RESTFUL WEB SERVICE, *Int. Arch. Photogramm. Remote Sens. Spatial Inf. Sci.*, XLII-4/W15, 67–74, <https://doi.org/10.5194/isprs-archives-XLII-4-W15-67-2019>.

Pispidikis, I. and Dimopoulou, E.: CITYGML RESTFUL WEB SERVICE: AUTOMATIC RETRIEVAL OF CITYGML DATA BASED ON THEIR SEMANTICS. PRINCIPLES, GUIDELINES AND BLDG CONCEPTUAL DESIGN, *ISPRS Ann. Photogramm. Remote Sens. Spatial Inf. Sci.*, IV-4/W6, 49–56, <https://doi.org/10.5194/isprs-annals-IV-4-W6-49-2018>

Ioannis Pispidikis, Eva Tsiliakou, Dimitrios Kitsakis, Katerina Athanasiou, Eftychia Kalogianni, Tassos Labropoulos and Efi Dimopoulou. Combining Methodological Tools for the Optimum 3D Modelling of NTUA Campus. *ISPRS Ann. Photogramm. Remote Sens. Spatial Inf. Sci.*, IV-4/W6, 57-63, 2018

George Floros, Claire Ellul and Efi Dimopoulou. Towards Data Integration between IFC and CityGML LOD 4 - Retaining Semantic Information. *Int. Arch. Photogramm. Remote Sens. Spatial Inf. Sci.*, XLII-4/W10, 33-40, 2018

Chatzinikolaou, E., Chalkias, C., and Dimopoulou, E.: URBAN MICROCLIMATE IMPROVEMENT USING ENVI-MET CLIMATE MODEL, *Int. Arch. Photogramm. Remote Sens. Spatial Inf. Sci.*, XLII-4, 69–76, <https://doi.org/10.5194/isprs-archives-XLII-4-69-2018>.

Kalogianni E., Dimopoulou E., Quak W., van Oosterom P.J.M. "LADM and INTERLIS as a perfect match for 3D Cadastre ". *Int. Arch. Photogramm. Remote Sens. Spatial Inf. Sci.*, Volume XLII-4/W7, 2017

Floros, G., Pispidikis, I., Dimopoulou, E. Investigating integration capabilities between IFC and citygml lod3 for 3D city modelling. *Int. Arch. Photogramm. Remote Sens. Spatial Inf. Sci.*, 42 (4W7), pp. 1-6-2017.

Kalogianni, E., Dimopoulou, E., Quak, W., Germann, M., Jenni, L., Van Oosterom, P. INTERLIS language for modelling legal 3D spaces and physical 3D objects by including formalized implementable constraints and meaningful code lists. *ISPRS International Journal of Geo-Information*, 6 (10), art., no. 319, **2017**.

Katerina ATHANASIOU, Efi DIMOPOULOU, Michael SUTHERLAND, Christos KASTRISIOS and Lysandros TSOULOS. Toward the Development of a Marine Administration System based on International Standards. *ISPRS Int. J. Geo-Inf.* **2017**, 6, 194; doi: 10.3390/ijgi6070194

Kalogianni E., Dimopoulou E., Quak W., van Oosterom P.J.M. "LADM and INTERLIS as a perfect match for 3D Cadastre ". *Int. Arch. Photogramm. Remote Sens. Spatial Inf. Sci.* Volume XLII-4/W7, **2017**.

Dimopoulou, E., Dimitra-Efstathia Andrianesi D.E. Investigating an Interoperability Platform for Sustainable Land Management. *Peer reviewed paper in Proc. of FIG Working Week 2017 in Helsinki, Finland May 29 - June 2, 2017*.

Floros, G. and Dimopoulou, E. INVESTIGATING THE ENRICHMENT OF A 3D CITY MODEL WITH VARIOUS CITYGML MODULES, *Int. Arch. Photogramm. Remote Sens. Spatial Inf. Sci.*, XLII-2/W2, 3-9, doi: 10.5194/isprs-archives-XLII-2-W2-3-**2016**.

Floros, G., Solou, D., Pispidikis, I., and Dimopoulou, E.(2016) A ROADMAP FOR GENERATING SEMANTICALLY ENRICHED BUILDING MODELS ACCORDING TO CITYGML MODEL VIA TWO DIFFERENT METHODOLOGIES, *Int. Arch. Photogramm. Remote Sens. Spatial Inf. Sci.*, XLII-2/W2, 23-32, doi: 10.5194/isprs-archives-XLII-2-W2-23-**2016**.

Tsiliakou, E. and Dimopoulou, E. 3D NETWORK ANALYSIS FOR INDOOR SPACE APPLICATIONS, *Int. Arch. Photogramm. Remote Sens. Spatial Inf. Sci.*, XLII-2/W2, 147-154, doi: 10.5194/isprs-archives-XLII-2-W2-147-**2016**.

Pispidikis, I. and Dimopoulou, E. DEVELOPMENT OF A 3D WEBGIS SYSTEM FOR RETRIEVING AND VISUALIZING CITYGML DATA BASED ON THEIR GEOMETRIC AND SEMANTIC CHARACTERISTICS BY USING FREE AND OPEN SOURCE TECHNOLOGY, *ISPRS Annals Photogramm. Remote Sens. Spatial Inf. Sci.*, IV-2/W1, 47-53, doi: 10.5194/isprs-annals-IV-2-W1-47-**2016**.

Lazoglou M., Kolokoussis P., Dimopoulou E. Investigating the Use of Modified NSGA-II Solution for Land-Use Planning in Mediterranean Islands. *Journal of Geographic Information System*, **2016**, 8, 369-386, SciRes. <http://www.scirp.org/journal/jgis>

Solou, D., and Dimopoulou, E. Investigating the capabilities of semantic enrichment of 3D CityEngine data. *Proc. SPIE 9688*, Fourth International Conference on Remote Sensing and Geoinformation of the Environment (RSCy2016), 968802 **2016**; doi:10.1117/12.2240736; <http://dx.doi.org/10.1117/12.2240736>

Psomadaki, S., Dimopoulou, E., and van Oosterom, P. Model Driven Architecture engineered land administration in conformance with international standards – illustrated with the Hellenic Cadastre. *Journal of Open Geospatial Data, Software and Standards, Springer* (**2016**) 1:3 DOI10.1186/s40965-0160002-3

Dimopoulou, E., Kitsakis, D., and Tsiliakou, E. Investigating Correlation between Legal and Physical Property: Possibilities and Constraints.), *SPIE Vol. 9535*, 95350A · doi: 10.1117/12.2192572 (eds. D. Hadjimitsis, K.Themistocleous, S. Michaelides, G.Papadavid)

Kalogianni, E., Dimopoulou, E., and van Oosterom, P. A 3D LADM prototype Implementation in INTERLIS. *Springer Lecture Notes in Geoinformation and Cartography (LNGC)* pp 137-157, **2016**

Floros, G., Tsiliakou, E., Kitsakis, D., Pispidikis, I., and Dimopoulou, E. Investigating Semantic Functionality of 3D Geometry for Land Administration. *Springer Lecture Notes in Geoinformation and Cartography (LNGC)*, pp 247-264, **2016**.

Pispidikis, I., and Dimopoulou, E. Web development of spatial content management system through the use of free and open-source technologies. Case study in rural areas. *SciRes. Journal of Geographic Information System (JGIS)*, **2015**, 7, 527-540, SciRes. <http://dx.doi.org/10.4236/igis.2015.75042>

Athanasίου, K., Pispidikis, I., and Dimopoulou, E. 3D Marine Administration System, Based on LADM. 3D GeoInfo Conference, 28-30 October 2015, Kuala Lumpur, Malaysia. *Springer Lecture Notes in Geoinformation and Cartography (LNGC)* pp. 385-407, **2015**.

Gogolou, C., and Dimopoulou, E. Land Administration Standardization for the Integration of Cultural Heritage in Land Use Policies. *Land Use Policy* 49, 617-625, **2015**, Elsevier.

Tsiliakou, E., Labropoulos, T., Dimopoulou, E. Procedural Modeling in 3D GIS Environment. *International Journal of 3-D Information Modeling*, 3(3), 17-34, July-September **2014**  
doi:10.4018/ij3dim.2014070102

Giannaka, O., Dimopoulou, E., Georgopoulos, A. Investigation on the Contribution of LiDAR data in 3d Cadastre. *SPIE Vol. 9229:2014* doi: 10.1117/12.

Tsiliakou, E., Labropoulos, T., Dimopoulou, E. Transforming 2D cadastral data in a dynamic smart 3D model. *Int. Arch. Photogramm. Remote Sens. Spatial Inf. Sci.*, Volume XL-2/W2, 105-111, doi: 10.5194/isprsarchives, **2013**.

Dimopoulou, E. and Elia, E. "Towards a Common Basis for 3D Cadastres from a Legal Perspective". *Survey Review* 45 (333), pp. 410-418, **2013**

Tolidis, K, and Dimopoulou, E. Addressing Complex Spatial Decision Problems in Mountainous Areas: The Intelligent Spatial Decision Support Systems (SDSS) Approach. *Regional Science Inquiry Journal*, Vol. IV, (3) Special Issue, pp. 51-67, **2012**.

Potsiou, C., and Dimopoulou, E. Access to Land and Housing Aspects of the Greek Roma. *Surveying and Land Information Science (SALIS)*, 72 (1), pp. 37-49, **2012**.

## 6. SEMINARS AND CONGRESSES

Efi Dimopoulou participated in more than 100 national and international scientific events, in quite as invited speaker or rapporteur: 75 presentations, 14 as invited speaker, 30 as PC-member and chairman session and chair of Congress. She was also invited in lecturing courses in 10 educational seminars as instructor, in the field of Cadastre, Photogrammetry and GIS.

## 7. INTERNATIONAL RECOGNITION

- Member of international Papers' Peer Review Committees (PPRCs), she peer reviewed more than 100 scientific papers in international scientific journals (Computers, Environment and Urban Systems, Waste Management Journal, International Journal of Information and Decision Sciences) and international congresses.
- Aalborg University Copenhagen, member of the assessment committee for full professorship in Land Management and Cadastral System (2020).
- **Chair** of the "3D Athens 2016 Joint International Conference" (including the «11<sup>th</sup> 3DGeoInfo 2016 Conference», the «5<sup>th</sup> 3D Cadastre Workshop» and the ISPRS «2<sup>nd</sup> 3D Indoor Workshop»)
- Programme Committee Member (PC-member) and chairman session in 25 international congresses and scientific events.
- National participant in Joint FIG Commission 3 and 7 on "3D-Cadastrals" and national delegate of Greece at the Land Administration Domain Model (LADM) experts' workshop.
- Interviewed by the Australian "ABC Radio National's Rear Vision" program for "Transforming the city through the Olympic Games 2012".
- Invited and organized experts' meeting for a 20-member delegation from the Japanese Urban Planners' Association on urban reforms that relate to the Olympic Games (2009).
- She organized scientific union requested by academic members of Korean Universities in the field of 3D cadastral advances (2007).
- **Editor of international scientific journals:** *ISPRS Ann. Photogramm. Remote Sens. Spatial Inf. Sci., IV-2-W1-1-2016* και *Int. Arch. Photogramm. Remote Sens. Spatial Inf. Sci., XLII-2-W2-1-2016, 2016*, **Guest Editor:** *Special issue, Journal ISPRS "Research and Development Progress in 3D Cadastral Systems"* IJGI: ISSN 2220-9964, SCIE member of the **Editorial Board:** *International Journal of 3D Information Modelling (IJ3DIM)*.