

# **C U R R I C U L U M V I T A E**

## **Nektarios CHRYSOULAKIS**

Foundation for Research and Technology – Hellas (FORTH)  
Institute of Applied and Computational Mathematics

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<http://www.iacm.forth.gr>  
<http://works.bepress.com/chrysoulakis>

**November 2017**

## ***Personal***

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FIRST NAME            Nektarios  
LAST NAME            Chrysoulakis  
FATHER'S NAME        Miltiadis  
BIRTH PLACE          Ierapetra, Crete, Greece  
BIRTH DATE            June 4, 1970  
PROFESSION            Physicist, PhD holder (University of Athens)  
OCCUPATION            Director of Research (Grade A) in Foundation for Research and  
                                 Technology – Hellas (FORTH)  
ADDRESS                Foundation for Research and Technology – Hellas  
                                 Institute of Applied and Computational Mathematics,  
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                                      <http://works.bepress.com/chrysoulakis>

## ***Education***

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**1996-2000**    PhD in Remote Sensing, Department of Physics, University of Athens.  
                                 PhD Thesis: "Development of a Model Algorithm for the detection and  
                                 Monitoring of Major Fires and Plumes caused by Industrial Accidents with the  
                                 use of Satellite Remote Sensing"  
**1993-1995**    MSc in Environmental Physics, Department of Physics, University of Athens  
**1989-1993**    Bachelor Degree in Physics, Department of Physics, University of Athens

## ***Professional Interests***

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- Satellite Remote Sensing
- Urban Environment, Urban Surface Energy Budget, Microclimatic Studies
- Thermal Infrared Studies, Surface Temperature Estimation
- Atmospheric Physics - Radiative Transfer
- Atmospheric correction.
- Earth Observation Time Series Analysis
- Environmental Monitoring, Change Detection
- Development of Land Use/Cover Databases
- Digital Terrain Models, 3D Visualizations
- Natural and Technological Risk Analysis
- Geographical Information Systems, Spatial Analysis
- Spatial Decision Support Systems

## Professional Experience

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2014 - **Director of Research (Grade A) in Foundation for Research and Technology – Hellas, Institute of Applied and Computational Mathematics**

**Coordinator of the following R&D projects:**

- **URBANFLUXES:** URBan ANthropogenic heat FLUX from Earth observation Satellites: investigate the potential of Earth Observation to retrieve the anthropogenic heat flux, as a key component in the urban energy budget and develop a method to derive it from space.

*Funding Organization: European Union, Horizon2020 - Space  
Duration: 2015 - 2017.*

- **SEN4RUS:** exploiting Sentinels for supporting urban planning applications at city and regional levels in Russia: developing environmental indicators and a web-based information system to exploit the information content provided by Copernicus Sentinels mass data streams in support of urban planning at local and regional scales in Russia.

*Funding Organization: European Union, FP7 - ERA.Net-RUS Plus  
Duration: 2016 - 2018.*

- **CitySen:** exploitation of dynamic Earth Observation in supporting Sustainable Urban Planning towards Climate Change Mitigation and Adaptation. Innovation Voucher from the Earth Observation Entrepreneurship Initiative of the European Space Agency, for the development of a Business Plan for establishing a Start-up and preparing its candidature for incubation in ESA BIC Noordwijk.

*Funding Organization: European Space Agency (ESA-EOEI)  
Duration: 2016*

- **EO4SEB:** Advanced Earth Observation techniques for urban Surface Energy Balance modeling (Bilateral cooperation: Greece - France)

*Funding Organization: General Secret. for Research & Technology  
Duration: 2013 - 2015.*

**Participation in the following R&D projects:**

- **IGIC: Improvement of green infrastructure in agroecosystems: reconnecting natural areas by countering habitat fragmentation:** Development of a Green Infrastructure network providing the basis for reconnecting existing nature areas of the NATURA 2000 network and conserve biodiversity. The network will play a demonstrative role in regional, national and EU level.

*Funding Organization: European Union - LIFE+  
Duration: 2017 - 2022.*

- **ThinkNature:** Development of a multi-stakeholder communication platform that will support the understanding and the promotion of Nature Based Solutions in local, regional, EU and International level.

*Funding Organization: European Union, Horizon2020: Climate action, environment, resource efficiency and raw materials  
Duration: 2016 - 2019.*

- **ECOPOTENTIAL:** Improving future Ecosystem benefits through Earth Observations: development of a new unified framework for ecosystem studies and management of protected areas.  
*Funding Organization: European Union, Horizon2020: Climate action, environment, resource efficiency and raw materials*  
*Duration: 2015 - 2019.*
- **ARCHERS:** Advancing Young Researchers' Human Capital in Cutting Edge Technologies in the Preservation of Cultural Heritage and the Tackling of Societal Challenges.  
*Funding Organization: Stavros Niarchos Foundation*  
*Duration: 2017 - 2019.*
- **ENVIRONMENT:** Research in the Scientific area "Environment" in the framework of the Hellenic Republic-Siemens Agreement partially funded by the Programmatic Agreement Between Research Centers-GSRT 2015-2017.  
*Funding Organization: SIEMENS*  
*Duration: 2015 - 2017.*
- **FLIRE:** Floods and fire Risk assessment and management: Change the paradigm for the combined, effective and robust risk assessment and management of both flash floods and forest fires in peri-urban areas, using state of art tools, technologies and methods and taking into account prevention, adaptation and interaction issues.  
*Funding Organization: European Union - LIFE+*  
*Duration: 2012 - 2015.*
- **DRAGON 3:** ESA – MOST cooperation Programme. 3<sup>rd</sup> Framework Cooperation Program between European Space Agency and National Remote Sensing Center of China. Participation in Action: MONITOR: Definition of indicators at the urban scale as supported by EO data. (PI: Prof. D. Asimakopoulos, University of Athens).  
*Funding Organization: European Space Agency*  
*Duration: 2012 - 2016.*
- **PEFYKA:** Innovating methods for observation and improvement of environmental quality and for natural hazards mitigation.  
*Funding Organization: General Secret. for Research & Technology, Action "KRIPIS: Development proposals of Research Institutions"*  
*Duration: 2013 - 2015.*
- **SPIDOnet.GR:** Spinning or speeding the web? Accelerating biodiversity research using ground spiders as ambassadors of Greek arthropod hotspots (PI: Prof. M. Alexiou - Chatzaki, Democritus University of Thrace).  
*Funding Organization: General Secret. for Research & Technology, Action "ARISTEIA II: Supporting human capital to promote research and innovation"*  
*Duration: 2014 - 2015.*

**2005 - 2014 Senior Researcher (Grade B) in Foundation for Research and Technology – Hellas, Institute of Applied and Computational Mathematics**

**Coordinator of the following R&D projects:**

- **EO4SEB:** Advanced Earth Observation techniques for urban Surface Energy Balance modeling (Bilateral cooperation: Greece - France)  
*Funding Organization: General Secret. for Research & Technology*  
*Duration: 2013 - 2015*
- **GEOURBAN:** Exploiting Earth Observation in sustainable Urban Planning & Management: bridging the gap between Earth Observation scientists and urban planners focusing on urban structure and urban environmental quality.  
*Funding Organization: European Union, FP7 - ERA.Net-RUS*  
*Duration: 2012 - 2013*
- **BRIDGE:** Sustainable Urban planning Decision support accounting for urban metabolism: Bridging the gap between bio-physical sciences and urban planners and to illustrate the advantages of accounting for environmental issues on a routine basis in design decisions, focusing on the interrelation between energy and material flows and urban structure.  
*Funding Organization: European Union, FP7 - Environment including Climate Change*  
*Duration: 2008 - 2011*
- **PROGRESSION:** Prototyping the retrievals of energy fluxes and surface soil moisture: Development of a series of prototype products for the operational retrieval of sensible and latent heat fluxes, as well as soil surface moisture content by using a synergy of ESA's satellite sensors (Post-doc research, PI: Dr. G. Petropoulos)  
*Funding Organization: European Space Agency - The Changing Earth Science Network*  
*Duration: 2010 - 2012 (FORTH involvement: 2010 - 2011)*
- **ATMOSAT:** Adjustment of atmospheric correction methods for local Studies: Application in ASTER data for the area of Crete (Bilateral cooperation: Greece - US - Japan).  
*Funding Organization: General Secret. for Research & Technology*  
*Duration: 2006 - 2008*
- **PRECIPITABLE WATER:** Study on the spatial – temporal distribution of atmospheric water content with the combined use of satellite remote sensing and non-linear science (Bilateral cooperation: Greece - China).  
*Funding Organization: General Secret. for Research & Technology*  
*Duration: 2005 - 2007*
- **PLUMESAT:** Use of a satellite ground receiving station for the detection and monitoring of fires and plumes caused by major natural and man-made disasters (Bilateral cooperation: Greece - France)  
*Funding Organization: General Secret. for Research & Technology*  
*Duration: 2005 - 2007*
- **REALDEMS:** Remote sensing Application for Land cover and Digital Elevation Models Service (Bilateral cooperation: Greece - US).  
*Funding Organization: General Secret. for Research & Technology*  
*Duration: 2004 - 2006*

- **SATERM:** A Satellite Technique for Estimating Rainfall over Mediterranean (Bilateral cooperation: Greece - US).  
*Funding Organization: General Secret. for Research & Technology*  
*Duration: 2004 - 2006*

**Participation in the following R&D projects:**

- **FLIRE** – Floods and fire Risk assessment and management: Change the paradigm for the combined, effective and robust risk assessment and management of both flash floods and forest fires in peri-urban areas, using state of art tools, technologies and methods and taking into account prevention, adaptation and interaction issues.  
*Funding Organization: European Union - LIFE+*  
*Duration: 2012 - 2015.*
- **DRAGON 3:** ESA – MOST cooperation Programme. 3<sup>rd</sup> Framework Cooperation Program between European Space Agency and National Remote Sensing Center of China. Participation in Action: MONITOR: Definition of indicators at the urban scale as supported by EO data. (PI: Prof. D. Asimakopoulos, University of Athens).  
*Funding Organization: European Space Agency*  
*Duration: 2012 - 2016.*
- **AKAIPRO:** Study of the extreme weather events in local scale to assess their impacts on civil protection and economy.  
*Funding Organization: General Secret. for Research & Technology – Cooperation 2011: Partnerships of Production and Research Institutions in Focused Research and Technology Sectors.*  
*Duration: 2011 - 2013*
- **DRAGON 2:** ESA – MOST cooperation Programme. 2<sup>nd</sup> Framework Cooperation Program between European Space Agency and National Remote Sensing Center of China. Participation in Action: Use of Earth Observation in support of Major Sport Events: Case Study for the Athens, Beijing and London Olympic Games (PI: Prof. D. Asimakopoulos, University of Athens).  
*Funding Organization: European Space Agency*  
*Duration: 2008 - 2012.*
- **UHI-** Urban Heat Islands and Urban Thermography. Analysis of the Urban Heat Island trends over 10 European cities over the last 10 years, using a multi-sensor approach. Participation as external expert (PI: Dr. I. Daglis, National Observatory of Athens).  
*Funding Organization: European Space Agency*  
*Duration: 2008 - 2012.*
- **TRANSFER:** Tsunami Risk AND Strategies For the European Region. Specific Targeted Research Project (STREP). Contribution to our understanding of tsunami processes in the Euro-Mediterranean region, to assessing the tsunami risk and to identifying the best strategies for reduction of tsunami risk.  
*Funding Organization: European Union, FP6 - Sustainable Development, Global Change and Ecosystem*  
*Duration: 2006 - 2008.*

- **DRAGON 1:** ESA - MOST cooperation Programme. 1<sup>st</sup> Framework Cooperation Program between European Space Agency and National Remote Sensing Center of China. Participation in Action: Use of Earth Observation in Support of the Needs of Major Athletic Events: Case Study for the Olympic Games: Athens-Beijing-London, (PI: Prof. C. Cartalis, University of Athens).

*Funding Organization: European Space Agency*

*Duration: 2005 - 2008.*

- **ATLANTAS AKTIS:** Development and pilot operation of an integrated Geographical Information System in support of the coastal zone management.

*Funding Organization: General Secret. for Research & Technology – European Regional Development Fund*

*Duration: 2006 - 2008*

#### **Operation of a low resolution satellite ground receiving station**

The satellite station has been installed at FORTH/IACM since 2002. It receives AVHRR and MVIRS data from NOAA and Fen Yung satellites.

#### **2001 - 2005 Associate Researcher (Grade C) in Foundation for Research and Technology – Hellas, Inst. of Applied and Computational Mathematics**

##### **Leading investigator of the following R&D projects:**

- **GGOA-GIS:** Development of a GIS-based application to support the activities of the General Secretariat for the Olympic Games in monitoring the economic process of Olympic Works

*Funding Organization: General Secret. for the Olympic Games 2004*

*Duration: 2003 - 2004*

- **BLUE BOOKS:** Reconstruction and Enrichment of the Official Web Site of the International Olympic Academy

*Funding Organization: General Secret. for the Olympic Games 2004*

*Duration: 2002 - 2003*

##### **Participation in the following R&D projects:**

- **GipSyNoise:** An efficient GIS tool oriented to meeting the objectives of the European Directive on the Assessment and Management of Environmental Noise

*Funding Organization: European Union - LIFE*

*Duration: 2003 - 2005*

- **WADI:** Water Supply Watershed Planning and Management: An Integrated Approach.

*Funding Organization: European Union, FP5 - INCO MEDII*

*Duration: 2001 - 2004*

- **FORMIDABLE:** Friendly Operational Risk Management through Interoperable Decision Aid Based on Local Events.

*Funding Organization: European Union, FP5 - IST*

*Duration: 1999 – 2002*

**1994 - 2001** *University of Athens, Department of Physics, Division of Appl. Physics.  
Research Assistant in the Remote Sensing Laboratory.*

**Participation in the following R&D projects:**

- **AIR QUALITY:** An Information Campaign for Schools in the field of Air Quality and Urban Policy (the operation).  
*Funding Organization: European Union*  
*Duration: 2000 - 2001*
- **SUSTAINABLE SCHOOLS:** An Information Campaign for Schools in the field of Sustainable Use of Natural Resources.  
*Funding Organization: Ministry of Education*  
*Duration: 2000 - 2001*
- **GLOBE – ALEXANDROS:** Global Learning and Observations to Benefit the Environment.  
*Funding Organization: Ministry of Education, Ministry of Environment*  
*Duration: 1996 - 1999*
- **MEDACT** (MEDiterranean Action): The **APHRODITE** Project.  
*Funding Organization: European Union - LIFE*  
*Duration: 1997 – 1998*
- **DIFFUSION:** Education and Training Activities in Support of the Diffusion of Earth Observation in the Public Sector of Greece.  
*Funding Organization: European Union - CEO*  
*Duration: 1997 – 1998*
- **CO<sub>2</sub>:** Estimation of the Impacts of CO<sub>2</sub> and other Greenhouse Effect Emissions on Climate Change.  
*Funding Organization: Ministry of Environment*  
*Duration: 1996 – 1997*
- **Application of Remote Sensing in Agriculture**  
*Funding Organization: European Union - CEO*  
*Duration: 1996 - 1997*



## ***Invited Talks***

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- 2017:** Remote Sensing Technologies and Applications in Urban Environments, organized in the framework of SPIE Remote Sensing (<https://spie.org/conferences-and-exhibitions/remote-sensing>), 11-14/9/2017. Invited Talk on "Anthropogenic heat flux estimation from space: results of the final phase of the URBANFLUXES Project" (Warsaw, Poland).
- 2017:** Urban Climate and Urban Biometeorology Session, organized in the framework of the European Geoscience Union General Assembly, on April 26, 2017 (<http://meetingorganizer.copernicus.org/EGU2017/orals/22751>). Invited Talk on "Anthropogenic heat flux estimation from space: results of the second phase of the URBANFLUXES Project" (Vienna, Austria).
- 2016:** Remote Sensing Technologies and Applications in Urban Environments, organized in the framework of SPIE Remote Sensing (<http://spie.org/conferences-and-exhibitions/remote-sensing>), 26-29/9/2016. Invited Talk on "Anthropogenic heat flux estimation from space: results of the first phase of the URBANFLUXES Project" (Edinburg, United Kingdom).
- 2016:** European Space Agency Summer Schools on Monitoring of the Earth System (<https://earth.esa.int/web/eo-summer-school/home>), held at ESA/ESRIN on 1-12/8/2016. Invited Lectures on: a) "Urban Remote sensing applications", b) "The exploitation of EO in urban energy budget estimation" and c) "EO-derived surface albedo time series" (Frascati, Italy).
- 2016:** International SPatial LITeracy (SPLIT), Remote Sensing Summer School 2016, held at the Mediterranean Agronomic Institute of Chania, on 5-10/6/2016 (<http://splitsr2016.com/>). Invited Talk on "Earth Observation for Urban Climate" (Chania, Greece).
- 2016:** EASME: 10<sup>th</sup> GEO European Projects Workshop 2016 on "Fostering Open Earth Observation for Europe", held at the Federal Ministry of Transport and Digital Infrastructure of Germany, on 31/5-2/6/2016 (<https://ec.europa.eu/easme/en/geo-european-projects-workshop-2016>). Invited Talk on "Urban Anthropogenic Heat Flux Measured from Earth Observation Satellites – The H2020 Project URBANFLUXES" in the framework of "Earth Observation in Support of Urban Monitoring" (Berlin, Germany).
- 2016:** National Observatory of Athens, Master of Science in Space Science Technologies and Applications (<http://space.uop.gr>) 1/3/2016. Invited Talk on "Urban Heat Fluxes from Earth Observation" (Athens, Greece).
- 2015:** Directorate-General for Regional and Urban Policy, workshop on "Copernicus and the Urban Atlas: Measuring cities and their qualities", held in the framework of Open Days 2015 (13<sup>th</sup> European Week for Regions and Cities), on 15/10/2015 ([http://ec.europa.eu/regional\\_policy/opendays/od2015/index.cfm](http://ec.europa.eu/regional_policy/opendays/od2015/index.cfm)). Invited Talk on "Urban Atlas in Urban Research projects" (Brussels, Belgium).
- 2015:** National and Kapodistrian University of Athens. MSc Program in Environmental Physics and Meteorology: Invited Talk on "Urban Metabolism: Introduction and bottom-up approaches" (Athens, Greece).
- 2014:** International Symposium on "The Mediterranean City 2014: Adaptation Strategies to Global Environmental Change in the Mediterranean City and the Role of Global Earth Observations", jointly organised by the European Commission, the Eurisy, the Mediterranean City Climate Change Consortium, the Mariolopoulos – Kanaginis Foundation for the Environmental Sciences, the Academy of Athens and the Justus-Liebig University of Giessen: Invited Talk on "EO for Urban Planning: The GEOURBAN Project" (Athens, Greece).
- 2014:** International Conference on "Renaturing Cities: Addressing Environmental Challenges and the Effects of the Economic Crisis through Nature-Based Solutions", organized by the European Commission (Directorate for Climate Action and Resource Efficiency) under the auspices of the Hellenic Presidency of the Council of the European Union:

- Rapporteur in Session 1 "Going Green: How are cities facing the economic crisis and leading green economy?" (Brussels, Belgium).
- 2014:** National and Kapodistrian University of Athens. MSc Program in Environmental Physics and Meteorology: Invited Talk on "Urban Metabolism: Introduction and bottom-up approaches" (Athens, Greece).
- 2014:** National and Kapodistrian University of Athens. MSc Program in Environmental Physics and Meteorology: Invited Talk on "Urban Remote Sensing" (Athens, Greece).
- 2014:** Workshop on "Global Urban Observation and Monitoring from Space", organized by the National Observatory of Athens, in the framework of the FP7 project BEYOND: Invited talk on "EO for Urban Planning: The GEOURBAN Project" (Athens, Greece).
- 2013:** Workshop of the Med Project MAIN on "Smart materials: Energy efficiency and improvement of urban microclimate", co-organized by the Municipality of Acharnes, the Athens Chamber, to Institute of Accelerating Systems and Applications and the University of Athens: Invited talk on "Use of Earth Observation in improving of urban microclimate" (Acharnes, Greece).
- 2013:** DG Research & Innovation, workshop on "Fostering innovative dialogue between researchers and stakeholders to meet future challenges: Land, Soil, Desertification, Urban and Community-Based Environmental Management": Invited talk on "Communities of Practice: Lessons/Examples from BRIDGE and GEOURBAN Projects" (Brussels, Belgium).
- 2012:** DG Research & Innovation – DG RTD, I.3, Meeting of Coordinators (Urban issues, Soil Biodiversity, Desertification and Land Degradation): Invited talk on "BRIDGE Main Achievements" (Brussels, Belgium).
- 2012:** Urban Physics and interactions across the Scales (<http://www.urbanphysics2012.org/>): Lecture on "Urban Remote Sensing", in Spring School 2012: An international specialized workshop for doctoral students and post doctoral researchers, organized by the University of Cyprus, the Swiss Federal Institute of Technology Zurich (ETH) and the Eindhoven University of Technology (Limassol, Cyprus).
- 2011:** FRENZ (Facilitating Research co-operation between Europe and New Zealand) Project: Invited talk on "BRIDGE: A decision support tool for sustainable urban metabolism", in a Sandpit workshop on ICT Tools for Governance and Policy Modelling (Rotorua, New Zealand).
- 2011:** DG Research & Innovation – DG RTD, I.3, FP7 Coordinators Meeting: Invited talk on "BRIDGE Project Overview and Results" (Brussels, Belgium).
- 2010:** Cyprus University of Technology: Invited talk on "Space Applications for Cyprus and the Mediterranean Region", in a workshop organized by the European Space Agency and the Frederick University (Nicosia, Cyprus).
- 2009:** ICT-ENSURE (European ICT Environmental Sustainability Research) Project: Invited talk on "ICT for Urban Metabolism: The case of BRIDGE", in a workshop on ICT for Sustainable Use of Natural Resources (<http://ict-ensure.tugraz.at/en/index.php/ensure/Organisational-Content/Downloads-Resources/Presentation-Slides/EnviroInfo-2009-Berlin>), that was organized in the framework of EnviroInfo 2009 (Berlin, Germany).
- 2007:** Hellenic Association of Rural and Surveying Engineers: Invited talk on "Remote sensing and GIS" in a workshop on "The Development of GIS for Local and Regional Governance" (Volos, Greece).
- 2006:** University of the Aegean: Invited Talk on "Digital Elevation Models Production using Satellite stereo-pairs: Applications of ASTER derived Digital Elevation Models and Land Cover/Use" (Mytiline, Greece).
- 2005:** Jet Propulsion Laboratory: Invited talk on "Combining Satellite and Socioeconomic Data for Land Use Models Estimation" (Pasadena, USA).
- 2004:** Land-Water-MED Network: Invited talk on "Use of ASTER imagery in GIS-based Watershed Analysis at Mediterranean Islands", in Land-Water-MED Workshop, held in Joint Research Centre (Ispra, Italy).

## **Educational Activities**

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### **2009 - 2016 University of Crete, Department of Physics**

- Visiting Professor for the course of “**Principles and Applications of Satellite Remote Sensing**”. Academic Years **2009 - 2010, 2010 - 2011, 2011 - 2012, 2012 - 2013, 2013 - 2014, 2014 - 2015, 2015 - 2016** and **2016 - 2017**.

Course URL: <http://ph338.edu.physics.uoc.gr>

### **2015 - 2016 Mediterranean Agronomic Institute of Chania (MAICh)**

- Visiting Professor for the course of “**Remote sensing of Urban Environments**” of The Master Programme “Geoinformation in Environmental Management”. Academic Years **2015 - 2016** and **2016 - 2017**.

URL: <http://www.maich.gr/en/education>

### **2016 - University of Crete, Department of Biology**

- Member of the advisory committee for the PhD candidate Mr. N. Klamos; topic: “Small Mammals of Greece: A survey of distributions and ecological preferences combining GIS and Tyto alba pellets analysis”.

### **2015 - National and Kapodistrian University of Athens, Department of Physics**

- Member of the advisory committee for the PhD candidate Mr. E. Agathagelidis; topic: “Detection of urban energy fluxes, estimation of ecosystem and anthropogenic contribution to energy fluxes and development of an urban heat island indicator”.
- Member of the advisory committee for the PhD candidate Mrs Th. Mayrakou; topic: “Climate change mitigation through the study of the urban energy budget, based on combined use of advance remote sensing techniques and numerical models”

### **2013 - 2016 Tor Vergata University of Rome, Department of Information, Systems and Production**

- Member of the advisory committee for the PhD candidate Mrs. Z. Mitraka; topic: “Dynamics, magnitude and spatial form of the urban heat island effect and its impact on the biophysical, climatic and environmental processes”

### **2014 - 2015 University of Hamburg, Department of Mathematics: Erasmus Mundus MSc in Mathematical Modeling and Engineering**

- Member of the advisory committee for the PhD candidate Mr. A. Beloconi; topic: “Spatio-temporal approach for the estimation of urban PM2.5 and PM10 concentrations, based on MERIS/AATSR synergistic observations and urban land cover and morphology data”.

### **2013 - 2015 National and Kapodistrian University of Athens, Department of Physics**

- Invited lecturer in post-graduate studies program “Environmental Physics and Meteorology”.

- 2013 - 2014 University of Crete, Department of Biology**
- Invited lecturer in post-graduate studies program “Environmental Biology - Terrestrial and Marine biological resources management”.
- 2008 - 2013 Aristotle University of Thessaloniki, Department of Geology**
- Member of the advisory committee for the PhD candidate Mr. A. Giannakos; topic: “Contribution to the development of a technique for the estimation of rainfall from multispectral satellite data”.
- 2009 - 2012 Cyprus University of Technology, Dept. of Civil Engineering-Geomatics**
- Member of the advisory committee for the PhD candidate Mr. K. Themistocleous; topic: “Improving atmospheric correction methods for aerosol optical thickness retrieval supported by in-situ observations and GIS analysis”.
- 2007 - 2010 National and Kapodistrian University of Athens, Department of Physics**
- Member of the advisory committee for the following PhD candidates:
    - ✓ Mrs N., Adaktylou; topic: “Design, development and evaluation of a learning platform for satellite remote sensing”.
    - ✓ Mrs M. Stathopoulou; topic: “Improvement of spatial scale land of AVHRR land surface temperature retrievals to improve the estimation of surface urban heta island intensity”.
- 2005 - 2006 University of the Aegean, Department of Geography**
- Invited lecturer in post-graduate studies program “Geography & Applied Geo-informatics”.
- 2001 - FORTH, Institute of Applied and Computational Mathematics**
- Advisor in undergraduate thesis and internships of students from University of Crete (Dept. of Physics and Dept. of Applied Mathematics) and from Technological Educational Institute of Crete (Dept. of Applied Informatics and Multimedia, Dept. of Environment Management).
- 2000 - 2001 University of Athens, Department of Physics**
- Laboratory courses on Physics (Mechanics - Oscillations - Relativity Theory) for the undergraduate students.
  - Development of Distance Learning courses on Environmental Education focusing on Energy Consumption and CO<sub>2</sub> Emissions.
  - Development of Distance Learning courses on sustainable use of natural resources in schools.
- National Technical University of Athens, Faculty of Naval Architecture**
- Participation in courses on Remote Sensing Methods and Databases for the study of the Marine Environment for the graduate students.
- 1995 - 1998 University of Athens, Department of Physics**
- Undergraduate laboratory courses on Atmospheric Physics.
  - Development of Distance Learning courses on Digital Image Processing and Remote Sensing Applications. (<http://sat.uoa.gr/diff>).

## ***Honors and Awards***

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Vardinogianneion Foundation Award (1996 - 1997)

## ***Languages***

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Greek, English

## ***Professional Memberships***

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- American Geophysical Union (AGU)
- European Geoscience Union (EGU)
- International Society for Optical Engineering (SPIE)
- International Association of Urban Climate
- Hellenic Society for Photogrammetry & Remote Sensing (HSPRS)
- Hellenic Society for Geographical Information Systems (HellasGI).  
*Member of the Management Board 2004 - 2006.*
- Hellenic Physicists Society
- Hellenic Meteorological Association

## ***Referee in International Journals***

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Nature Scientific Reports  
Remote Sensing of Environment  
International Journal of Remote Sensing  
Photogrammetric Engineering and Remote Sensing  
IEEE Transactions on Geoscience and Remote Sensing  
ISPRS Journal of Photogrammetry and Remote Sensing  
Remote Sensing  
Optical Engineering  
Journal of Applied Meteorology & Climatology  
Meteorology and Atmospheric Physics  
Advances in Space Research  
Urban Ecosystems  
Journal of Water Resources Management  
Journal for Nature Conservation  
Journal of Applied Remote Sensing  
Journal of Electronic Imaging  
Environmental Modelling and Software  
Sensors  
Applied Geomatics  
Acta Geophysica  
International Journal of Low-Carbon Technologies  
Advances in Building Energy Research  
Journal of Industrial Ecology  
Landscape and Urban Planning  
Frontiers of Earth Science  
Solar Energy

## Scientific Collaborations

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- National and Kapodistrian University of Athens (GR)
- National Observatory of Athens (GR)
- University of the Aegean (GR)
- University of Thessaly (GR)
- National Technical University of Athens (GR)
- University of Crete (GR)
- Technical University of Crete (GR)
- Aristotle University of Thessaloniki (GR)
- Cyprus University of Technology (GR)
- JPL (USA)
- GSFC (USA)
- INRIA (FR)
- European Space Agency
- DLR (D)
- CNES (FR)
- SAGA University (JP)
- Chengdu University of Information Technology (CN)
- King's College London (UK)
- Consiglio Nazionale delle Ricerche (IT)
- Instytut Ekologii Terenów Przemysłowych (PL)
- CESBIO (FR)
- Technical University of Madrid (ES)
- University of Southampton (UK)
- GRAD Inform (RUS)
- Kuzgun Bilisim Ltd. (TR)
- DATAMAT S.A. (IT)
- FMA (IT)
- VITROCISSET S.p.A. (IT)
- UCM (ES)
- CIDA (ES)
- EADS (FR)
- Dartcom (UK)
- Trinity College Dublin (IR)
- University of Helsinki (FI)
- CMCC (IT)
- Météo France CNRM (F)
- Alterra B.V (NL)
- University of Basel (CH)
- University of Aveiro (PT)
- Tel-Aviv University (IL)
- University of Hamburg (D)
- GARD Ltd. (IL)
- DELTARES (NL)
- TerraDue (UK)
- Google-GEE (CH)

## Evaluator of Scientific Proposals

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- DLR: Evaluator of research proposals in the framework of ERANETMED (September 2017).
- DLR: Evaluator of research proposals in the framework of ERANETRUS Plus (September 2017).
- Hellenic Foundation for Research and Innovation (HFRI): Evaluator of research proposals in the framework of the 1<sup>st</sup> call for research proposals from Postdoctoral Researchers (August 2017).
- European Research Council (ERC): Evaluator of proposals submitted to the 2017 call of its funding scheme "Starting Grants" (May 2017).
- DLR: Evaluator of research proposals in the framework of ERANETMED (August 2016).
- General Secretariat for Research and Technology: Evaluator of proposals for the action "Business Support for the employment of highly qualified personnel" in the framework of the Operational Programme "Employment and Vocational Training" (October, 2015).
- DLR: Evaluator of research proposals in the framework of ERANETMED (July 2015).
- National Centre of Science and Technology Evaluation (JSC) of Kazakhstan: Evaluator of research proposals in the domains of environment, geography and urban planning (November 2014).
- General Secretariat for Research and Technology: Evaluator of proposals for the action "Business Support for the employment of highly qualified personnel" in the framework of the Operational Programme "Employment and Vocational Training" (April 2014).

- General Secretariat for Research and Technology: Evaluator of proposals for the action "Business Support for the employment of highly qualified personnel" in the framework of the Operational Programme "Employment and Vocational Training" (February 2012).
- State Scholarships Foundation: Evaluator, in the framework of the Operational Programme "Education and Lifelong Learning", of proposals for scholarships from candidate doctors abroad and for candidates for a postgraduate specialization diploma in Greece and abroad, for the academic year 2011-2012 (October 2011).
- Research Promotion Foundation of Cyprus: Evaluators of proposal in the domain of use of Earth Observation and GIS to study the natural environment (Heraklion, 2010).
- Reviewer of the Project "THETIS: Satellite system for the estimation of vessel traffic", funded by the General Secretariat for Research and Technology under the 3<sup>rd</sup> European Support Framework, PEP of West Greece, measure 3.4 (Patras, 2009).
- Cyprus University of Technology: Evaluator of proposal in the domain of use of Earth Observation and GIS to study the natural environment (Limassol, 2008).

## **Chairman in Scientific Conferences**

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- Conference Chair of "Remote Sensing Technologies and Applications in Urban Environments" held in the framework of SPIE International Symposium on Remote Sensing (Warsaw, 2017).
- Chairman of the Session "Urban Air Quality and Climate II" of SPIE International Symposium on Remote Sensing (Warsaw, 2017).
- Chairman of the Session "Urban Monitoring and Planning I" of SPIE International Symposium on Remote Sensing (Warsaw, 2017).
- Chairman of the Session "Urban Monitoring and Planning III" of SPIE International Symposium on Remote Sensing (Warsaw, 2017).
- Chairman of the Special Session "Urban Climate & Environment" of ISRSE37: 37<sup>th</sup> International Symposium on Remote Sensing of Environment (Tshwane, 2017).
- Chairman of the Special Session "Remote sensing of urban heat fluxes" of JURSE 2017: Joint Urban Remote Sensing Event (Dubai, 2017).
- Chairman of the Session "Smart Cities" of SPIE International Symposium on Remote Sensing (Edinburg, 2016).
- Chairman of the Session "Urban Morphology and Infrastructures III" of SPIE International Symposium on Remote Sensing (Edinburg, 2016).
- Chairman of the Session "Spectroscopy - Urban Remote Sensing – Mapping" of the RSCy2013: First International Conference on Remote Sensing and Geoinformation of Environment (Pafos, 2013).
- Chairman of the Session "3D Modeling and Urban Applications" of the 9<sup>th</sup> SPIE International Symposium on Remote Sensing (Heraklion, 2002).

## **Member of Scientific Committees in Conferences**

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- Member of the International Scientific Committee of the of JURSE 2017: Joint Urban Remote Sensing Event (Dubai, 2017).
- Member of the International Scientific Committee of RSCy2017: Fifth International Conference on Remote Sensing and Geoinformation of Environment (Pafos, 2017).
- Member of the International Scientific Committee of the SPIE International Symposium on Remote Sensing (Edinburg, 2016).
- Member of the International Scientific Committee of the Third International Conference on Remote Sensing and Geoinformation of Environment (Pafos, 2015).
- Member of the International Scientific Committee of the Second International Conference on Remote Sensing and Geoinformation of Environment (Pafos, 2014).

- Co-organizer of a symposium on “Modelling and Computations in Atmospheric Sciences” in the framework of the “International Conference on Applied Mathematics” (Heraklion 2013).
- Member of the International Scientific Committee of the First International Conference on Remote Sensing and Geoinformation of Environment (Pafos, 2013).
- Member of the Organizing Committee of the BRIDGE Sustainable urban Planning Conference (Brussels, 2011).
- Member of the Scientific Committee of the International Conference EUROMED2010: Digital Heritage, organized by the Cyprus University of Technology (Limassol, 2010).
- Member of the Organizing Committee of the 3<sup>rd</sup> International Conference PALENC2010: Passive & Low Energy Cooling for the Built Environment (Rhodes, 2010).
- Member of the Jury Committee of the 8<sup>th</sup> Hellenic Geographical Conference organized by University of Athens (Athens, 2007).
- Member of the Jury Committee of the IEEE International Geoscience and Remote Sensing Symposium (IGARSS) 2007 (Barcelona, 2007).
- Member of the Scientific Committee of the 19<sup>th</sup> Enviinfo: International Conference Informatics for Environmental Protection (Brno, 2005).
- Member of the Organizing Committee of the 3<sup>rd</sup> Symposium of the Hellenic Association of GIS, supporting also the preparation of the CD-ROM of Proceedings (Athens, 2004).
- Member of the Organizing Committee of the AGILE2004 (7<sup>th</sup> International Conference on Geographic Information Science), organized by FORTH (Heraklion, 2004).
- Member of the Scientific Committee of COST719 International Symposium on GIS and Remote Sensing for Environmental Applications (Volos, 2003).

## **Administrative Activities**

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- Head of the "Earth Observation Research and Applications in Urban and Natural Environment" Laboratory of the Institute of Applied and Computational Mathematics of FORTH.
- Chairman of the Scientific Council of the Institute of Applied and Computational Mathematics of FORTH (2016 - ).
- Member of the Jury for the Research Prize of FORTH (2017).
- Member of a Faculty Election Committee in the Department of Geology of the Aristotle University of Thessaloniki (2017).
- Member of a Faculty Election Committee in the Department of Department of Forestry and Natural Environment of the Aristotle University of Thessaloniki (2017).
- Member of a Faculty Election Committee in the Department of Forestry and Management of the Environment and Natural Resources of the Democritus University of Thrace (2017).
- Member of the Evaluation Committee for the promotion of a Researcher of the Institute of Mediterranean Studies of FORTH.
- Member of the Election Committee for the position of the Director of the Institute of Applied and Computational Mathematics of FORTH.
- Elected member of the Scientific Council of the Institute of Applied and Computational Mathematics of FORTH (J2014 - 2016).
- Member of the Personnel Evaluation Committee of the Institute of Applied and Computational Mathematica of FORTH (2016).
- Member of the Personnel Evaluation Committee of the Institute of Applied and Computational Mathematica of FORTH (2013).



## Other Activities

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- Presentation in the Newspaper “Eleytherotypia” of the use of FORTH satellite ground receiving station for the near real time detection and monitoring of the toxic plumes caused by the bombing in Bagdad in April 2003 (12/4/2003).
- Participation in a Workshop organized by Environmental Modeling Group of ERCIM (Heraklion, 2004).
- Participation in INTERREG III C Workshop on Management and Development of islands (Heraklion, 2004).
- Participation in European Space Agency Workshops on “GMES: Global Monitoring for Environment and Security” (Athens, 2002) and on “How to Do Business with ESA” (Athens, 2004), as well as on “Space Industry” (Athens, 2004).
- Participation in the Consultation Meeting for the Work Programme 2005-06 of the Strategic Objective "Improving Risk Management" of IST (Brussels, 2004).
- Publication in SPIE Newsroom (<http://spie.org/x1004.xml>) of the article: *N. Chrysoulakis, H. Feidas, and M. Abrams, 2006. Digital elevation models generated from multispectral stereo satellite imagery (SPIE, 2006).*
- Participation in the Summer School Alpach 2006: “Monitoring of Natural Hazards from Space”. Member of the design team of the satellite mission MOSART: Monitoring of Surface Deformation in Active Tectonic Zones (Alpach, 2006).
- Member of the working group that prepared the description document of the Greek Technology and Science Initiatives (GTSI) for Space (Athens, 2007)
- Advisor for a stage at FORTH of the PhD candidate C, Alecu from the National Meteorological Service of Romania; topic: “Thermal infrared satellite signal retrieving as land surface temperature related to different land use/land cover units”, (Heraklion, 2007).
- Speaker in the 8<sup>th</sup> FORTH Workshop (Rethymno, 2007).
- Publication (with Prof. C. Cartalis) of a article in the Newspaper “Eleftherotypia” on the monitoring of the urban sprawl of Athens during the last 30 years (22/6/2008).
- Publication in ERCIM News of the article: *Flouri, E., Mitsoudis, D., Chrysoulakis, N., Diamandakis, E., Dougalis, V. A. and C. E. Synolakis, 2010. Mathematical Modelling of Tsunami Waves.* ERCIM News Special Theme: Computational Science/Scientific Computing Simulation & Modelling for Research and Industry (ERCIM, 2010).
- Participation in the FP7 Brokerage Event on “Marine Research Capacities in a global context” (Istanbul, 2010).
- Member of the Scientific Team of the Centre for Renewable Energy Sources developed guidelines on bioclimatic rehabilitation studies for open public spaces (April – July, 2011).
- Interviewed by the financial/business magazine “Hv-Ωv” on the innovative urban planning and design (April, 2011).
- Key speaker in the Information Day of the program “Bioclimatic rehabilitation of open public spaces”, held in Heraklion and interviewed on local media (Heraklion, 2010).
- Participation in the Coordinators Meeting, organized by DG-Research (Brussels, 2011).
- Presentation in the Newspaper “To Vima” of the results of a study on the land surface changes in the Municipalities of Attica, during the last 30 years, based on satellite observations (4/8/2011).
- Presentation of the GEOURBAN project in Russian Urban planning management (Управление развитием территории) journal, Issue 1, pp. 54 – 58 (Omsk, 2013).
- Rapporteur at Session “Community-based approached to Environmental Management” in the framework of workshop on "Fostering innovative dialogue between researchers and stakeholders to meet future challenges: Land, Soil, Desertification, Urban and Community-Based Environmental Management" (Brussels, 2013).

- Presentation of the BRIDGE Project in European Commission DG Environment News Alert Service 'Science for Environmental Policy', issue 334 (June 2013), as well as in FORTH Newsletter, Vol. 06 (August 2013).
- Speaker in the 11<sup>th</sup> Scientific Retreat of FORTH. Talk on "Urban Remote Sensing, recent projects and future prospects" (Heraklion, 2013).
- Speaker in the workshop on "REmote Sensing Technologies in Cultural Heritage", organized by the Institute of Mediterranean Studies of FORTH. Talk on: "Earth Observation contribution to surface parameterization in atmospheric modelling" (Rethymnon, 2014).
- Participation in the international Symposium on "Copernicus- Sentinels Serving Society and the Environment", jointly organized by the Hellenic Presidency of the Council of the European Union, the European Space Agency and the European Commission (Athens, 2014).
- Member of the Editorial Board of the Book: Understanding Urban Metabolism: A Tool for Urban Planning. Nektarios Chrysoulakis, Eduardo Castro and Eddy Moors (Eds). Routledge, Taylor & Francis ISBN 978-0-415-83511-4 (August 2014).
- Participation in the workshop "Nature Based Solutions and Renaturing Cities", organized by DG-Research in Brussels, as an on-going multi-stakeholder dialogue which aims at contributing to developing a Research & Innovation agenda (2014 - 2020) on Nature-Based Solutions (December 2014).
- Participation in workshop on networking of the Greek Space Industry organized by the General Secretariat for Research and Technology, the Hellenic Space Technologies and Applications Cluster (si-Cluster), the Hellenic Association of Space Industry and the "Corallia" Unit of the Athena Research and Innovation Centre. Presentation of the relevant to Space - Earth Observation activities of the Institute of Applied and Computational Mathematics of FORTH (Athens, 2015).
- Participation in the 4<sup>th</sup> International Meeting of the EarthTemp Network on the theme of "exploring the complexity of urban surface temperatures", organized by the University of Reading. Presentation of the URBANFLUXES Project (Reading, 2015).
- Participation in the 3<sup>rd</sup> GLOBTEMPERATURE Consultation Meeting, organized by the European Space Agency and the University of Reading Presentation of the URBANFLUXES Project (Reading, 2015).
- Interviewed by "International Innovation" on "Earth Observation for Urban Climate" <http://www.internationalinnovation.com/earth-observation-for-urban-climate/> (September 2015).
- Member of the EnCeladus hellenic Supersite, included in Geohazard Supersites and Natural Laboratories (GSNL) of Group of Earth Observations (GEO), <http://www.earthobservations.org/gsnl.php> (Νοέμβριος 2016).
- Host of the ECOPOTENTIAL General Assembly (May, 2017).
- Publication of the article "Copernicus Sentinels for urban planning: The SEN4RUS Project" in the Bulletin of the Hellenic Association of Rural & Surveying Engineers, Issue 232 (May 2017).
- Participation to the First Policy Workshop "From R&I Projects to EU Policies: Sustainable cities through nature-based solutions" and II Clustering Event, organized by the Directorate-General for Research and Innovation of the European Commission in Brussels (June 2017).

## **Editor of Books and Conference Proceedings**

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- A1. Erbertseder, T., **Chrysoulakis, N.**, Zhang, Y. and Heldens, W. (Eds.), 2017. Remote Sensing Technologies and Applications in Urban Environments II. Proceedings Volumes from SPIE Remote Sensing. Proc. of SPIE Vol. 10431, © 2017 SPIE · CCC code: 0277-786X/17/\$18.
- A2. Erbertseder, T., Esch, T. and **Chrysoulakis, N.**, (Eds.), 2016. Remote Sensing Technologies and Applications in Urban Environments. Proceedings Volumes from SPIE Remote Sensing. Proc. of SPIE Vol. 10008, © 2016 SPIE · CCC code: 0277-786X/16/\$18.
- A3. **Chrysoulakis, N.**, Castro, E. A. and Moors, E. J. (Eds.), 2015. Understanding Urban Metabolism: A Tool for Urban Planning. Routledge, Taylor & Francis, London. ISBN 9780415835114.

## **Book Chapters**

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- B1. Landier, L., Lauret, N., Yin, T., Al Bitar, A., Gastellu-Etchegorry, J-P., Feigenwinter, C., Parlow, E., Mitraka, Z. and **Chrysoulakis, N.**, 2016. Remote Sensing Studies of Urban Canopies: 3D Radiative Transfer Modeling. In: Ergen, M. (Ed.), 2016. Sustainable Urbanization. Environmental Sciences. InTech, Rijeka, Croatia. ISBN 978-953-51-2653-9, pp. 227 - 247.
- B2. **Chrysoulakis, N.** and Grimmond, C.S.B., 2016. Understanding and reducing the anthropogenic heat emission. In: Santamouris, M. and Kolokotsa, D. (Eds.), 2016. Urban Climate Mitigation Techniques. Routledge, Taylor & Francis, London. ISBN 978-0-415-71213-2, pp. 27 - 39.
- B3. **Chrysoulakis, N.**, Feigenwinter, C., Triantakonstantis, D., Penyevskiy, I., Tal, A., Parlow, E., Fleishman, G., Düzgün, S., Esch, T. and Marconcini, M., 2016. A Conceptual List of Indicators for Urban Planning and Management Based on Earth Observation. In: Etingoff, K. (Ed.), 2016. Urban Ecology. Strategies for Green Infrastructure and Land Use. Apple Academic Press, Inc., Oakville, Canada. ISBN-13: 978-1-77188-282-8, pp. 285 - 313.
- B4. **Chrysoulakis, N.**, 2015. The BRIDGE approach. In: Chrysoulakis, N., Castro, E. A. and Moors, E. J. (Eds.), 2015. Understanding Urban Metabolism: A Tool for Urban Planning. Routledge, Taylor & Francis, London. ISBN 9780415835114, pp. 18 - 26.
- B5. Cartalis, C., Stathopoulou, M., Mitraka, Z. and **Chrysoulakis, N.**, 2015. Use of Earth Observation to support urban modelling parameterization in BRIDGE. In: Chrysoulakis, N., Castro, E. A. and Moors, E. J. (Eds.), 2015. Understanding Urban Metabolism: A Tool for Urban Planning. Routledge, Taylor & Francis, London. ISBN 9780415835114, pp. 58 - 68.
- B6. Mitraka, Z., Diamantakis, M. and **Chrysoulakis, N.**, 2015. The BRIDGE DSS. In: Chrysoulakis, N., Castro, E. A. and Moors, E. J. (Eds.), 2015. Understanding Urban Metabolism: A Tool for Urban Planning. Routledge, Taylor & Francis, London. ISBN 9780415835114, pp. 175 - 184.
- B7. **Chrysoulakis, N.**, Castro, E. A. and Moors, E. J. (Eds.), 2015. Conclusions. In: Chrysoulakis, N., Castro, E. A. and Moors, E. J. (Eds.), 2015. Understanding Urban Metabolism: A Tool for Urban Planning. Routledge, Taylor & Francis, London. ISBN 9780415835114, pp. 209 - 212.
- B8. Mitraka, Z. and **Chrysoulakis, N.**, 2012. Satellite based estimation of urban surface emissivity with the use of sub-pixel classification techniques. In: C.G. Helmig and P.T. Nastos (eds.): Advances in Meteorology, Climatology and Atmospheric Physics, Springer Atmospheric Sciences., Springer-Verlag, Berlin Heidelberg (doi: 10.1007/978-3-642-29172-2\_127), pp. 231 - 237.

- B9. Benas, N. and **Chrysoulakis, N.**, 2012. Comparative analysis of MERIS/AATSR synergy algorithm aerosol retrievals vs. MODIS aerosol product and validation against AERONET observations. In: C.G. Helmis and P.T. Nastos (eds.): *Advances in Meteorology, Climatology and Atmospheric Physics*, Springer Atmospheric Sciences., Springer-Verlag, Berlin Heidelberg (doi: 10.1007/978-3-642-29172-2\_127), pp. 911 - 916.
- B10. Borrego, C., Cascão, P., Lopes, M., Amorim, J. H., Tavares, R., Rodrigues, V., Martins, J., Miranda, A. I. and **Chrysoulakis, N.**, 2011. Impact of urban planning *alternatives* on air quality: URBAIR model application. In: Brebbia C. A., Longhurst, J. W. S., Popov, V. (eds): *WIT Transactions on Ecology and the Environment*, Vol 147, WIT Press, ISSN (on-line) 1743-3541, United Kingdom.
- B11. Lipakis, M., **Chrysoulakis, N.** and Kamarianakis, Y. 2008. Shoreline extraction using satellite imagery. In: Pranzini, E. and Wetzel, E. (eds): *Beach Erosion Monitoring. Results from BEACHMED/e-OptIMAL Project (Optimization des Techniques Intégrées de Monitoring Appliquées aux Littoraux) INTERREG III C South*. Nuova Grafica Fiorentina, Florence, Italy, pp. 81 – 95.
- B12. **Chrysoulakis, N.**, Prastacos, P., and Cartalis, C., 2004. Development of a Decision Support Tool for Technological Risk Management with Remote Sensing and GIS. In: Hilty, L., Seifert, E. and Treibert, R. (eds.): *Information Systems for Sustainable Development*. Idea Group, Hershey PA 17033, USA, pp. 342 - 353.

## ***Publications in International Peer-reviewed Journals***

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- C1. Gastellu-Etchegorry, J. P., Lauret, N., Yin, T., Landier, L., Kallel, A., Malenovsky, Z., Bitar, A. A., Aval, J., Benhmida, S., Qi, J., Medjdoub, G., Guilleux, J., Chavanon, E., Cook, B., Morton, D., **Chrysoulakis, N.** and Mitraka, Z., 2017. DART: Recent Advances in Remote Sensing Data Modeling With Atmosphere, Polarization, and Chlorophyll Fluorescence. *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing*, **10**, 2640 - 2649.
- C2. Poursanidis, D. and **Chrysoulakis, N.**, 2017. Remote Sensing, natural hazards and the contribution of ESA Sentinels missions. *Remote Sensing Applications: Society and Environment*, **6**, 25 - 38.
- C3. Prastacos, P., Lagarias, A. and **Chrysoulakis, N.**, 2017. Using the Urban Atlas dataset for estimating spatial metrics. Methodology and application in urban areas of Greece, *Cybergeo: European Journal of Geography, Regional and Urban Planning*, Document 815, doi: 10.4000/cybergeo.28051
- C4. Kochilakis, G., Poursanidis, D., **Chrysoulakis, N.**, Varella, V., Kotroni, V., Eftychidis, G., Lagouvardos, K., Papathanasiou, C., Karavokyros, G., Aivazoglou, M., Makropoulos, C. and Mimikou, M., 2016. FLIRE DSS: A web tool for the management of floods and wildfires in urban and periurban areas. *Open Geosciences*, **8**, 711 - 727.
- C5. Benas, N., **Chrysoulakis, N.** and Cartalis, C. 2016. Trends of urban surface temperature and heat island characteristics in the Mediterranean. *Theoretical and Applied Climatology*, doi:10.1007/s00704-016-1905-8.
- C6. Kochilakis, G., Poursanidis, D., Chrysoulakis, N., Varella, V., Kotroni, V., Eftychidis, G., Lagouvardos, K., Papathanasiou, C., Karavokyros, G., Aivazoglou, M., Makropoulos, C. and Mimikou, M., 2016. A web based DSS for the management of floods and wildfires (FLIRE) in urban and periurban areas. *Environmental Modelling & Software*, **86**, 111 - 115.
- C7. Mitraka, Z., Doxani, G., Del Frate, F. and **Chrysoulakis, N.**, 2016. Uncertainty Estimation of Local-Scale Land Surface Temperature Products Over Urban Areas Using Monte Carlo Simulations. *IEEE Geoscience and Remote Sensing Letters*, **13**, 917 - 921.

- C8. Beloconi, A., Kamarianakis, Y. and **Chrysoulakis, N.**, 2016. Estimating urban PM10 and PM2.5 concentrations, based on synergistic MERIS/AATSR aerosol observations, land cover and morphology data. *Remote Sensing of Environment*, **172**, 148 - 164.
- C9. Triantakonstantis, D., **Chrysoulakis, N.**, Sazonova A., Esch, T., Feigenwinter, C., Düzgün, S., Parlow, E., Marconcini, M. and Tal, A., 2015. On-line Evaluation of Earth Observation Derived Indicators for Urban Planning and Management. *Urban Planning and Design Research*, **3**, 17 - 33.
- C10. Benas, N. and **Chrysoulakis, N.**, 2015. Estimation of the land surface albedo changes in the broader Mediterranean area, based on 12 years satellite observations. *Remote Sensing*, **7**, 16150 - 16163.
- C11. Mitraka, Z., **Chrysoulakis, N.**, Doxani, G., Del Frate, F. and Berger, M., 2015. Urban Surface Temperature Time Series Estimation at the Local Scale by Spatial-Spectral Unmixing of Satellite Observations. *Remote Sensing*, **7**, 4139 - 4156.
- C12. Poursanidis, D., **Chrysoulakis, N.** and Mitraka, Z., 2015. Landsat 8 vs. Landsat 5: a comparison based on urban and peri-urban land cover mapping. *International Journal of Applied Earth Observation and Geoinformation*, **35**, 259 - 269.
- C13. Mitraka, Z., Diamantakis, E., **Chrysoulakis, N.**, Castro, E. A., San Jose, R., Gonzalez, A. and Blecic, I., 2014. Incorporating Bio-Physical Sciences into a Decision Support Tool for Sustainable Urban Planning. *Sustainability*, **6**, 7982 – 8006.
- C14. **Chrysoulakis, N.**, Feigenwinter, C., Triantakonstantis, D., Penyevskiy, I., Tal, A., Parlow, E., Fleishman, G., Düzgün, S., Esch, T. and Marconcini, M., 2014. A Conceptual List of Indicators for Urban Planning and Management Based on Earth Observation. *ISPRS International Journal of Geo-Information*, **3**, 980 - 1002.
- C15. Benas, N., Beloconi, A. and **Chrysoulakis, N.**, 2013. Estimation of urban PM10 concentration, based on MODIS and MERIS/AATSR synergistic observations. *Atmospheric Environment*, **79**, 448 - 454.
- C16. **Chrysoulakis, N.**, Mitraka, Z., Stathopoulou, M. and Cartalis, C., 2013. A comparative analysis of the urban web of the greater Athens agglomeration for the last 20 years period on the basis of Landsat imagery. *Fresenius Environmental Bulletin*, **22**, 2139 - 2144.
- C17. Benas, N., **Chrysoulakis, N.** and Giannakopoulou, G., 2013. Validation of MERIS/AATSR synergy algorithm for aerosol retrieval against globally distributed AERONET observations and comparison with MODIS aerosol product. *Atmospheric Research*, **132-133**, 102-113.
- C18. **Chrysoulakis, N.**, Lopes, M., San José, R., Grimmond, C.S.B., Jones, M.B., Magliulo, V., Klostermann, J.E.M., Synnefa, A., Mitraka, Z., Castro, E., González, A., Vogt, R., Vesala, T., Spano, D., Pigeon, G., Freer-Smith, P., Staszewski, T., Hodges, N., Mills, G. and Cartalis, C., 2013. Sustainable urban metabolism as a link between bio-physical sciences and urban planning: the BRIDGE project. *Landscape and Urban Planning*, **112**, 100 - 117.
- C19. González, A., Donnelly, A., Jones, M., **Chrysoulakis, N.** and Lopes, M., 2013. A Decision-Support System for Sustainable Urban Metabolism in Europe. *Environmental Impact Assessment Review*, **38**, 109 -119.
- C20. Themistocleous, K., Hadjimitsis, D., Retalis, A., **Chrysoulakis, N.** and Michaelides, S., 2013. Precipitation effects on the selection of suitable non-variant targets intended for atmospheric correction of satellite remotely sensed imagery. *Atmospheric Research*, **131**, 73 - 80.
- C21. Keramitsoglou, I., Daglis, I. A., Amiridis, V., **Chrysoulakis, N.**, Ceriola, G., Manunta, P., Maiheu, B., De Ridder, K. and Paganini, M., 2012. Evaluation of satellite-derived products for the characterization of the urban thermal environment. *Journal of Applied Remote Sensing*, **6**, 061404, doi: 10.1117/1.JRS.6.061704.
- C22. Themistocleous, K., Hadjimitsis, D. G., Retalis, A. and **Chrysoulakis, N.**, 2012. Development of a new image based atmospheric correction algorithm for aerosol

- optical thickness retrieval using the darkest pixel method. *Journal of Applied Remote Sensing*, **6**, 063538, <http://dx.doi.org/10.1117/1.JRS.6.063538>.
- C23. Themistocleous, K., Hadjimitsis, D.G., Retalis, A. and **Chrysoulakis, N.**, 2012. The identification of pseudo-invariant targets using ground field spectroscopy measurements intended for the removal of atmospheric effects from satellite imagery: a case study of the Limassol area in Cyprus. *International Journal of Remote Sensing*, **33**, 7240 - 7256.
- C24. Themistocleous, K., Nisantzi, A., Agapiou, A., Alexakis, D.D., Hadjimitsis, D.G., Lysandrou, V., Perdikou, S., Retalis, A. and **Chrysoulakis, N.**, 2012. Long Term Monitoring of Air Pollution on Monuments and Cultural Heritage Sites in Cyprus Using Satellite Remote Sensing. *International Journal of Heritage in the Digital Era*, **1**, 145 - 167.
- C25. Mitraka, Z., **Chrysoulakis, N.**, Kamarianakis, Y., Partsinevelos, P. and Tsouchlaraki, A., 2012. Improving the estimation of urban surface emissivity based on sub-pixel classification of high resolution satellite imagery. *Remote Sensing of Environment: Special Issue Remote Sensing of Urban Environment*, **117**, 125 – 134.
- C26. Mitsoudis, D. A., Flouri, E. T., **Chrysoulakis, N.**, Kamarianakis, Y., Okal., E. and Synolakis, C. E., 2012. Tsunami hazard in the southeast Aegean Sea. *Coastal Engineering*, **60**, 136 – 148.
- C27. **Chrysoulakis, N.**, Abrams, M., Kamarianakis, Y. and M. Stanisławski, 2011. Validation of the ASTER GDEM for the area of Greece. *Photogrammetric Engineering & Remote Sensing*, **77**, 157 - 165.
- C28. Hadjimitsis, D., Mitraka, Z., Gazani, I., Retalis, A., **Chrysoulakis, N.** and S. Michaelides, 2011. Estimation of spatio-temporal distribution of precipitable water using MODIS and AVHRR data: A Case Study for Cyprus. *Advances in Geosciences*, **30**, 23 - 29.
- C29. **Chrysoulakis, N.**, Abrams, M., Feidas, H., and Arai, K., 2010. Comparison of atmospheric correction methods using ASTER data for the area of Crete, Greece. *International Journal of Remote Sensing*, **31**, 6347 - 6385.
- C30. Retalis, A., Hadjimitsis, D. G., Michaelides, S., Tymvios, N. F., **Chrysoulakis, N.** and C.R.I. Clayton, 2010. Comparison of aerosol optical thickness with in situ visibility data over Cyprus. *Natural Hazards and Earth System Science*, **10**, 421–428.
- C31. Hadjimitsis, D. G., Agapiou, A., Papadavid, G., Themistocleous, K., Retalis, A., Michaelides, S., **Chrysoulakis, N.**, Toullos, L., and C.R.I. Clayton, 2010. Atmospheric correction for satellite remotely sensed data intended for agricultural applications: impact on vegetation indices. *Natural Hazards and Earth System Sciences*, **10**, 89 - 95.
- C32. Feidas, H., Kokolatos, G., Negri, A., Manyin M., **Chrysoulakis, N.** and Y. Kamarianakis, 2009. Validation of an infrared-based satellite algorithm to estimate accumulated rainfall over the Mediterranean basin. *Theoretical and Applied Climatology*, **95**, 91 – 109.
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## **Conference Abstracts**

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