Zina (Zinovia) Mitraka

Education

PhD Degree in the **Computer Science, Control and GeoInformation Doctorate** of the **Computer Science Department** of the **University of Rome Tor Vergata**, Rome, Italy. April 2016.
http://www.disp.uniroma2.it/geoinformation/
http://www.ce.uniroma2.it/dottorato/
Thesis Title: **Earth Observation and the Copernicus Sentinels for Urban Climate**

Master Degree in **Environmental and Sanitary Engineering** of the **Environmental Engineering Department** of the **Technical University of Crete**, Chania, Greece. June 2011.
http://www.tuc.gr/enveng-deparment.html

Degree in **Applied Mathematics – Department of Applied Mathematics** – Faculty of Sciences and Engineering, **University of Crete**, Heraklion, Greece. December 2006.
http://www.math.uoc.gr/en/

PhD Thesis

Title: **Earth Observation and the Copernicus Sentinels for Urban Climate**
Supervisor: Fabio Del Frate (delfrate@disp.uniroma2.it)

Master Thesis

Title: **Sub-pixel classification of satellite imagery for the estimation of land surface emissivity in urban environment**
Supervisor: Tsouchlaraki Androniki (niki.tsouchlaraki@enveng.tuc.gr)

Diploma Dissertations

Title: **Numerical Solution of the Parabolic Problem using Parallel Processing Techniques**
Supervisor: Katsaounis Theodoros (thodoros@tem.uoc.gr)

Title: **Homogeneous Exact non – Oscillatory 2nd order Schemes**
Supervisor: Katsaounis Theodoros (thodoros@tem.uoc.gr)

Professional Experience

01/09/2025 – today	**Principal Researcher (Grade B)** in the Remote Sensing Lab of the **Foundation for Research and Technology Hellas**, Heraklion, Greece (http://www.rslab.gr)
01/03/2021 – 31/08/2025	**Assistant Researcher (Grade C)** in the Remote Sensing Lab of the **Foundation for Research and Technology Hellas**, Heraklion, Greece (http://www.rslab.gr)
01/11/2014 – 28/02/2021	**Post-Doctoral Research Fellow** in the Remote Sensing Lab of the **Foundation for Research and Technology Hellas**, Heraklion, Greece (http://www.rslab.gr),
01/11/2011 – 01/04/2013	**Young Graduate Trainee** at the Science Strategy, Coordination and Planning Office (EOP-SA) of European Space Research Institute (ESRIN) – **European Space Agency**, Rome, Italy (http://www.esa.int/esaMI/ESRIN_SITE/index.html)
01/04/2007 – 30/10/2011	**Research Associate** in the Remote Sensing Lab of the **Foundation for Research and Technology Hellas**, Heraklion, Greece (http://www.rslab.gr)
11/12/2006 – 18/01/2007	**Software engineer** in the computational team of the **Chemical Process Engineering Research Institute** of the National Centre for Research and Technology-Hellas, Thessaloniki, Greece (http://www.cperi.certh.gr)
20/05/2006 – 20/08/2006	**Work Placement** in the Remote Sensing Lab of the Regional Analysis Division – Foundation for Research and Technology Hellas, Heraklion, Greece (http://www.rslab.gr)

Research Projects

UpClim | Upgrading a climate model to improve regional climate projections
https://upclim.geo.auth.gr/
Duration: 2024 – 2025
Funding: European Space Agency
Role: Principal Investigator

EO4UTEMP | Large scale exploitation of satellite data for the assessment of urban surface temperatures
http://rslab.gr/eo4utemp/
Duration: 2020 – 2022
Funding: European Space Agency
Role: Principal Investigator

CLMS-Cities | Copernicus Responding to EU Cities Mission
https://CLMS-Cities.eu
Duration: 2025 – 2028

Funding: Horizon Europe
Role: Closely following the project and its progress from the coordinator's side. Leading the Work Packages related to management and dissemination and the CLMS data portfolio & integration at local level.

Sat4Gaia | Greek National Satellite Space Project: Axis 3 Land Monitoring Service
Duration: 2024 – 2026
Funding: European Space Agency
Role: Closely following the project and its progress. Coordination of the development of remote sensing methods and algorithms for the urban analytics service, which consists of three sub-services: monitoring the urban heat island, assessing urban health indicators, and tracking urban air quality.

HARMONIA | Development of a Support System for Improved Resilience and Sustainable Urban areas to cope with Climate Change and Extreme Events based on GEOSS and Advanced Modelling Tools
http://harmonia-project.eu/
Duration: 2021 – 2024
Funding: European Commission (H2020)
Role: Closely following the project and its progress. Leading the Work Package related to the services towards urban climate change risk quantification to be integrated in the HARMONIA support system.

urbisphere | coupling dynamic cities and climate
http://urbisphere.eu/
Duration: 2020 – 2026
Funding: European Research Council
Role: Developing Earth Observation methods and algorithms for characterizing the urban surface and assist urban climate modeling.

CURE | Copernicus for Urban Resilience in Europe
http://cure-copernicus.eu/
Duration: 2020 – 2023
Funding: European Commission (H2020)
Role: Closely following the project and its progress from the coordinator's side. Responsible for the project technical management and all the Work Packages of the project. Leading the Work Package related to the development of the Copernicus Services cross-cutting applications for urban resilience.

DiAS | DIsaster & Agriculture Sentinel applications
http://dias.topo.auth.gr/
Duration: 2018 – 2020
Funding: General Secretariat for Research and Technology – Greece
Role: Responsible for work packages related to the project management and the decision support system. Developer of the decision support system that uses Sentinel-1 and Sentinel-2 data for disaster monitoring in agriculture.

ThinkNATURE | Development of a multi-stakeholder dialogue platform and Think tank to promote innovation with Nature based solutions
https://www.think-nature.eu/
Duration: 2016 – 2019
Funding: European Commission (H2020)

Role: Responsible for the work package related to the identification of barriers and uptake of the necessary decision making mechanisms of the various local authorities and stakeholders. Closely following the whole project and its progress.

ECOPOTENTIAL | Improving future ecosystem benefits through earth observations

https://www.ecopotential-project.eu/
Duration: 2015 - 2019
Funding: European Commission (H2020)
Role: Technical assistance in the work packages related to remote sensing products. Development of algorithms and web applications providing land surface temperature and land surface albedo for the globe and the ECOPOTENTIAL case studies.

SEN4RUS | Exploiting Sentinels for supporting urban planning applications at city and regional levels in Russia

http://www.sen4rus.eu/
Duration: 2016 - 2019
Funding: General Secretariat for Research and Technology – Greece
Role: Closely following the project and its progress from the coordinator's side. Responsible for the project management and all work packages of the project.

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

Duration: 2015 - 2017
Funding: SIEMENS - General Secretariat for Research and Technology – Greece
Role: Closely involved in the environmental modeling and data analysis work package of the project, specifically coordinating and implementing the task "Exploitation of the Copernicus Sentinels satellite observations and the development of applications for urban environments".

URBANFLUXES | URBan ANthrpogenic heat FLUX from Earth observation Satellites

http://urbanfluxes.eu/
Duration: 2015 - 2017
Funding: European Commission (H2020)
Role: Closely following the project and its progress from the coordinator's side. Responsible for the project management and all Work Packages of the project. Leading the Work Package related to the adaptation of the URBANFLUXES anthropogenic heat flux estimation method to the Copernicus Sentinels.

EO4SEB | Advanced Earth Observation techniques for urban Surface Energy Balance modelling

http://rslab.gr/projects/eo4seb/
Duration: 2013 - 2015
Funding: General Secretariat for Research and Technology – Greece
Role: Closely following the project and its progress from the coordinator's side. Responsible for the project management and all Work Packages of the project. Responsible for preparing the satellite data, necessary for urban energy budget simulations.

SEN4LST | Synergistic Use Of The Sentinel Missions For Estimating And Monitoring Land Surface Temperature
Duration: 2012 - 2014
Funding: European Space Agency
Role: Closely following the project and its progress from the project officer's side. Processing of airborne hyperspectral data for simulating Sentinel-2 and Sentinel-3 imagery. Development of algorithm for retrieving emissivity from Sentinel-2 simulated data and Land Surface Temperature from Sentinel-3.

BRIDGE | Sustainable urban planning decision support accounting for urban metabolism
http://www.bridge-fp7.eu/
Duration: 2008 - 2011
Funding: European Commission (FP7 Collaborative Project)
Role: Closely following the project and its progress from the coordinator's side. Responsible for the project management. Responsible for developing the Decision Support System methodology and assisting its implementation.

UHI | Urban Heat Islands and Urban Thermography
Analysis of the UHI trends over 10 European cities (Athens, Bari, Brussels, Budapest, Lisbon, London, Madrid, Paris, Seville, Thessaloniki) over the last 10 years, using a multi-sensor approach.
Duration: 2008 - 2011
Funding: European Space Agency (ITT ESRIN/AO/1-5685/08/I-LG)
Role: MODIS satellite data processing for deriving Land Surface Temperature and emissivity time series.

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
Duration: 2005 - 2007
Funding: General Secretariat for Research and Technology – Greece
Role: Closely following the project and its progress from the coordinator's side. Assisting in satellite image processing.

Precipitable Water | Study on the spatial – temporal distribution of atmospheric water content with the combined use of satellite remote sensing and non-linear science
http://rslab.gr/projects/pw/index.html
Duration: 2005 – 2007
Funding: General Secretariat for Research and Technology – Greece
Role: Closely following the project and its progress from the coordinator's side. Processing of satellite (AVHRR) and in-situ (radiosonde data) for precipitable water estimation.

DISTINCTIONS AND AWARDS

Living Planet Fellowship from the European Space Agency (ESA) for the EO4UTEMP project, Duration July 2020 – June 2022, Heraklion, Greece.

Research Scholarship for high level scientific stay (Séjour scientifique de haut niveau) (SSHN), in the framework of the Greek Youth Mobility Fund of the French Embassy in Greece, supported by the French

Ministry of National Education, Higher Education and Research, September 2019 – December 2019, CESBIO, Toulouse, France.

Best paper prize, 1st place in the Joint Urban Remote Sensing Event, 30 March – 1 April 2015 Lausanne, Switzerland

Best poster award in the 4th GIONET Summer School, 30 June – 4 July 2014, ESA ESRIN Frascati, Italy

Best poster award in the ESA 4th Advanced Training Course in Land Remote Sensing, 01 – 5 July 2013, Harokopio University, Athens, Greece

National PhD Tuition Fee Award and Research Scholarship, Tor Vergata University of Rome, Italy, 2012 - 2015.

European Space Agency and Greek General Secretariat for Research and Technology Traineeship Programme, 2011-2013.

TEACHING EXPERIENCE

ESA Earth Observation Remote Sensing Workshop 2024, Land Remote Sensing, **Thermal Remote Sensing**, 15 – 19 July 2024, ESA, ESEC-Galaxia, Transinne, Belgium

ESA Earth Observation Remote Sensing Workshop 2022, Land Remote Sensing, **Thermal Remote Sensing**, 6 – 9 December 2022, ESA, ESEC-Galaxia, Transinne, Belgium

University of Crete, Department of Physics, February 2019 – June 2019, Heraklion, Greece
Teaching Assistant in the Course: Principles and applications of satellite remote sensing

ESA Earth Observation Remote Sensing Workshop 2018, Thermal Remote Sensing Introduction, 10 December – 14 December 2018, ESA, ESEC-Galaxia, Transinne, Belgium

University of Crete, Department of Physics, February 2018 – June 2018, Heraklion, Greece
Teaching Assistant in the Course: Principles and applications of satellite remote sensing

ESA Earth Observation Summer School on Earth System Monitoring and Modelling, **Practical**, 1 August – 12 August 2016, ESA ESEC- Galaxia, Belgium
Lecture: Sentinel-1 and Sentinel-2 practical session.

University of Crete, Department of Physics, February 2016 – June 2016, Heraklion, Greece
Teaching Assistant in the Course: Principles and applications of satellite remote sensing

University of Rome Tor Vergata, Department of Computer Science, October 2013 – June 2014, Rome, Italy
Teaching Assistant in the Course: Remote Sensing and Cartography

University of Crete, Department of Physics, February 2010 – June 2011, Heraklion, Greece
Teaching Assistant in the Course: Principles and applications of satellite remote sensing

Editorial Boards

Member of the Editorial Board of the Urban Remote Sensing Section, Remote Sensing — Open Access Journal, MDPI

Guest Editor for the Special Issue "Application of Remote Sensing in Urban Climatology", Remote Sensing — Open Access Journal, MDPI

Guest Editor for the Special Issue "Understanding urban climates with artificial intelligence and Earth observation", International Journal of Applied Earth Observation and Geoinformation, Elsevier

Scientific Committees

URBan Insights from Space (URBIS24), 16 - 18 September, 2024, Frascati, Rome, Italy

Joint Urban Remote Sensing Event 2023 (JURSE 2023), 10 - 12 May, 2023, Heraklion, Greece.

The 4th International Electronic Conference on Remote Sensing (ECRS2022), 25–27 January 2022, on-line.

Joint Urban Remote Sensing Event 2019 (JURSE 2019), 22 - 24 May, 2019, Vannes, France.

SPIE, Remote Sensing Technologies and Applications in Urban Environments, 9 - 12 September 2019, Strasburg, France.

ESA Living Planet Symposium 2019 (LPS19), 13-17 May 2019, Milan, Italy.

Seventh International Conference on Remote Sensing and Geoinformation of Environment (RSCy2019), 18-21 March, 2019, Paphos, Cyprus.

Mapping Urban Areas from Space (MUAS2019), 30-31 October 2018, Frascati, Italy.

SPIE, Remote Sensing Technologies and Applications in Urban Environments, organized in the framework of SPIE Remote Sensing, 10-13 September, 2018, Berlin, Germany.

Earth Observation Supporting Sustainability Research, 38th Annual EARSeL Symposium 2018, 9-12 July, 2018, Chania, Greece.

Sixth International Conference on Remote Sensing and Geoinformation of Environment (RSCy2019), 26 - 29 March, 2018, Paphos, Cyprus.

Reviewer for R&D Funding Agencies

Reviewer for the following R&D Funding Agencies:

The Belgian Science Policy Office (BELSPO)

The Croatian Science Foundation (EPP)

The European Science Foundation (ERF)

Reviewer for Scientific Journals

Reviewer for the following journals:

Scientific Reports
Discover Applied Sciences
Remote Sensing of Environment, Elsevier
Remote Sensing — Open Access Journal, MDPI
Transactions on Geoscience & Remote Sensing, IEEE
Geoscience and Remote Sensing Letters, IEEE
Urban Climate, Elsevier
International Journal of Applied Earth Observation and Geoinformation, Elsevier
Land Degradation & Development, Wiley
Theoretical and Applied Climatology, Springer

Training Courses Attendance

GIONET Summer School 2014: Monitoring the Earth for Environmental Policy and Decision Making, 30 June – 4 July 2014, ESA/ESRIN, Frascati, Italy

ESA 4th Advanced Training Course in Land Remote Sensing, 01 – 5 July 2013, Harokopio University, Athens, Greece

ESA Earth Observation Summer School on Earth System Monitoring and Modelling, 30 July – 10 August 2012, ESA – ESRIN, Frascati, Rome

Computing for Data Analysis, 2 January – 6 February 2013, Johns Hopkins University, on-line course, Coursera

Computational Photography, 25 March – 7 May 2013, Georgia Institute of Technology, on-line course, Coursera

Designing Cities, 7 October 2013 – 4 January 2014, University of Pennsylvania, on-line course, Coursera

Machine Learning, 14 October 2013 – 18 January 2014, Stanford University, on-line course, Coursera

Global Warming: The Science of Climate Change, 21 October 2013 – 10 January 2014, The University of Chicago, on-line course, Coursera

An Introduction to Interactive Programming in Python, 7 October 2013 – 10 January 2014, Rice University, on-line course, Coursera

Languages

Excellent knowledge of English (Cambridge Proficiency)

Good knowledge of Italian (B2 European Level)

REFERENCES

Nektarios Chrysoulakis
Research Director, Foundation for Research and Technology Hellas, Greece
zedd2@iacm.forth.gr

Michael Berger
European Space Agency, Italy
michael.berger@esa.int

Fabio Del Frate
Professor, Tor Vergata University of Rome, Italy
delfrate@disp.uniroma2.it

Sue Grimmond
Professor, University of Reading, United Kingdom
c.s.grimmond@reading.ac.uk

PUBLICATIONS IN PEER-REVIEW JOURNALS

Iqbal, N., Ravan, M., Mitraka, Z., Birkmann, J., Grimmond, S., Hertwig, D., Chrysoulakis, N., Somarakis, G., Wendnagel-Beck, A., & Panagiotakis, E. (2025). How does perceived heat stress differ between urban forms and human vulnerability profiles? Case study Berlin. Natural Hazards and Earth System Sciences, 25(7), 2481–2502. https://doi.org/10.5194/nhess-25-2481-2025

Fenner, D., Christen, A., Grimmond, S., Meier, F., Morrison, W., Zeeman, M., Barlow, J., Birkmann, J., Blunn, L., Chrysoulakis, N., Clements, M., Glazer, R., Hertwig, D., Kotthaus, S., König, K., Looschelders, D., Mitraka, Z., Poursanidis, D., Tsirantonakis, D., … van Hove, M. 2024. urbisphere-Berlin Campaign: Investigating Multiscale Urban Impacts on the Atmospheric Boundary Layer. *Bulletin of the American Meteorological Society*, *105*(10), E1929–E1961. DOI: 10.1175/BAMS-D-23-0030.1

Chrysoulakis, N., Ludlow, D., Mitraka, Z., Somarakis, G., Khan, Z., Lauwaet, D., Hooyberghs, H., Feliu, E., Navarro, D., Feigenwinter, C., Holsten, A., Soukup, T., Dohr, M., Marconcini, M., & Holt Andersen, B. (2023). Copernicus for urban resilience in Europe. Scientific Reports, 13(1), 16251. https://doi.org/10.1038/s41598-023-43371-9

J23 Iqbal, N., Ravan, M., Jamshed, A., Birkmann, J., Somarakis, G., Mitraka, Z., & Chrysoulakis, N. 2022. Linkages between Typologies of Existing Urban Development Patterns and Human Vulnerability to Heat Stress in Lahore. Sustainability, 14 (17), 10561. https://doi.org/10.3390/su141710561

Chrysoulakis, N., Somarakis, G., Stagakis, S., Mitraka, Z., Wong, M.-S., Ho, H.-C., 2021. Monitoring and Evaluating Nature-Based Solutions Implementation in Urban Areas by Means of Earth Observation. Remote Sens. 13, 1503. https://doi.org/10.3390/rs13081503

Lantzanakis, G., Mitraka, Z., Chrysoulakis, N., 2020. X-SVM: An Extension of C-SVM Algorithm for Classification of High-Resolution Satellite Imagery. IEEE Trans. Geosci. Remote Sens. 1–11. DOI: 10.1109/TGRS.2020.3017937

Nikoloudakis, N., Stagakis, S., Mitraka, Z. et al. Spatial interpolation of urban air temperatures using satellite-derived predictors. Theor Appl Climatol 141, 657–672 (2020).

Mitraka, Z., Siachalou, S., Doxani, G., Patias, P., 2020. Decision Support on Monitoring and Disaster Management in Agriculture with Copernicus Sentinel Applications. Sustainability 12, 1233. https://doi.org/10.3390/su12031233

Tzelidi, D., Stagakis, S., Mitraka, Z., Chrysoulakis, N., 2019. Detailed urban surface characterization using spectra from enhanced spatial resolution Sentinel-2 imagery and a hierarchical multiple endmember spectral mixture analysis approach. J. Appl. Remote Sens. 13, 1. https://doi.org/10.1117/1.JRS.13.016514

Chrysoulakis, N., Grimmond, S., Feigenwinter, C., Lindberg, F., Gastellu-Etchegorry, J.-P., Marconcini, M., Mitraka, Z., Stagakis, S., Crawford, B., Olofson, F., Landier, L., Morrison, W., Parlow, E., 2018. Urban energy exchanges monitoring from space. Sci. Rep. 8, 11498. https://doi.org/10.1038/s41598-018-29873-x

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Chrysoulakis, N., Mitraka, Z., Gorelick, N., 2019. Exploiting satellite observations for global surface albedo trends monitoring. Theor. Appl. Climatol. 137, 1171–1179. https://doi.org/10.1007/s00704-018-2663-6

Parastatidis, D., Mitraka, Z., Chrysoulakis, N., Abrams, M., 2017. Online Global Land Surface Temperature Estimation from Landsat. Remote Sens. 9, 1208. doi:10.3390/rs9121208

Gastellu-Etchegorry, J.P., Lauret, N., Yin, T., Landier, L., Kallel, A., Malenovsky, Z., Bitar, A. Al, Aval, J., Benhmida, S., Qi, J., Medjdoub, G., Guilleux, J., Chavanon, E., Cook, B., Morton, D., Chrysoulakis, N., Mitraka, Z., 2017. DART: Recent Advances in Remote Sensing Data Modeling With Atmosphere, Polarization, and Chlorophyll Fluorescence. IEEE J. Sel. Top. Appl. Earth Obs. Remote Sens. 10, 2640–2649. doi:10.1109/JSTARS.2017.2685528

Mitraka, Z., Doxani, G., Del Frate, F., & 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, 1–5. http://doi.org/10.1109/LGRS.2016.2553367

Mitraka, Z., Del Frate, F., & Carbone, F. (2016). Nonlinear Spectral Unmixing of Landsat Imagery for Urban Surface Cover Mapping. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 1–11. http://doi.org/10.1109/JSTARS.2016.2522181

Doxani, G., Mitraka, Z., Gascon, F., Goryl, P., & Bojkov, B. R. (2015). A Spectral Unmixing Model for the Integration of Multi-Sensor Imagery: A Tool to Generate Consistent Time Series Data. Remote Sensing, 7, 14000–14018. doi:10.3390/rs71014000

Mitraka, Z., Chrysoulakis, N., Doxani, G., Del Frate, F., & Berger, M. (2015). Urban Surface Temperature Time Series Estimation at the Local Scale by Spatial-Spectral Unmixing of Satellite Observations. Remote Sensing, 7(4), 4139–4156. doi:10.3390/rs70404139

Poursanidis, D., Chrysoulakis, N., & 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. doi:10.1016/j.jag.2014.09.010

Mitraka, Z., Diamantakis, E., Chrysoulakis, N., Castro, E., Jose, R., Gonzalez, A., & Blecic, I. (2014). Incorporating Bio-Physical Sciences into a Decision Support Tool for Sustainable Urban Planning. Sustainability, 6(11), 7982–8006. doi:10.3390/su6117982

Chrysoulakis, N., Mitraka, Z., Stathopoulou, M., & 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(7), 2139–2144, Proceedings of the 3rd International CEMEPE & SECOTOX Conference, Skiathos, Greece, June 19-24, 2011, ISBN 978-960-6865-43-5

Mitraka, Z., & Chrysoulakis, N. (2013). Satellite Based Estimation of Urban Surface Emissivity with the Use of Sub-Pixel Classification Techniques. (C. G. Helmis & P. T. Nastos, Eds.) Advances in Meteorology, Climatology and Atmospheric Physics, 231–237. doi:10.1007/978-3-642-29172-2

Chrysoulakis, N., Lopes, M., San José., R., Grimmondd, S., Magliulo, V., Klostermann, J., Synnefa, A., Mitraka, A., Castro, E.A, González, A., Vogt, R., Vesala, T., Spano, D., Pigeon, G., Freer-Smith, P., Staszewski, T., Hodges, N., Mills, g. & 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.

Petropoulos, Y., Partsinevelos, P. & Mitraka, Z. (2012). Change detection of surface mining activity and reclamation based on a machine learning approach of multi-temporal Landsat TM imagery. Geocarto International, doi:10.1080/10106049.2012.706648

Mitraka, Z., Chrysoulakis, N., Kamarianakis, Y., Partsinevelos, P. & Tsouchlaraki, A. (2013). Improving the estimation of urban surface emissivity based on sub-pixel classification of high resolution satellite imagery. Remote Sensing of Environment, 117,125-134. doi: 10.1016/j.rse.2011.06.025

Hadjimitsis, D., Mitraka, Z., Gazani, I., Retalis, A., Chrysoulakis, N. & Michaelides, S. (2011). Estimation of spatio-temporal distribution of precipitable water using MODIS and AVHRR data: A case study for Cyprus. Advances in Geoscience, 30, 23-29. doi: 10.5194/adgeo-30-23-2011.

Chrysoulakis, N., Kamarianakis, Y., Xu, L., Z. Mitraka, Z. & Ding, J. (2008). Combined use of MODIS, AVHRR and radiosonde data for the estimation of spatiotemporal distribution of precipitable water. Journal of Geophysical Research, 113, D05101. doi: 10.1029/2007JD009255

BOOK CHAPTERS

Mitraka, Z., Chrysoulakis, N. 2018. Earth Observation for Urban Climate Monitoring: Surface Cover and Land Surface Temperature, in: Multi-purposeful Application of Geospatial Data. InTech, Rijeka, Croatia, p. 125-145. doi: 10.5772/intechopen.71986

Landier, L., Lauret, N., Yin, T., Al Bitar, A., Gastellu-Etchegorry, J., Feigenwinter, C., Parlow, E., Mitraka, Z., Chrysoulakis, N., 2016. Remote Sensing Studies of Urban Canopies: 3D Radiative Transfer Modeling, in: Ergen, M. (Ed.), Sustainable Urbanization. InTech, Rijeka, Croatia, p. 180. doi:10.5772/63887

Lantzanakis, G., Mitraka, Z., Chrysoulakis, N., 2017. Comparison of Physically and Image Based Atmospheric Correction Methods for Sentinel-2 Satellite Imagery, in: Perspectives on Atmospheric Sciences. pp. 255–261. doi:10.1007/978-3-319-35095-0_36

Mitraka, Z., Diamantakis, M., Chrysoulakis, N., 2014. The BRIDGE Decision Support System, in: Chrysoulakis, N., Castro, E., Moors, E. (Eds.), Understanding Urban Metabolism: A Tool for Urban Planning. Routledge, London and New York.

Cartalis, C., Stathopoulou, M., Mitraka, Z., Chrysoulakis, N., 2014. Use of Earth Observation to support urban modelling parameterization in BRIDGE, in: Chrysoulakis, N., de Castro, E.A., Moors, E.J. (Eds.), Understanding Urban Metabolism: A Tool for Urban Planning. Routledge, London and New York, pp. 58–68.s

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Hodges, N., González, A., Mitraka, Z. 2014. Decision support tools for urban planning. in N. Chrysoulakis, E. Castro, & E. Moors (Eds.), *Understanding Urban Metabolism: A Tool for Urban Planning*. London and New York: Routledge.

Mitraka, Z., Lazzarini, M., Doxani, G., Frate, F. Del, & Ghedira, H. (2014). Uncertainty indices of high spatial resolution Land Surface Temperature estimates over urban areas. In Land Product Validation and Evolution Workshop, Frascati, Italy, 28-30 January 2014.

Conference Publications

Mitraka, Z., Lantzanakis, G., Gkolemi, M., Chrysoulakis, N. Large scale exploitation of satellite data for the assessment of urban surface temperatures: the EO4UTEMP project. URBan Insights from Space (urbis24), 16-18 September 2024, ESA-ESRIN.

Mitraka, Z., Lantzanakis, G., Gkolemi, M., Tsirantonakis, D., Chrysoulakis, N., Morrison, W., Fenner, D., Christen, A., Reinicke, T., Grimmond, S., Frid, M., Saunders, B., Birkmann, J., Abrams, M. Analysis of urban surface temperatures from in-situ, airborne and satellite remote sensors: the case of Berlin, Germany. URBan Insights from Space (urbis24), 16-18 September 2024, ESA-ESRIN.

Gkolemi, M., Mitraka, Z., Chrysoulakis, N., Morrison, W., Christen, Z., Grimmond, S., Birkmann, J., 3D surface temperature modeling evaluation with in-situ thermal remote sensing: A study in Berlin. URBan Insights from Space (urbis24), 16-18 September 2024, ESA-ESRIN.

Mitraka, Z., Lantzanakis, G., Panagiotakis, E. Chrysoulakis, N., Somarakis, G., Marconcini, M., Feigenwinter, F. & Lauwaet, D. (2025). Copernicus services and satellite data products in the service of urban heat mapping and monitoring. 2024 IEEE International Geoscience and Remote Sensing Symposium (IGARSS24).

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