Dr. George P. Petropoulos
Short Curriculum Vitae

Researcher Unique Identifiers: **IRCID:** orcid.org/0000-0003-1442-1423, **Scopus:** 56500820900
Google Scholar: https://scholar.google.co.uk/citations?user=Boe7HJcAAAAJ&hl=en
Personal Web Site: https://petropoulosgeorge.wixsite.com/mysite
Citation metrics: total citations: 5182, H-index: 39, H-10 index: 99 (as per Google scholar, 20/11/2022)

EDUCATION

2002-2008	**PhD** in Earth Observation Modelling, Dept. of Geography, Kings College London, UK
2001-2002	**MSc** in Remote Sensing, University of London (intercollegiate degree between University College London, Imperial College & King's College) UK
1994-1999	**BSc** in Natural Resources Development & Agricultural Engineering, Agricultural University of Athens, Greece

CURRENT POSITION

2020 – Now	***Assistant Professor in Geoinformatics*** – Department. of Geography, Harokopio University of Athens, Greece

RESEARCH INTERESTS

- Earth Observation, GIS, digital cartography, GPS, simulation models, ground networks
- Geoinformation in geographical and environmental applications
- Mapping of the natural and man-made environment and monitoring of their changes over time
- Study of biotic and abiotic hazards and of their spatiotemporal dynamics
- Development and implementation of geoinformation tools
- All-inclusive assessment of geoinformation algorithms and products
- Operational use, products and applications of geoinformation

PROFESSIONAL EXPERIENCE

2018 – 2021	***Marie Curie Fellow*** – Technical University of Crete, Department of Mineral Resources Engineering, Chania, Crete, Greece
2018 – 2020	***Associate Researcher in Remote Sensing & Geographical Information Systems (GIS)*** – Hellenic Agricultural Organisation "Demeter" (Former NAGREF), Institute of Soils Mapping, Ministry of Agriculture, Larisa, Greece
2016 – 2018	***Reader (Associate Professor) in Remote Sensing & GIS,*** Dept. of Geography and Earth Sciences (DGES), Aberystwyth University (AU), UK
2014 – 2016	***Senior Lecturer in Remote Sensing & GIS***, Dept. of Geography and Earth Sciences (DGES), Aberystwyth University (AU), UK
2012 – 2014	***Lecturer in Remote Sensing and GIS,*** Dept. of Geography and Earth Sciences, Aberystwyth University, UK
2011 – 2014	***Postdoctoral Scholar of the European Space Agency (ESA),*** Institute of Applied and Computational Mathematics, Heraklion, Crete, Greece and DGES at AU/UK
2010 – 2011	***Postdoctoral Research Fellow***, Dept. of Natural Resources and Agricultural Engineering, Agricultural University of Athens, Greece
2009 – 2010	***Research Fellow***, Institute of Space Applications and Remote Sensing, National Observatory of Athens, Greece
2009 – 2010	***Research Fellow***, Dept. of Environmental Management, Mediterranean Agronomic Institute of Chania, Crete, Greece

2008 – 2009   *Postdoctoral Research Fellow*, Dept. of Earth Sciences, University of Bristol, UK

RESEARCH STUDENTS SUPERVISION (below included the completed PhD's only)

Khidir Abdalla Kwal Deng PhD Thesis title: "*Soil moisture retrievals from the synergy of Earth Observation datasets*". School of Atmospheric Physics, Nanjing University of Information Science & Technology, China.

Salim Lamine PhD Thesis title: "*Contribution of Hyperspectral satellite images to study the interaction between the plant cover and the soil*". Dept of Ecology and Environment, University of Sciences and Technology Houari Boumediene (USTHB), BP 32, El Alia Bab Ezzouar, Algiers, Algeria.

Joshua Jones PhD Thesis title: "*Assessing the impacts of previous land use on the regeneration of tropical rainforests in areas of abandoned agriculture in the Brazilian Amazon*". PhD supervision start date 11/2013. Dept of Geography & Earth Sciences, Aberystwyth University, UK.

Rebecca Charnock PhD Thesis title: "*Assessment of biodiversity indicators utilizing remote sensing data*". PhD supervision start date 04/2012. Dept of Geography & Earth Sciences, Aberystwyth University, UK.

FELLOWSHIPS (list not exhaustive)

2017-2021   **Marie Curie Individual Fellowship (IF),** project "ENVISION-EO" (top 4.01% score)

2015   **Senior Fellow** awarded from the UK's Higher Education Academy (HEA) in recognition of my teaching contribution and impact outside of a UK academic institute

2014   **Research Scientist Visitor at the NASA's Hydrology Group**, Goddard, USA.

2013   **Marie Curie Reintegration Grant (GIG),** project TRANSFORM-EO" (top 9% score)

2010   **European Space Agency (ESA) award** obtained for pursuing postdoctoral research. My proposal was one of the 10 accepted by ESA in a call that was open for all ESA-Member States and Canada

2009   **Honorary Research Fellow,** Dept. of Earth Sciences, Bristol University, UK

2009   **Postdoctoral Research Fellowship** obtained from the Ministry of Education, Greece

2002   **Postgraduate Studies Scholarship** obtained from the Greek Scholarships Foundation (IKY) to pursue postgraduate studies (MSc, PhD) in the field of Earth Observation/GIS

RESEARCH PROJECTS (list not exhaustive)

2023:   **EU HORIZON Europe,** funded project " A cloud-based remote sensing data system for promoting research and socioeconomic studies in arctic environments – EO-PERSIST", Duration: 4 years.**,** Role: PI, *Funding amount: 1,568.600 euros*

2022:   **HUA Greece,** funded project: " "Evaluation of the Physical Capital of Harokopio University: The road to the «Green University»"   Duration: 41 year, Role: Co-I. *Funding amount: 5,000 euros*

2022:   **EU HORIZON Europe, funded project: "safeGUARDing biodivErsity aNd critical ecosystem services across sectors and scales – GUARDEN",** Role: participant, *Funding amount: 5M euro*

2022:   **COST Action: "**Opportunistic precipitation sensing network" (CA20136). EU-funded project. Duration: 4 years. Role: National Delegate and Management Committee

2021:   **KALLIPOS:** Funding to develop a an e-textbook (in Greek) "Introduction to Cartography & GIS". Duration:1.5 years, Role: PI. *Funding amount: 8,500 euros*

2019:   **COST Action: "**On the Use of Unmanned Aerial Systems for Environmental Monitoring, HARMONIOUS" (CA16219). Participant to WPs of the Action, mainly in WP2 (Vegetation state Monitoring from UAVs)

2018   **COST Action** "Optical synergies for spatiotemporal sensing of scalable ecophysiological

traits" (CA17134), EU-funded project. Duration: 4 years. My role: Management Committee member

2018	**Newton Fund Research Partnerships, UK-Indonesia call for proposals.** Proposal title: "Towards a Fire Early Warning System for Indonesia (ToFEWSI)". My role: Co-I. Funding amount: *£180,000*, of which I managed *£58,000*.
2017	**Marie Curie Individual Fellowship:** ENViSioN-EO. Research for 2 years focusing on the investigation of improved estimates of key parameters characterising land surface interactions from the synergies of EO data and land biosphere models. Project duration: 2 years; My role: fellow; Funding amount: ~*€168,000*.
2015	**Newton Fund, NSFC Agritech, UK**: "Synthesis of EO and novel ground truth sensors to develop high resolution soil moisture forecasts in China and the UK". Project budget: £970,000; duration: 3 years; Role: Co-I of which I managed *£235,000*.
2014	**High Performance Computing Facilities (HPC) Wales:** "Investigating the Prototyping the retrievals of existing EO-based operational products for the estimation of evapotranspiration rates (ET) and soil moisture. Co-Is: NASA Hydrology Group, USA & Geosmart Solution Ltd, UK. duration: 3 years; Role: PI; *Funding amount: £44,500.*
2013	**Marie Curie Career Integration Grant:** TRANSFOrM-EO. Estimation of energy fluxes and soil moisture from the synergy of Earth Observation (EO) and simulation process model SimSphere. duration: 3 years; Role: fellow; *Funding amount: €100,000.*
2012	**University of Aberystwyth Research Funds:** Towards the development of a continuous, autonomous long-term monitoring of soil moisture content and related parameters for west Wales. duration: 1 year; Role: PI; *Funding amount: £4,850.*
2011	**European Space Agency (ESA).** Funding obtained for pursuing postdoctoral research in prototyping the retrievals of energy fluxes and soil surface moisture from ESA satellites. Role: PI; *Funding amount: €116,400.*

POSITIONS OF COMMISSIONS OF TRUST (indicative examples below)

2018 – Now	**EUMETSAT LSA SAF Space Agency,** *appointed to evaluate forthcoming operational products by the Space Agency*
2017 – Now	**Copernicus Global Land Services of European Commission** *appointed by EU to evaluate the quality of several operational products to be distributed via Copernicus*
2016 – 2017	**Expert evaluator and rapporteur for the EU's HORIZON2020 "Space" call**
2015 – 2018	**Elected Trustee of the Remote Sensing & Photogrammetric Society (RSPSoC)**
2015 – Now	**Expert evaluator for funding bodies such as:** *Austrian Science Fund (FWF), National Research Fund of Luxembourg, Belgian Science Policy Office, British Council (UK), NERC (UK)*

EDITORIAL WORK (indicative examples)

Editor Roles:

2015 – 2020	**Editor of SENSED,** *Newsletter Remote Sensing & Photogram. Society (RSPSoc UK)*
2021 – Now	*Environmental Modeling & Software, Elsevier* [IF: 5.471]
2016 – Now	*International Journal of Remote Sensing, Taylor & Francis* [IF: 3.151]
2015 – 2020	Editor of "SENSED", *Newsletter of the UK Remote Sensing & Photogrammetric Society*

Associate Editor Roles:

2021 – Now	*Remote Sensing Applications: Society & Environment (RSASE), Elsevier*
2019 – Now	*European Journal of Remote Sensing (Taylor & Francis)* [IF: 3.168]
2017 – Now	*Remote Sensing* MDPI [IF: 5.349]

Editorial Board Member:

2022 – Now	*Geocarto International (Taylor & Francis group)* [IF: 3.452]
2021 – Now	*Intern. Journal of Applied Earth Observation & Geoinformation, Elsevier* [IF: 7.672]

2019 – Now	*Scientific Data*, Nature [IF: 8.501]
2018 – Now	*Applied Geography*, Elsevier [IF: 4.732]
2018 – Now	*GIScience & Remote Sensing*, Taylor & Francis [IF: 6.238]

SPECIAL ISSUES ORGANISATION TO SCIENTIFIC JOURNALS ((I have so far edited/co-edited 13 special issues to journals. Below are given indicative examples only)

2022	**Editor of Special Issue** "*The Use of Hyperspectral Remote Sensing Data in Mineral Exploration*" journal Remote Sensing MDPI [IF: 5.349]
2021	**Editor of Special Issue** "*Open source geoinformation software tools in environmental modelling*" journal of Environmental Modelling & Software, Elsevier [IF: 5.471]
2021	**Editor of Special Issue** "*Novel Methods and Applications in Satellite and Aerial Imagery Time Series Analysis*" journal Remote Sensing MDPI [IF: 5.349]
2019	**Editor of Special Issue** "*Remote Sensing for biophysical and biochemical properties of crops*" journal Remote Sensing MDPI
2019	**Editor of Special Issue** "*Spaceborne RADAR Remote sensing of Agricutlural Canopies and Soil Moisture*" journal Sensors MDPI
2018	**Editor of Special Issue** "*GPS/GNSS Contemporary Applications*" journal Remote Sensing MDPI
2018	**Editor of Special Issue** "*Satellite Remote Sensing for Water Resources in a Changing Climate*" journal Remote Sensing MDPI
2016	**Editor of Special Issue** "*Earth Observation Technologies for Agrometeorology and Agroclimatology*" journal of Applied Remote Sensing
2015	**Editor of Special Issue** "*SimSphere model: developments & applications*" the journal Geoscientific Model Development

ORGANISATION OF SCIENTIFIC MEETINGS (In total so far participated to the organization of 24 conferences as organizing or technical committee member. Below are indicative examples only)

2022	**Organizing Committee member** of the 4th Conference of GIS and Spatial Analysis in Agriculture & Environment (GIS Congress AUA, May 24– 26th 2022, Athens, Greece
2022	**Scientific Committee member** of the Living Planet Symposium of the European Space Agency (ESA), May 23-27th, 2022, Bonn, Germany
2021	**Technical Committee member** of the IEEE workshop on Hyperspectral Image & Signal Processing: Evolution in Remote Sensing, May 24-26th, 2021, online event
2020	**Scientific Committee Member** of the 2nd Conference of the Arabian Journal of Geosciences (CAJG). November, 2-5, 2020, Sousse, Tunisia
2020	**Scientific Committee Member** of the DRONES & ROVS 2020. April, 29-30th, 2020, London, UK.
2019	**Scientific Committee Member** of the European Space Agency (ESA)'s Living Planet Symposium, May 13-17th, 2019, Milan, Italy
2018	**Scientific Committee Member** of the 4th International Conference on Fuzzy Systems and Data Mining, Nov. 16-19th, 2018, Bangkok, Thailand
2018	**Scientific Committee Member** of the International Conference on Advanced Remote Sensing: October, 15-18th, 2018Wuhan, China,
2018	**Scientific Committee Member** of the 4th International Conference on Fuzzy Systems and Data Mining, Nov. 16-19th, 2018, Bangkok, Thailand
2016	**Scientific Committee Member** of the European Space Agency (ESA)'s Living Planet Symposium, Prague, Czech Republic

ORGANISATION OF EXPERT SESSIONS AT INTERN. CONFERENCES (In total so far I have (co-)organized 20 sessions at international conference. Below are indicative examples only)

2022	**Convener** of the WISPERS 2022, session entitled "**H**yperspectral remote sensing new

missions and novel applications in the natural environment", Rome, Italy

2021	***Co-Convener*** of session "Impact of climate change on agriculture", European Geosciences Union, Vienna, Austria. Session.
2021	***Co-Convener*** of session "Novel methods and applications of satellite and aerial time series imagery", European Geosciences Union, Vienna, Austria.
2020	***Co-Convener*** of session "Satellite Remote Sensing for Hydrological Applications", Asia Oceania Geosciences Society (AOGS), Annual Conference, Hongcheon, Session.
2019	***Convener*** of session "Open source software tools in Earth Observation and GIS", at EGU2019, Vienna, Austria
2019	***Convener*** of session "Advances in remote sensing data analyses for investigating nonlinear processes", at EGU 2019, Vienna, Austria
2019	***Co-Convener*** of session "Impact of climate change on agriculture", at EGU 2019, Vienna, Austtria
2018	***Co-Convener*** of session "EO & GIS use in Water Resources Management", AT THE 10th World Congresss on Water Resources & Environment, EWRA, July, 5-9th, Athens Greece.
2016	***Co-Convener*** of session "Smart Water for the Future", 12th International Conference on Hydroinformatics, Songdo Convensia, Incheon, Korea
2014	***Organising Committee Member*** of the RSPSoc, UK Annual Conference
2014	***Convener*** of session "Uncertainty & Sensitivity Analysis in Geoscience" , EGU
2009 – 2015	***Co-Convener*** of session "Satellite time-series analysis", EGU, Vienna, Austria

INVITED - SOLICITED TALKS (So far, I have been invited to 12 sessions in total at intern. conference and national research and educational institutions. Below are indicative examples only)

2022:	**Solicited Talk in** EGU General Assembly Session : "Geoinformation Technologies in Sustainable Soil Management", Talk Title: A methodological framework for mapping frost occurrence utilizing a cloud-based platform & geospatial data.
2022:	**Solicited Talk in** EGU General Assembly 2022, Session : «Impact of climate change on agriculture», Talk title: SimSphere: a software toolkit to facilitate teaching and research in the study of Land Surface Interactions
2019	**Invited TaIk in Institute of Industrial & Forage Crops,** Hellenic Agricultural Organization (HAO) DEMETER. Workshop on "Use of drones in Agriculture. Talk title: Use of Geoinformation in Agriculture, an overview"
2019	**Invited TaIk in Technological Educational Institution (TEI) of Thessaly, Department of Technologists of Agronomists, Larissa, Thessaly.** Scientific lecture on 22/01 within the course of Soil Science on "*Applications of Geospatial Technologies in Management of the Rural Environment*".
2018	**Invited TaIk in Technical University of Athens, School of Rural & Surveying Engineering, Greece,** UG programme Lecture with title "*Earth Observation in the retrievals of parameters characterizing the hydrological cycle: methods, operational products and tools for data processing & analysis*".

PUBLICATIONS: EDITED BOOKS

1) **Petropoulos, G. P., C. Chalkias, N. Myofa & C., Vradis (2022):** Elements of Cartography and Geographic Information Systems, Edition KALLIPOS, Athens, Greece, ISBN: 978-618-5667-53-5

2) **Bochtis, D., V. Moysiadis, <u>G.P. Petropoulos</u>, Y Ampatzidis & P. M. Pardalos (2022):** Information and Communication Technologies for Agriculture—Theme I: Sensors. Springer, ISBN-13: 978-3030841430

3) **<u>Petropoulos, G.P.</u> & P.K. Srivastava (2021):** *GPS and GNSS Technology in Geosciences*. Elsevier, ISBN: 9780128186176

4) **Pandey, P.C., P.K. Srivastava, H. Baltzer, B. Bhattacgarya & <u>G.P. Petropoulos</u> (2020):** *Hyperspectral Remote Sensing: Theory & Applications*. Elsevier, ISBN: 978-0-08-102894-0

5) **<u>Petropoulos, G.P.</u> & T. Islam (2017):** Remote Sensing of Hydrometeorological Hazards, ISBN: 978-1-4987-7758-2, Elsevier, ISBN: 978-01-4987-7758-2.

6) **<u>Petropoulos, G.P.</u> & P.K. Srivastava (2016):** *Sensitivity Analysis in Earth Observation,* Elsevier, [in press, to be in circulation October 2016].

7) **Srivastava P.K., <u>G.P. Petropoulos</u> & Y. Kerr (2016):** *Satellite Soil Moisture Retrieval: Techniques and Applications*, Elsevier, ISBN: 978-0-12-803388-3.

8) **<u>Petropoulos G.P.</u> (2013):** "*Remote Sensing of Energy Fluxes and Soil Moisture Content*", 506 pp, Taylor and Francis. ISBN: 978-1-4665-0578-0.

<u>PUBLICATIONS: BOOK CHAPTERS</u>*(in total: **37 (co-authored)** book chapters published so far; full list available in my personal webpage indicative examples below from the last 4 years)*

2022 (in total so far)

1) **Tselka I., Detsikas S.E., <u>Petropoulos, G.P.,</u> Demertzi, I. I. (2022),** Google Earth Engine and Machine learning classifiers for obtaining burnt area cartography: a case study from a Mediterranean setting, Chapter x,, pp: xx-xx, In: Geoinformatics for Geosciences. Advanced Geospatial Analysis using RS, GIS and Soft Computing, Publisher Elsevier, [accepted]

2) **Demertzi, I. I., Detsikas , S.E., Tselka ,I. , <u>Petropoulos ,G.P.</u> and Karymbalis , E. (2022)**: Deposition and erosion dynamics in Axios and Aliakmonas river deltas (Greece) with the use of Google Earth Engine and geospatial analysis tools, Chapter x, pp: xx-xx, In: Geoinformatics for Geosciences. Advanced Geospatial Analysis using RS, GIS and Soft Computing, Publisher Elsevier [accepted]

3) **Detsikas S.E., <u>Petropoulos, G.P.,</u> Lekka C., Faraslis I., (2022).** Combining low-cost UAV imagery and machine learning to map land use/cover properties in a Mediterranean agricultural site., Chapter x, pp: xx-xx, In: *"Remote Sensing in Precision Agriculture".* Publisher Elsevier, [accepted]

2021

4) **Lamptey, P. N. L., <u>G.P. Petropoulos</u> & P. K. Srivastava (2021):** SMOS L4 downscaled soil moisture product evaluation over a 2-year period in a Mediterranean setting. Chapter 8, pp: 82-96 In: "Advances in Remote Sensing for Natural Resource Monitoring", edited by P. C. Pandey & L. K. Sharma, by Wiley, ISBN: 978-1119615972

5) **Suman, S., M.R. North, <u>G.P. Petropoulos</u>, P. K. Srivastava, D. Hristopulos, D. S. Fuzzo, S. Lamine, & T.N. Carlson (2021):** Modelling Key Parameters Characterising Land Surface in 1D Space Using the SimSphere SVAT Model: Findings from its Use at European Ecosystems. Chapter 20, pp:409-444, in "Agricultural Water Management", published by Elsevier, USA", Edited by M. Gupta, P. K. Srivastava, G. Tsakiris & N. Quinn, 9780128123621, Elsevier

6) **Kumar, A., S. Kumar, P. L P. Saikia, P.K. Srivastava & <u>G. P. Petropoulos</u> (2021):** Introduction to GPS/GNSS technology, Chapter 1, pp: 3-20, in book entitled *GPS and GNSS Technology in Geosciences*, edited by <u>G. P. Petropoulos</u> & P. K. Srivastava, Elsevier, ISBN: 9780128186176.

2020

7) **Singh, P. P. C. Pandey, <u>G.P. Petropoulos</u>, A. Pavlidies, P.K. Srivastava, N. Koutsias, K.A. K. Deng & Y. Bao (2020):** Hyperspectral remote sensing in precision agriculture: present status, challenges and future trends, Chapter 8, pp: 121-144, in Hyperspectral Remote Sensing: Theory & Applications, (eds.) Pandey, P.C., P.K. Srivastava, B. Bhattacgarya & <u>G.P. Petropoulos</u> (2020): Elsevier, ISBN: 978-0-08-102894-0.

8) **Pandey, P. C., H. Balzter, P.K. Srivastava, <u>G.P. Petropoulos</u> & B. Bhattacharya (2020):** Future perspectives and challenges in hyperspectral remote sensing, pp: 429-440, in Hyperspectral Remote Sensing: Theory & Applications, edited by Pandey, P.C., P.K. Srivastava, B. Bhattacgarya & <u>G.P. Petropoulos</u> (2020): Elsevier, ISBN: 978-0-08-102894-0

2019

9) **Dalezios, N., <u>G.P. Petropoulos</u> & I. Faraslis (2019):** Concepts and Methodologies of Environmental

Hazards Affecting Agriculture and Agroecosystems. Chapter 1, pp: xx-xx, to appear in "Techniques for Disaster Risk Management and Mitigation". Publisher AGU-Wiley. ISBN-10: 111935918X [in press]

10) **Howells, O. G.P. Petropoulos & Z. Ioannou (2019):** Evaluating the Potential for National Coverage of Soil Moisture Monitoring using Remote Sensing. Chapter 8, pp: xx-xx, to appear in "Techniques for Disaster Risk Management and Mitigation". Publisher AGU-Wiley. ISBN-10: 111935918X [in press]

11) **Stippa, S.R., K.P. Ferentinos, G. P. Petropoulos (2019).** An Exploration of the Panther Mountain Crater Impact Using Spatial Data and GIS Spatial Correlation Analysis Techniques. Chapter 10, pp: xx-xx, in "Techniques for Disaster Risk Management and Mitigation". Publisher AGU-Wiley. ISBN-10: 111935918X [in press]

12) **Suman S., M.R. North, G.P. Petropoulos, P. K. Srivastava, J.P. McCalmont, D. S. Fuzzo, S. Lamine & T. Carlson (2018):** Modelling Key Parameters Characterising Land Surface in 1D Space Using the SimSphere SVAT Model: Findings From its Use at European Ecosystems. Chapter xx, ppxx-xx, to appear in "Agricultural Water Management: Theory and Practices", published by Elsevier, USA", Edited by M. Gupta, P. K. Srivastava, G. Tsakiris & N. Quinn, 9780128123621, Elsevier. [accepted].

2018

13) **Pandley, P.C., K. Manevski, P.K. Srivastava & G.P. Petropoulos (2018):** The Use of Hyperspectral Earth observation Data for Land Use/Cover Classification: Present Status, Challenges and Future Outlook. Chapter 8, pp: 147-173, to appear in "Hyperspectral Remote Sensing of Vegetation", published by Taylor & Francis CRC Press. 9781439845370, Edited by P. Thenkabail. [in press].

2017

14) **Dalezios N. R. & G.P. Petropoulos (2017):** Frost and Remote Sensing: An Overview of Capabilities & Potential. Chapter 6, pp: 105-129, in "Remote Sensing of Hydrometeorological Hazards, Edited by G.P. Petropoulos & T. Islam, ISBN: 978-1-4987-7758-2,Elsevier.

15) **Louka, P., I. Papanikolaou, G.P. Petropoulos & N. Stathopoulos (2017):** Temperature Fluctuation & Frost Risk Analysis on a Road Network by Coupling Remote Sensing Data, Thermal Mapping and GIS Techniques. Chapter 9, pp: 183-210, in "Remote Sensing of Hydrometeorological Hazards, Edited by G.P. Petropoulos & T. Islam, pp520, ISBN: 978-1-4987-7758-2, Elsevier.

PUBLICATIONS: ARTICLES TO INTERNATIONAL JOURNALS *((in total: 114 (co-authored) journal articles to international published so far; full list available in my personal webpage -indicative examples below from the last 4 years)*

2022: (in total so far)

1. **Singh, R., Srivastava, P.K., Petropoulos, G.P., Shukla, S., Prasad, R. (2022):** Improvement of the "Triangle Method" for Soil Moisture Retrieval Using ECOSTRESS and Sentinel-2: Results over a Heterogeneous Agricultural Field in Northern India. Water 2022, 14, 3179. https://doi.org/10.3390/w14193179 [IF: 3.530]

2. **Zhu, L., Bao, Y., Lu, Q., Fan, S.; Petropoulos, G. P.; Mao, J., Li, Y., Li, X., (2022)**, "A Method for Retrieving Thermodynamic Atmospheric Profiles Using Microwave Radiometers of Meteorological Observation Networks," in *IEEE Transactions on Geoscience and Remote Sensing*, doi:10.1109/TGRS.2022.3208939

3. **Wu, Y., Bao, J., Liu, Z., Bao Y., Petropoulos, G.P. (2022),** Investigation of the Sensitivity of Microwave Land Surface Emissivity to Soil Texture in MLEM. *Remote Sensing*. 14(13):3045. https://doi.org/10.3390/rs14133045 [IF: 5.349]

4. **Li M., Wu Y., Bao Y., Liu B., Petropoulos, G. P. (2022),** Near-Surface NO_2 Concentration Estimation by Random Forest Modeling and Sentinel-5P and Ancillary Data. *Remote Sensing*. 14(15):3612. https://doi.org/10.3390/rs14153612 [IF: 8.125]

5. **Moradizadeh, M., Srivastava,P. K., Petropoulos, G. P. (2022):** Synergistic evaluation of passive microwave and optical/IR data for modelling vegetation transmissivity towards improved soil moisture retrieval. *Sensors MDPI*, 22, 1354-66, https://doi.org/10.3390/s22041354 [IF: 3.576]

6. **Mehmood, K. S. Mushtag, Y. Bao, S. Sadia-Bibi, M. Yaseen, M. A. Khan, M. M. Abrar, Z. Ulhassan, S. Fahad & Petropoulos, G. P. (2022):** The impact of COVID-19 pandemic on air pollution: a global research framework, challenges and future perspectives. *Environmental Science and Pollution*, https://doi.org/10.1007/s11356-022-19484-5in press, [IF: 4.223]

7. **Popa ,A.M., Onose ,D.A., Sandric ,I.C., Dosiadis ,E.A., <u>Petropoulos ,G.P.,</u> Gavrilidis ,A.A., Faka ,A. (2022)** Using GEOBIA and Vegetation Indices to Assess Small Urban Green Areas in Two Climatic Regions. *Remote Sensing*., 14(19):4888. https://doi.org/10.3390/rs14194888 [IF: 5.349]

8. **Sandric I., R. Irmia, <u>G. P. Petropoulos</u>, A. Anand, P.K. Srivastava, A. Pesolanu, I. Faraslis, D. Stateras & D. Kalivas (2022):** Tree's detection and heath assessment from ultra-high resolution UAV imagery and deep learning. *Geocarto International*, https://www.tandfonline.com/doi/full/10.1080/10106049.2022.2036824, in press, [IF: 4.889]

9. **Markogianni, V., D. Kalivas, <u>G.P. Petropoulos</u> & E. Dimitriou (2020):** Modelling of Greek lakes water quality using Earth Observation in the framework of the water framework directive (WFD). *Remote Sensing, MDPI*, 14, 739-770, https://www.mdpi.com/2072-4292/14/3/739 [IF: 4.848]

2021:(in total were published 19 journal articles)

10. **Carlson, T.N, A. A. Person, T.J. Canish & <u>G. P. Petropoulos</u> (2021):** A Downloable Soil vegetation Atmosphere Transfer (SVAT) model for Teaching and Research, *Bulletin of the American Meteorological Society*, in press, https://doi.org/10.1175/BAMS-D-20-0296.1 [IF: 8.766]

11. **Gupta, A., P. K. Srivastava, G. P. Petropoulos & P. Singh (2021):** Statistical Unfolding Approach to Understand Influencing Factors for Taxol Content Variation in High Altitude Himalayan Region. *Forests, MDPI*, https://www.mdpi.com/1999-4907/12/12/1726 [IF: 2.634]

12. **Dorigo, W., Himmelbauer et al. (2021):** The international Soil Moisture network: serving Earth system science for over a decade. *Hydrology Earth System Science*, 25, 5749-5804, https://hess.copernicus.org/articles/25/5749/2021, [IF: 5.748]

13. **Howells, D.O., G. P. Petropoulos, P. K. Srivastava & D. Triantakonstantis (2021):** Exploring the potential of SCAT-SAR SWI for soil moisture retrievals at selected COSMOS-UK sites. Intern. Journal of Remote Sensing, 42 (23), 9146-9160, https://doi.org/10.1080/01431161.2021.1988185 [IF: 2.899]

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PUBLICATIONS: CONTRIBUTIONS TO INTERNATIONAL CONFERENCES *(in total: +120 contributions. Below contributions during 2020 & 2021 only), full list available in my web page)*

2021:

1) **Piles, M. M. P. Hernandez, M. Vall-llossera, G. Portal, I. Sandric, G.P. Petropoulos, and D. Hristopulos (2021):** Synergistic use of SMOS and Sentinel-3 for retrieving spatiotemporally estimates of surface soil moisture and evaporative fraction. European Geosciences Union (vEGU), April 19-30th, 2021, [online conference]

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4) **Lekka, C., G. P. Petropoulos, D. Triantakonstantis, S. Detsikas, and C. Chalkias (2021):** Geoinformation in support of sustainable soils' management to strengthen resilience under the pressure of climate change, European Geosciences Union (vEGU), April 19-30th, 2021, [online conference]

5) **Vidalis-Kelagiannis, M., K. Kalogeropoulos, G. Grigorakis, N. Stathopoulos, G.P. Petropoulos, C. Chalkias & A. Tsatsaris (2021):** From planning to application of UAVs in archaeology: Empirical evidence from Cephalonia isle, Greece. Drones & ROVs 2021, February 25-26th, 2020, [online conference], London, UK

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