

Thomas M. Koutsos

Short Curriculum Vitae

Professional Roles

- Academic Teaching Staff
- Academic Reviewer, Editor
- Geoinformatics Specialist
- Spatial Data Analyst
- GIS Specialist
- Environmental Impact Specialist
- SQL Developer

Performance Indicators

- **Research Activity:**
  - **15** Research Projects AUTh.
  - **64** Publications
    A: **26** articles in Journals,
    B: **24** Conferences,
    C: **6** chapters in books,
    D: **6** Technical Reports,
    E: **2** Thesis
  - **711** citations
  - **10** *h*-index, **11** *i10*-index
- **Quality Indicators:**
  - **94.2% Q, MODIP** (2024)
  - **95.0% Q, MODIP** (2025)
  - **R^G stats** *(04/11/2026)*: | Reads: **35,247** | Recommendations: **49** | Research Interest: **631.2** |
- **Peer Reviews:**
  - **Reviewer Service**: Active reviewer for more than **40** international Journals.
  - **Review Record**: Completed over **250** Peer Reviews of scientific articles to date.

Languages

- **English** (C2)
- **French** (B1)
- **German** (B1)
- **Chinese** (Mandarin, HSK2)

Personal Info

Address: Laboratory of Remote Sensing, Spectroscopy and GIS, Department of Hydraulics, Soil science and Agricultural engineering, Faculty of Agriculture, Forestry and Natural Environment, Aristotle University of Thessaloniki (AUTH), 54124, Thessaloniki, Hellas.

Contact: 231 0998630, tkoutsos@agro.auth.gr

Interests: Geoinformatics in agriculture, Spatial Analysis, Geographic Information Systems (GIS), Geostatistics, Machine Learning, environmental protection, management of environmental impacts and waste, applications of spatial statistical methods, and visualization of geospatial data.

Networks: ORCID, ResearchGate, Google Scholar

Degrees and Certifications

Academic Education

2008 **Doctorate (PhD)**, Department of Geology, School of Sciences, Aristotle University of Thessaloniki (AUTh). The seven-member examination committee included faculty members from the Department of Agriculture (AUTh) and the Department of Geology (AUTh).

1998 **Master of Science (MSc)** in "Applied and Environmental Geology", Department of Geology, School of Sciences, Aristotle University of Thessaloniki (AUTh).

1995 **Bachelor's Degree (BSc)** in Geology, Department of Geology, School of Sciences, Aristotle University of Thessaloniki (AUTh). Recipient of an entrance scholarship (specializations: Hydrogeology and Geoinformatics).

IT Engineer Certifications *(acquired through formal examination)*

1998 Microsoft Certified Systems Engineer M.C.S.E. + INTERNET

1998 Microsoft Certified Systems Engineer M.C.S.E.

1998 Microsoft Certified Professional M.C.P.

Professional Experience

2014 – today **Laboratory Teaching Staff (E.DI.P.)**, Laboratory of "Remote Sensing, Spectroscopy and Geographic Information Systems", Division of Hydraulics, Soil Science and Agricultural Engineering, Aristotle University of Thessaloniki (AUTh). Subject Area: "Geoinformatics in Agriculture". Formally integrated into the Department's Registry of Subject Areas (Government Gazette 5919/11-10-2023, Vol. B).

2002 – 2014: **Geotechnical Scientist (PE)**, Aristotle University of Thessaloniki (AUTh). Department of Agriculture, Field Crops and Ecology.

2003 – 2004: **Specialist Trainer in Information Technology (IT),** Directorate of Education of Thessaloniki A'. Registry Code: 517/03Y (IT Educators Registry of the Ministry of Education, "Information Society" program).

1994 – 2026: **Participation in Research Projects, Aristotle University of Thessaloniki (AUTh).** Active involvement in 13 research programs managed by the Research Committee (ELKE AUTh).

1994 – 2002: **Specialist Scientific Consultant, GeoInfo Ltd.** Expert consultant in Geoinformatics, Spatial Analysis, Geographic Information Systems (GIS), and Environmental Impact Assessments (EIA).

Participation in Funded Research Projects

2026 **PR15.** *Carbon farming for soil quality improvement+ (C4SQ+).* Department of Agriculture, Aristotle University of Thessaloniki (AUTh). Funded by NSRF 2021-2027, European Territorial Cooperation Programmes, INTERREG EURO-MED 2021-2027 (Project: 15491).

2026 **PR14.** *Advanced Geomatics and Remote Sensing for Precision Agriculture in Higher Education (AGROPATH).* Analysis and evaluation of existing curricula and courses related to remote sensing and geoinformatics, AGROPATH Program, School of Agriculture, Aristotle University of Thessaloniki (AUTh), (Project: 14116).

2025 **PR13.** *Site-specific fertilization for reducing the carbon footprint in viticulture (proof of concept).* Organization and supervision of experimental trials for data collection and analysis, aimed at investigating fertilization practices within the framework of Precision Agriculture to reduce carbon emissions (Project: 12765).

2025 **PR12.** *Atmospheric CO_2 capture and storage for soil quality improvement (C4SQ).* Department of Agriculture, Aristotle University of Thessaloniki (AUTh). Funded by NSRF 2021-2027, European Territorial Cooperation Programmes, INTERREG EURO-MED 2021-2027 (Project: 75089).

2024 **PR11.** *Atmospheric CO_2 sequestration and storage for improving soil quality*. Department of Agriculture, Aristotle University of Thessaloniki (AUTh). Funded by NSRF 2021-2027, European Territorial Cooperation Programmes, INTERREG EURO-MED 2021-2027 (Project: 75089).

2023 **PR10.** *Highlighting the wine identity of Drama Prefecture through a holistic characterization of the physical and microbial environment*. Department of Agriculture, Aristotle University of Thessaloniki (AUTh) (Project: **72630**).

2022 **PR09.** *Sino-European Soil Observatory (SECO) for smart land management*. Department of Agriculture, Aristotle University of Thessaloniki (AUTh) (Project: 98648).

2008 **PR08.** *Psychometric battery of cognitive competence for children and adolescents*. Department of Psychology, AUTh. Funded by the 3rd Community Support Framework (CSF), Operational Programme for Education and Initial Vocational Training (EPEAEK II), MIS: 114973 (Project: 82195).

2005 **PR07.** *Preparation and implementation of in-house training and specialization for preschool education teachers.* Department of Early Childhood Education, AUTh. Funded by the 3rd Community Support Framework (CSF), EPEAEK II, MIS: 86058 - Special Education (Project: 21432).

2001 **PR06.** *Study of water-saving interventions in the geographic area of Salakos – Emponas – Kritinia, Rhodes.* (Art. 7 par. 4AB, KA/679/22.8.96 - Gov. Gazette 826, Issue B). Department of Geology, AUTh (Project: 9748).

1999 **PR05.** *Research on the hydrological, hydrogeological, and hydrochemical conditions of the Kassandreia basin, Chalkidiki, for rational water resource management and environmental protection (against pollution, contamination, salinization)*. Department of Geology, AUTh. Funded by the General Secretariat for Research and Technology (GSRT), 94 SYN 82, EPET II (Project: 9394).

1997 **PR04.** *Hydrogeological study of Mount Paiko and the karstic system of the Arabissos springs.* Department of Geology, AUTh (Project: 4607).

1996 **PR03.** *Scientific investigation of the potential for establishing a Natural History Museum in the Municipality of Axioupoli, Kilkis.* Department of Geology, AUTh (Project: 8377).

1996 **PR02.** *Pilot research for dam design and optimal water resource management in the Akropotamos area, Kavala Prefecture.* Department of Geology, Aristotle University of Thessaloniki (AUTh), (Project: 2672).

1990 **PR01.** *Research on the rational utilization of water potential in the Akropotamos - Pieria Valley area and feasibility study for dam construction on the Marmaras torrent.* Department of Geology, Aristotle University of Thessaloniki (AUTh), Research Project, (Project: 2672).

Peer Review Services *(Reviewer and Guest Editor)*

2026 **Reviewer** in more than **40** International Scientific Journals.

2026 More than **250 reviews** in total.

2026 **Guest Editor** in **Agronomy Journal** (MDPI) for the Special Issue titled ***"Data-Driven Crop Monitoring for Sustainable Agronomic Systems: Integrating AI and Remote Sensing"*** (ISSN 2073-4395).

https://www.mdpi.com/journal/agronomy/special_issues/DMHW53X63J

2026 **Guest Editor** in **Agronomy Journal** (MDPI) for the Special Issue titled "*Strategies and Methods for Analyzing Multivariate-Multidimensional Data from Agricultural Research*" (ISSN 2073-4395).

https://www.mdpi.com/journal/agronomy/special_issues/IK6OLXPO5F

Teaching Experience

Undergraduate Courses

- N273 Remote Sensing and Geographic Information Systems (GIS)
- N216Y Mapping and Evaluation of Agricultural Soils and Lands

Postgraduate Courses

- RM116 Geoinformatics
- RM106 Research Methodology for master's Thesis
- RM122 Training in Laboratory Analytical Instruments and Devices
- NAKA816E Spatial Analysis and Geoinformatics
- NAKA820E: Systematic Review and Meta-analysis
- NAKA828E Machine Learning
- NAKA807E: Experimental Design and Data Analysis using Statistical Packages
- NAKA821: Special Topics – Seminars
- RM123: Master's Thesis
- ET206: Mapping through Photo-interpretation and Geographic Information Systems (GIS)

Invited Lectures

2026 Invited Lecture: "**Remote Sensing and AI Competencies for Precision Agriculture**", **Koutsos, T. M.** & Alexandridis, T. K., Joint Workshop "Modern Obligatory Skills and Knowledge in Geomatics and Precision Agriculture" (Event E4.1), AGROPATH Project (Erasmus+ CBHE, Grant Agreement: 101238034), hosted by the Faculty of Land Management, National University of Life and Environmental Sciences of Ukraine (NUBIP), Kyiv, Ukraine (Online, October 22, 2026), invited by Prof. Taras Ievsiukov, Head of the Department of Geodesy and Cartography at NUBiP.

2024 Invited Lecture: "**Hydrology and Environmental Protection**", **Koutsos, T. M.,** School of Architecture, Faculty of Engineering, Aristotle University of Thessaloniki (AUTH), Thessaloniki, Greece (May 25, 2024).

2023 Invited Lecture: "**Flood Events and Environmental Impact Assessment**", **Koutsos, T. M.**, Conference "Landscape Architecture: Education, Research and Practice", Joint Postgraduate Program in Landscape Architecture (AUTH), Faculty of Engineering, Aristotle University of Thessaloniki, Thessaloniki, Greece (November 2–4, 2023).

Scholarships & Awards

2026 **Review Confirmation Certificate,** presented to **Thomas Koutsos** for reviewing has reviewed **120** papers for the following MDPI journals in the period 2020–2026: *Plants, Agriculture, Agronomy, Applied Sciences, Environments, Sustainability, Information, ISPRS International Journal of Geo-Information, Geographies, AgriEngineering, Horticulturae, Algorithms, Data, Machine Learning and Knowledge, Extraction, Remote Sensing, Land, Sensors, Applied System Innovation Systems, Electronics, Journal of Marine Science and Engineering, Water, Coatings, International, Journal of Environmental Research and Public Health,* Stefan Tochev, Chief Executive Officer (August 2026).

2025 On behalf of the Editorial Office of **Agronomy journal**, Ms. Wanda Wang, MDPI Section Managing Editor, informed me (as being the corresponding author) that our paper "Pest Management Pathways: Control Strategies for the Olive Fruit Fly (*Bactrocera oleae*)—A Systematic Map" (http://www.mdpi.com/2073-4395/14/12/2929) **has been selected as an "Editor's Choice Article" for the year 2024** (June 2025).

2024 **Review Confirmation Certificate,** presented to **Thomas Koutsos** for reviewing has reviewed **74** papers for the following MDPI journals in the period 2020–2024: *Machine Learning and Knowledge Extraction, Sustainability, Agriculture, Plants, Applied Sciences, Remote Sensing, Land, Agronomy, Sensors, Applied System Innovation, Systems, Electronics, Journal of Marine Science and Engineering, Water, Coatings, Horticulturae, International Journal of Environmental Research and Public Health, AgriEngineering*, Stefan Tochev, Chief Executive Officer (October 2024).

2018 **Certificate of Appreciation in Reviewing**, presented to Thomas Koutsos for his contribution to "*European Journal of Educational Research*" as reviewer at Vol8.Iss.1, EU-JER (ISSN: 2165-8714), The Editor-in-Chief: Ahmet Savas, Ph.D. (November 2018).

2017 **Certificate of Outstanding Contribution in Reviewing,** awarded November 2017 to Thomas Koutsos in recognition of the contributions made to the quality of the Journal of *Science of the Total Environment*, Editor in Chief: Damià Barceló, Elsevier, Amsterdam, The Netherlands (December 2017).

2010 Feature in the "**Science for Environment Policy**" **News Alert Service** of the **European Commission's DG Environment** (09/10/2010). This recognition highlighted the research findings regarding paper A1 (Koutsos et al., 2010). Official Link: http://ec.europa.eu/environment/integration/research/newsalert/pdf/208na2_en.pdf.

1990 **Entrance Scholarship,** awarded (for high performance) in the National Entrance Examinations for the Department of Geology, School of Sciences, Aristotle University of Thessaloniki (AUTh).

Specialized Training in Information Technology & Geoinformatics

IT Engineer Certifications

1998 **Microsoft Certified Systems Engineer** - M.C.S.E. (1997-1998), *Certification of Microsoft for Systems Engineers.*

1998 **Microsoft Certified Systems Engineer + INTERNET** - M.C.S.E. (1997-1998), *Microsoft Certification for Systems Engineer with specialization in internet.*

1998 **Microsoft Certified Professional** - M.C.P. (1997-1998), *Certified Application Professional for Microsoft products and services.*

Professional IT Engineering Training *(with exams)*

1998 *Microsoft*® **"Implementing and Supporting Microsoft IIS 3.0 and Index Server 1.1".**

1998 *Microsoft*® **"Secure Web Access Using Microsoft Proxy Server 2.0".**

1998 *Microsoft*® **"Microsoft Exchange Server 4.0".**

1998 *Microsoft*® **"Internetworking with MS TCP/IP on MS Windows NT 4.0".**

1998 *Microsoft*® **"Implementing and Supporting NT 4.0 Workstation".**

1998 *Microsoft*® **"Implementing and Supporting NT Server 4.0 in the Enterprise".**

1998 *Microsoft*® **"Implementing and Supporting NT Server 4.0".**

1998 *Microsoft*® **"Networking Essentials".**

IT Training in Programming Languages

2008 Microsoft® "2279 – **Implementing a Microsoft SQL Server 2005 DB".**

2008 Microsoft® "2280 – **Maintaining a Microsoft SQL Server 2005 DB".**

Advanced Software Proficiency (User seminars in MICROSOFT products)

2010 Microsoft® **"50438A - Microsoft® Excel 2007 - Level III (Advanced User Level)"**, INFOLAB, Θεσσαλονίκη.

Software Development & Enterprise Systems

2017 Δημιουργία **EBS Dashboards** (ENTERSOFT).

2017 Webinar για δημιουργία **EBS automations** (ENTERSOFT).

Geoinformatics Training *(Seminars – Webinars – Summits)*

2026 **ESRI** Geospatial AI in Education: Applying Pre-Trained Models and Embeddings (Nov 5, 2026, 10:00 AM America/Los_Angeles).

2026 **ESRI** Spatial Data Science: The New Frontier in Analytics MOOC (Sep 23 - Nov 4, 2026, **6 weeks**), California, USA on September 23 1:00 PM Eastern European Standard Time.

2026 **ESRI** Going Places with Spatial Analysis MOOC (Jan 21 - Mar 4, 2026, **6 weeks**), California, USA on January 21 1:00 PM Eastern European Standard Time.

2025 **ESRI** Imagery & Remote Sensing Educators Summit Streaming from Redlands, California, USA on May 15, at 8:00 a.m. (PT).

2025 **ESRI** MOOC: GIS for Climate Action (19 Feb – 8 Apr, 6 weeks)

2024 **ESRI** Integrating R and ArcGIS for Spatial Data Science Using R-ArcGIS Bridge | Higher Education Webinar (October 10, 2024, 11:00 a.m.–12:00 p.m. PDT)

2024 **ESRI** webinar: Teaching Introductory GIS with ArcGIS Online: Faculty Panel (Wed, Jun 12, 2024, 10:00 AM PM)

2024 **ESRI** webinar: Imagery and Remote Sensing Educators Summit (Tue, May 22, 2024, 08:00 AM - 13:30 PM)

2024 **ESRI** webinar: Spatial Statistics with Machine Learning and AI (Tue, May 14, 2024, 11:00 AM - 12:00 PM CEST).

2019 **ΚΗΔ**-603 Χωρική Ανάλυση με χρήση geoprocessing Spatial & 3D εργαλείων (24 & 25 Jan, 10 ώρες).

2018 **ΚΗΔ**-604 Εισαγωγή στην cloud πλατφόρμα ArcGIS Online (6 & 7 Dec, 10 ώρες).

2018 **ΚΗΔ**-602 Τυπικές ροές εργασίας στο ArcGIS Desktop (22 & 23 Nov, 4 Nov, 15 ώρες).

2018 **ΚΗΔ**-601 Εισαγωγή στην πλατφόρμα ArcGIS (15 & 21 Nov, 5 ώρες).

Seminars in Artificial Intelligence (AI)

2026 **KEDIVIM AUTH** Academic Integrity in the Era of Artificial Intelligence (AI): New Turnitin Features and AI Challenges. Center for Education and Lifelong Learning (KEDIVIM), Aristotle University of Thessaloniki (AUTh). Delivered via ZOOM (March 10).

2026 **INFOLAB** Build a foundation to build AI agents & extend Microsoft 365 Copilot | G1, Wed, Feb 11, 2026, 12:00 PM - 2:00 PM (UTC+02:00) Athens, Bucharest.

Research & Innovation Seminars

2021 **Harmonious Workshop: Remote Sensing of the Environment using Unmanned Aerial Systems (UAS)**. Participation in the workshop organized within the framework of the COST Action "Harmonious" (*https://www.costharmonious.eu/*), held at the Research Dissemination Center (KEDEA), Aristotle University of Thessaloniki (AUTh), Greece (September 1–3). Online: *https://www.auth.gr/en/node/29477*.

2018 **Clarivate Analytics: Web of Science, EndNote Online & InCites Journal Highly Cited Data**. Training seminar focused on the optimized utilization of the Web of Science™ platform and Highly Cited Data for advanced citation analysis, AUTh Central Library (May 24).

2017 **7th Research & Innovation Exploitation Workshop.** Organized by the AUTh Technology Transfer Office, Research Dissemination Center (KEDEA), AUTh (November 7–8), *https://www.auth.gr/news/events/24610*.

2016 **6th Research & Innovation Exploitation Workshop.** Organized by the AUTh Technology Transfer Office, Research Dissemination Center (KEDEA), AUTh (November 8–9), *https://www.auth.gr/news/events/21429*.

Publications

A. Publications in International Peer-Reviewed Journals (articles)

2026 **A26**. **Koutsos, T. M.**, Alexandridis, T. K., Kantzou., O-U, Papadopoulos I., Golia, E. E. Spatiotemporal Assessment of Heavy Metal Accumulation in Urban Soils: A Four-Year Monitoring Study in Thessaloniki, Greece (2021–2024). *Land*, 15(8), 1509. Land Journal I.F. (2022-23): **3.900**.

DOI: *https://doi.org/10.3390/land15081509*.

2026 **A25.** Balampekou, E. I., **Koutsos, T. M.**, Koveos, D. S., & Kouloussis, N. A. (2026). Resilience to Protein Limitation and Reproductive Costs in Bactrocera oleae: Implications of Sex-Specific Longevity Determinants. Agronomy 2026, 16(8), 787. Agronomy Journal with I.F. (2024): **3.400**.

DOI: *https://doi.org/10.3390/agronomy16080787*.

2026 **A24.** Balampekou, E. I., **Koutsos, T. M.**, Koveos, D. S., & Kouloussis, N. A. (2026). Survival analysis of Bactrocera oleae starvation resistance during senescence: The interactive influence of diet, mating status, and sex. Special Issue on "Biology and Management of Tephritid Fruit Flies". *Insects (MDPI)* 2026, 17(3), 296 *with* I.F. (2025): **2.900**.

DOI: *https://doi.org/10.3390/insects17030296*.

2025 **A23. Koutsos, T. M.**, Bilas, G., Menexes, G.C., Taskos, D., & Alexandridis, T. K. (2025). A Multivariate Spatial Framework for Delineating Viticulture Management Zones: A Proof-of-Concept Study. Special Issue on "*Strategies and Methods for Analyzing Multivariate-Multidimensional Data Resulted from Agricultural Research*". Agronomy 2025, 15(12), 2745. *Agronomy Journal with* I.F. (2024): **3.400**.

DOI: *https://doi.org/10.3390/agronomy15122745*.

2024 **A22.** Balampekou, E. I., **Koutsos, T. M.**, Menexes, G.C., Koveos, D.S., & Kouloussis, N. A. (2024). Pest Management Pathways: Control Strategies for the Olive Fruit Fly (Bactrocera oleae) – A Systematic Map. Accepted for publication to the Special Issue on "*Integrated Water, Nutrient, and Pesticide Management of Fruit Crops*". *Agronomy Journal with* I.F. (2024): **3.400**.

DOI: *https://doi.org/10.3390/agronomy14122929*.

2024 **A21. Koutsos, T. M.**, Papachristaki, A., Ovakoglou, G., Cherif, I., & Alexandridis, T. K. (2024). Surface water mapping in rice paddies and wetlands using SENTINEL-1 data, Random Forests, and texture analysis. *Journal of Remote Sensing (JARS), 19(2),* I.F. (2023): **1.700**.

DOI: *https://doi.org/10.1117/1.JRS.19.021005* . Also available in Peeref*: https://www.peeref.com/works/86762006*.

2024 **A20.** Balampekou, E. I., Koveos, D. S., **Koutsos, T. M.**, Menexes, G. C., & Kouloussis, N. A. (2024). Factors affecting Water Deprivation Resistance in Bactrocera oleae (Olive Fruit Fly). *Applied Biosciences. Applied Biosciences is a companion journal of Applied Sciences with* I.F. (2022-23): **2.500**.

DOI: *https://doi.org/10.3390/applbiosci3030021.*

2024 **A19.** Balampekou, E. I., Koveos, D. S., **Koutsos, T. M.**, Menexes, G. C., Kapranas, A., Carey, J. R., & Kouloussis, N. A. (2024). Locomotor Activity of Adult Olive Fruit Flies recorded under Conditions of Food or Water Deprivation. Agronomy 2024, 14(5), 1051, *Section: "Pest and Disease Management",* I.F. (2023): **3.700**.

DOI: *https://doi.org/10.3390/agronomy14051051*.

2024 **A18. Κουτσός Θ.**, Μάρκος Α., & Μενεξές, Γ. 2024. Στρατηγικές νοερής επίλυσης γραφικών έργων με συναρτήσεις, μαθητών Γ΄ Λυκείου: Στρατηγική ανάλυσης περιεχομένου συνεντεύξεων με μεθόδους της Ανάλυσης Δεδομένων. *Data Analysis Bulletin* (eJournal) 20(1).

https://ejournals.epublishing.ekt.gr/index.php/dab/article/view/33715

2024 **A17. Koutsos, T. M.**, & Menexes, G. C. (2024). Comparing spatial sampling designs for estimating effectively maize crop traits in experimental plots. *Agronomy 14(2), 280*. Special Issue: *"Design and Statistical Analysis in Agricultural, Biological and Environmental Sciences",* I.F. (2023): **3.700**.

DOI: *https://doi.org/10.3390/agronomy14020280.*

2024 **A16.** Karapetsas, N., Gobin, A., Bilas, G., **Koutsos, T. M.**, Pavlidis, V., Katragkou, E., & Alexandridis, T. K. (2023). Analysis of land suitability for maize production under climate change and its potential mitigation by crop residue management. Land, 13(1), 63, I.F. (2022-23): **3.900**.

DOI: *https://doi.org/10.3390/land13010063.*

2024 **A14. Koutsos, T. M.**, & Menexes, G.C. (2024). The role of Spatial Autocorrelation on spatially correlated data for Hierarchical Cluster Analysis. Scientific Publication of the Greek Data Analysis Society (ISSN 1109-4192): *Data Analysis Bulletin 20(1), 109 – 119),* publisher: National Documentation Centre (ekt.gr).

Online page: *https://ejournals.epublishing.ekt.gr/index.php/dab/article/view/33519*.

DOI: *https://ejournals.epublishing.ekt.gr/index.php/dab/article/view/33519/28158.*

2023 **A15. Koutsos, T. M.**, Menexes, G.C., Elefterohorinos, I.G., & Alexandridis, T.K. (2023). Using Block Kriging as a spatial smooth interpolator to address missing values and reduce variance in maize field yield data. *Agronomy* 13, 1685. *Special issue: "Design and Statistical Analysis in Agricultural, Biological and Environmental Sciences",* I.F. (2023): **3.949**.

DOI: http://dx.doi.org/10.3390/agronomy13071685.

2022 **A13.** Bilas, G., Karapetsas, N., Gobin, A., Mesdanitis, K., Toth, G., Herman, T., Wang, Y., Luo, L., **Koutsos, T. M.,** Moshou, D., & Alexandridis, T.K. (2022). Land Suitability Analysis as a tool for evaluating Soil Improving Cropping Systems. *Land 11(12),* I.F. (2021): **3.905**; 5-Y I.F.: 4.048 (2021).

DOI: *https://doi.org/10.3390/land11122200*.

2022 **A12. Koutsos, T. M.**, Menexes, G.C., & Elefterohorinos, I.G. (2022). The use of spatial interpolation to improve the quality of corn silage data in case of presence of extreme or missing values. *ISPRS – International Journal of Geo-Information* 11(3), *153***.**

DOI: *https://doi.org/10.3390/ijgi11030153*, I.F. (2022): **3.099.**

2021 **A11. Koutsos, T. M.**, Menexes, G.C., & Mamolos A.P. (2021). The use of crop yield autocorrelation data as a sustainable approach to adjust agronomic inputs. Special Issue: *"Sustainable Soil and Field Management Practices in Agricultural Ecosystems under Climatic Challenges", Sustainability* 13(4), 2362.

DOI: *https://doi.org/10.3390/su13042362*, I.F. (2019-20): **3.889**.

2021 **A10. Koutsos, T. M.**, Menexes, G.C., Balampekou, E.I., & Oikonomou A. (2021). University students' perception of the factors affecting preschool and primary students' recycling behaviour as a tool to improve environmental education in university curriculum, *Psyecology* 12(2), *p.125-176. Bilingual Journal of Environmental Psychology*, I.F. (2019 – 20): **0.860.**

DOI: *https://doi.org/10.1080/21711976.2021.1888607*.

2020 **A9.** Menexes, G., & **Koutsos, T. M.** (2020). Correspondence Analysis and Kriging: Projection of quantitative information on the factorial maps**.** This paper was presented at IFCS2019 (16th International Federation of Societies). The idea was found interesting, and it was submitted as a research article written in LaTex code with 51% new material added for publication in the Springer Series "Studies in Classification, Data Analysis, and Knowledge Organization" released in 2020. The submitted manuscript has undergone a regular reviewing process and the evaluation of the contribution of this paper was considered as being very high. Published in book *Springer Series "Studies in Classification, Data Analysis, and Knowledge Organization"*, 2020 (Electronic ISSN: 2198-3321, Print ISSN: 1431-8814).

Online: *https://www.springer.com/series/1564*

2019 **A8. Koutsos, T. M.**, Menexes, G. C., & Dordas C. A. (2019). An efficient framework for conducting systematic literature reviews in agricultural sciences. *Journal of Science of the Total Environment Volume 682, 106-117.*

DOI: *https://doi.org/10.1016/j.scitotenv.2019.04.354*, I.F. (2021 – 22): **10.754.**

2018 **A7. Koutsos, T. M.,** & Menexes, G. C. (2018). Economic, agronomic, and environmental benefits from the adoption of precision agriculture technologies. A systematic review. This is an updated and extended version of the paper presented at the International Workshop "Information Technology, Sustainable Development, Scientific Network & Nature Protection", 8-11 October 2017, Edessa City, Greece. This work has been selected from the Workshop Committee to be published in the special issue entitled: "Agro-Environment, Informatics and Sustainable Development". *International Journal of Agricultural and Environmental Information Systems (IJAEIS) 10(1) of IGI Global*. Copyright: © 2019 |Pages: 40-56.

DOI: *https://doi.org/10.4018/IJAEIS.2019010103*, I.F.(2019 – 20): **0.950**.

2018 **A6. Koutsos, T. M.**, Chatzistathis, T., & Balampekou, E.I. (2018). A new framework proposal, towards a common EU agricultural policy, with the best sustainable practices for the re-use of olive mill wastewater, *Journal of Science of the Total Environment* 622-623C, 942-953.

DOI: *https://doi.org/10.1016/j.scitotenv.2017.12.073*, I.F. (2021 – 22): **10.754.**

2017 **A5.** Chatzistathis T., & **Koutsos, T. M.** (2017). Olive mill wastewater as a source of organic matter, water, and nutrients for restoration of degraded soils and for crops managed with sustainable systems, *Journal of Agricultural Water Management* 190, 55–64.

DOI: https://doi.org/10.1016/j.agwat.2017.05.008, I.F.(2021 – 22): **6.611.**

2017 **A4.** Balampekou, E. I., **Koutsos, T. M.**, Menexes, G., C., Oikonomou, A., & Karagiannis V., (2017). Selection of environmental education teaching techniques' categories for raising recycling awareness in Preschool and Primary Education, *εκπ@ιδευτικός κύκλος* 5 (1) (ISSN: 2241-4576). Published in Greek. Research Paper Indexed by Citefactor Index -- 20.

2016 **A3. Koutsos, T. M.,** Dimopoulos, G.C., & Mamolos, A.P. (2016). A novel method for assessing and mapping multiple impacts due to the technical construction project, *Landscape and Ecological Engineering (LAEE)* 12(1).

DOI: *http://dx.doi.org/10.1007/s11355-015-0274-2*, I.F. (2021 – 22): **2.147.**

2012 **A2**. Litskas, V. D., Karaolis, C. S., Menexes, G. C., Mamolos, A. P., **Koutsos, T. M.**, & Kalburtji, K. L. (2012). Variation of energy flow and greenhouse gas emissions in vineyards located in Natura 2000 sites, *Ecological Indicators* 27(1-7).

DOI: *http://dx.doi.org/10.1016/j.ecolind.2012.11.016*, I.F. (2021 – 22): **6.263.**

2010 **A1. Koutsos, T. M.,** Dimopoulos, G. C., & Mamolos, A.P. (2010). Spatial evaluation model for assessing and mapping impacts on threatened species in regions adjacent to Natura 2000 sites due to dam construction using Geographical Information Systems (G.I.S.). *Ecological Engineering,* 36, 1017–1027.

DOI: *http://dx.doi.org/10.1016/j.ecoleng.2010.04.011*, I.F. (2021 – 22): **4.379**.

B. Publications in Scientific Conferences & Working Groups

2026 **B24. Koutsos T. M.**, Alexandridis T., Bilas G. 2026. Multivariate spatial analysis and management zone delineation in precision viticulture. 6th Conference on Information Systems and Spatial Analysis in Agriculture and the Environment, Conference Amphitheatre, Agricultural University of Athens, 19-20-21 May 2026. Website: *https://giscongress.aua.gr*.

2026 **B23.** Balampekou, E. I., Koveos, D. S., **Koutsos, T. M.**, Menexes, G. C. & Kouloussis, N. A. 2026. Water deprivation resistance influenced by age, sex, and diet in Bactrocera oleae (Poster), 12th International Symposium on Fruit Flies of Economic Importance, 10 – 15 May 2026, in Agadir, Morocco. Website: *https://12isffei-morocco.com/*.

2026 **B22.** Balampekou, E. I., Koveos, D. S., **Koutsos, T. M.**, Menexes, G. C., Kapranas, A., Carey, J. R., & Kouloussis, N. A. 2026. Food or water deprivation induces distinct changes in the Locomotor Activity of Bactrocera oleae (Poster), 12th International Symposium on Fruit Flies of Economic Importance, 10 – 15 May 2026, in Agadir, Morocco. Site: *https://12isffei-morocco.com/*.

2025 **B21.** Bilas, G. & **Koutsos, T. M.** 2025. Transferrable carbon farming training materials. Conference "Carbon Farming: Benefits in the Mediterranean region", Thessaloniki, Greece, 10 December 2025. Website: *https://carbon4soilquality.interreg-euro-med.eu/carbon-4-soil-quality-final-conference/.*

2025 **B20.** Μπαλαμπέκου Ι. Ε., Κωβαίος Σ. Δ., **Κουτσός Μ. Θ.**, Μενεξές, Χ. Γ., Καπράνας, Α., Carey, R., J. και Κουλούσης Α., Ν. (2025). Επίδραση της στέρησης τροφής ή νερού στην κινητική δραστηριότητα του δάκου της ελιάς. Εντομολογική Εταιρεία Ελλάδος, *20ο Πανελλήνιο Εντομολογικό Συνέδριο*, Μυτιλήνη, 20 - 24 Οκτωβρίου 2025.

2025 **B19.** Karapetsas, N., Bilas, G., Righi, A., Longo, M., Morari, F., **Koutsos, T. K.**, & Alexandridis, T. K. (2025). Modeling perspectives on soil carbon sequestration in Mediterranean regions: a comparison of process-based and statistical models in the croplands of Northern Greece. Poster, Tuesday, 29 Apr, 14:00–15:45 (CEST), Display time Tuesday, 29 Apr, 14:00–18:00 Hall X4, X4.186. *EGU General Assembly 2025*, Vienna, Austria & Online, 27 April–2 May 2025. DOI: *https://doi.org/10.5194/egusphere-egu25-21207*.

2025 **B18. Koutsos, T. M.**, Kalitsiou, M., Goutas, N., & Alexandridis, T. K. (2025). Evaluation of Sentinel-2 satellite images to study the spatial variability in rice fields for precision farming. IGARSS 2025 – *IEEE International Geoscience and Remote Sensing Symposium,* 3 - 8 August 2025, Brisbane, Australia.

2025 **B17.** Karapetsas, N., Gobin, A., Bilas, G., **Koutsos, T. M.**, Pavlidis, V., Katragkou, E., & Alexandridis T. K. (2025). Analysis of Land Suitability for Maize Production under Climate Change and Its Mitigation Potential through Crop Residue Management. IGARSS 2025 – *IEEE International Geoscience and Remote Sensing Symposium,* 3 - 8 August 2025, Brisbane, Australia.

Online: *https://www.2025.ieeeigarss.org/view_paper.php?PaperNum=1640&SessionID=1207*

2025 **B16.** Alexandridis, T.K., **Koutsos, T. M.**, Karapetsas, N., Ovakoglou, G., Bilas, G., Cherif, I., Melitzanas, E., Chrysochoou, T., Bochtis, D., Theocharis, S., Koundouras, S. (2025). Multi-Scale Earth Observation for Geospatial Analysis in Sustainable Vineyard Management. *RSCy2025, Eleventh International Conference on Remote Sensing and Geoinformation of Environment*, 17-19 March, 2025 - Paphos, Cyprus.

2024 **B15**. Menexes, G., & **Koutsos, T. M.** (2024). Assessment of the effectiveness of spatial sampling methods in estimating maize yield components in experimental plots. *19ο Panhellenic Conference of the Hellenic Scientific Society for Plant Genetic Improvement "Innovation - Resilience - Sustainable Development Plant Breeding as an Aid in the Development of Modern Agriculture"* 16 – 18 October 2024, Larissa (19pbcongress).

2024 **B14**. **Koutsos, T. M.,** & Menexes, G. (2024). Cluster Analysis in Spatial Statistics: Utilizing Spatial Autocorrelation for Decision Making with Reduced Subjectivity. The study was presented in Greek under the title: "Ανάλυση σε συστάδες στη Χωρική Στατιστική: Αξιοποίηση της Χωρικής Αυτοσυσχέτισης για λήψη αποφάσεων με μειωμένη υποκειμενικότητα", *12ο Panhellenic Conference of Data Analysis* (*http://www.gsda.gr/conference/*), 3 – 6 October 2024, Aristotle University of Thessaloniki, Thessaloniki.

2022 **B13**. Menexes, G., & **Koutsos, T. M.** (2022). The contribution of spatial interpolation as a method to improve the quality of corn silage data. *18ο Panhellenic Conference of the Hellenic Scientific Society for Plant Genetic Improvement "Plants Improvements: innovations and perspectives for Sustainable Development"* 5 – 7 October 2022, Volos (18pbcongress).

2022 **B12**. Papafilippou N., **Koutsos T. M.**, Markos A., & Menexes, G. C. (2022). Strategies for mental solving of graphic projects with functions, 3rd high school students: Content analysis strategy of interviews with Data Analysis methods. *18ο Panhellenic Conference of the Hellenic Scientific Society for Plant Genetic Improvement "Plants Improvements: innovations and perspectives for Sustainable Development"* 5 – 7 October 2022, Volos (18pbcongress).

2022 **B11.** Menexes, G. C., & **Koutsos, T. M.** (2022). Hierarchical Cluster Analysis on spatial correlated data: comparison of two methodological schemes (Ιεραρχική Ανάλυση Συστάδων σε χωρικά συσχετισμένα δεδομένα: σύγκριση δύο μεθοδολογικών σχημάτων), Conference: 11th Panhellenic Conference on Data Analysis, with International Participation (September 29 - October 2, 2022), Grevena, Greece (*11ο Πανελλήνιο Συνέδριο Ανάλυσης Δεδομένων* με Διεθνή Συμμετοχή, 29 Σεπτεμβρίου - 2 Οκτωβρίου 2022, Γρεβενά) (*http://www.gsda.gr/conference/*).

2019 **B10**. Menexes, G. C., **Koutsos, T. M.** (2019). Combined use of Correspondence Analysis and Ordinary kriging to display "supplementary" values of quantitative variables onto the factorial planes**.** *16th Conference of the International Federation of Classification Societies, 26-29 Aug 2019, Thessaloniki Concert Hall, Thessaloniki, Greece.*

2017 **B9**. **Koutsos, T. M., &** Menexes, G. C. (2017). Benefits from the adoption of precision agriculture technologies - A Systematic Review. *ITAE 2017 18th Panhellenic Forestry Congress «Hellenic Forestry facing major challenges: sustainable forest management, forest cadaster, environmental technologies-networking and nature protection» & International Workshop "Information Technology, Sustainable Development, Scientific Network & Nature Protection",* 8-11 October 2017, Edessa City, Greece.

2017 **B8**. Menexes, G., & **Koutsos, T.M.** (2017). AFC and Kriging: Projection of quantitative "meta-data" on the factorial planes of AFC**.** *9th Pan-Hellenic Data Analysis Conference with International Participation,* 28-30 September 2017, University of Thessaloniki, Thessaloniki.

2017 **B7**. **Koutsos, T. M.,** & Menexes, G. C. (2017). Incorporating data visualization techniques and use of Infographics in presenting statistical data and complex information**.** *9th Pan-Hellenic Data Analysis Conference with International Participation "28-30 September 2017,* University of Thessaloniki, Thessaloniki.

2016 **B6**. Menexes, G., & **Koutsos, T. K.** (2016). Importance and properties of the Coefficient of Variation. Participation with manuscript. " The contribution of plant breeding to exit from the financial crisis", 16th Panhellenic Conference on Genetic Breeding of Plants in Florina (28-30/09/2016).

2016 **B5**. Menexes, G., & **Koutsos, T. K.** (2016). Importance and properties of the Coefficient of Variation. Participation with poster. " The contribution of plant breeding to exit from the financial crisis", 16th Panhellenic Conference on Genetic Breeding of Plants in Florina (28-30/09/2016).

2016 **B4**. Μενεξές, Γ., Μάρκος, Α., Κορπέτης, Ε., **Κουτσός, Θ.**, Μαυρομάτης, Α. (2016). Πρόταση μεθόδου για την κατάταξη γενοτύπων βάσει πολλών σχετικών κριτηρίων. *16ο Πανελλήνιο Συνέδριο Γενετικής Βελτίωσης Φυτών με θέμα «Η συμβολή της βελτίωσης των φυτών στην έξοδο από την οικονομική κρίση», 28-30 Σεπτεμβρίου 2016, στη Φλώρινα.*

2016 **B3.** Balampekou E., **Koutsos, T. M.**, Menexes G., Oikonomou A, Karagiannis V. (2016). Assessment of environmental education teaching techniques categories by students of Faculty of Education for raising recycling awareness in Preschool and Primary Education (poster). *8th Congress of the Hellenic Ecological Society, Thessaloniki, Greece, October 20-23, 2016.*

2014 **B2.** Litskas, V., **Koutsos, T. M.**, Menexes, G. C., Mamolos, A. P., Tsatsarelis, C. A., & Kalburtji, K. L. (2014). Mapping of total energy inputs, total energy outputs, energy efficiency and greenhouse gas-emissions in olive groves of Cyprus: a tool to determine the best management of energy inputs. *Workshop of Technical Chamber of Cyprus and Technical University of Cyprus for the use of Geographical Information Systems in Cyprus, Larnaka, 8 October 2014.*

2011 **B1. Koutsos, T. M.,** Dimopoulos, G. C., Mamolos, A.P. (2011). Ecological impacts due to hydraulic technical projects to ecosystems near Natura 2000 network. *9th International Hydrogeological Congress, Kalavrita, Greece, October 5-7, 2011).*

C. Books, Book Chapters & Edited Volumes

2026 **C6.** Papafilippou, N., Kyrana, Z., Pratsinakis, E. D., Dordas, C., **Koutsos, T. M.,** & Markos, A. (2026). Exploring students' mental strategies in algebraic function tasks through multivariate-multidimensional data analysis. In S. D. Anastasiadou, T. G. Chadjipadelis, N. Koutsoupias, A. Markos, & G. C. Menexes (Eds.), Advanced Data Analysis Techniques, Theory, and Applications (pp. 44). IGI Global. https://doi.org/10.4018/979-8-3373-6926-6.ch009.

2025 **C5. Koutsos, T. M.**, & Alexandridis, T.K., (2025). Reducing Subjectivity in Spatial Data Classification for Decision-Making. In special issue *"Modern International Developments in Data Analysis and Multivariate Statistical Analysis", IGI Global Scientific Publishing* (in English).

Special Issue DOI: https://doi.org/10.4018/979-8-3693-9400-7.

Article DOI: https://doi.org/10.4018/979-8-3693-9400-7.ch004.

2020 **C4.** Menexes, G. C., & **Koutsos, T. M.** (2020). Correspondence Analysis and Kriging: Projection of quantitative information on the factorial maps. In *Data Analysis and Rationality in a Complex World, Springer Series "Studies in Classification, Data Analysis, and Knowledge Organization"*. Full paper written in LaTex code by author (in English).

2019 **C3. Koutsos, T.M.,** & Menexes, G. (2019). Methodology for social impact assessment from the construction and operation of irrigation dams. In: Environmental Policy and Regional Development. 12th Volume of the series "*Issues of Forestry and Management of Environment and Natural Resources*", Topic: "Society and Environment". Thessaloniki: 2019 (in Greek).

2017 **C2. Koutsos, T.M.**, & Menexes, G. (2017). *Specifications for Environmental Impact Assessments and Licensing Procedures for Technical Projects and Activities*. In: Environmental Policy and Regional Development, Festschrift in honor of Professor Konstantinos Soutsas. Department of Forestry and Management of Environment and Natural Resources, School of Agricultural and Forestry Sciences, Democritus University of Thrace. Thessaloniki: 2017 (in Greek).

2011 **C1. Koutsos, T. M.,** Dimopoulos, G. C., Mamolos, A. P. (2011). Ecological impacts due to hydraulic technical projects to ecosystems near Natura 2000 network. In: Lambrakis, N., Stournaras, G., Katsanou, K. (eds) Advances in the Research of Aquatic Environment. Environmental Earth Sciences. Springer, Berlin, Heidelberg. DOI: https://doi.org/10.1007/978-3-642-19902-8_3.

D. Other Scientific Publications & Technical Reports

2026 **D6. Koutsos, T.M.**, & Alexandridis, T.K. (2026). Site-specific fertilization for the reduction of carbon footprint in viticulture (Proof of concept), (ELKE AUTH 12765), Lab of Remote Sensing, Spectroscopy and Geographic Information Systems, School of Agriculture, Aristotle University of Thessaloniki (in Greek and English).

2022 **D5. Koutsos, T.M., & Menexes, G. (2022).** Methodology for conducting a Systematic Literature Map. Faculty of Agriculture, Forestry and Natural Environment, Aristotle University of Thessaloniki (AUTh).

2020 **D4. Koutsos, T.M., Menexes, G., & Mamolos, A. (2020).** A brief guide to searching for scientific information (Web of Science platform). Department of Agriculture, Faculty of Agriculture, Forestry and Natural Environment, AUTh.

2017 **D3. Koutsos, T.M., & Menexes, G. (2017).** Transforming statistical information into "visual storytelling" using Infographics. Department of Agriculture, Faculty of Agriculture, Forestry and Natural Environment, AUTh. (Also presented as a poster within the Department).

2017 **D2. Koutsos, T.M., & Menexes, G. (2017).** Methodology for conducting a Systematic Review. Department of Agriculture, Faculty of Agriculture, Forestry and Natural Environment, AUTh. (Also presented as a poster within the Department).

2016 **D1. Koutsos, T.M., & Menexes, G. (2016).** Rules and guidelines for creating a scientific presentation. Department of Agriculture, Faculty of Agriculture, Forestry and Natural Environment, AUTh.

E. Thesis

2008 **E2. Koutsos, T.M. (2008)**. Contribution to Environmental Impact Assessment (EIA) of technical projects using Geographic Information Systems (GIS). PhD Dissertation, Department of Geology, School of Sciences, Aristotle University of Thessaloniki (AUTh), 286 pp.

1998 **E1. Koutsos, T.M. (1998).** Study of the Germasogeia aquifer (Cyprus) using Geographic Information Systems (GIS). Master's Thesis, Department of Geology, School of Sciences, Aristotle University of Thessaloniki (AUTh), in collaboration with the Water Development Department of Cyprus, 116 pp.