PERSONAL INFORMATION

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ΕΠΑΓΓΕΛΜΑΤΙΚΗ ΕΜΠΕΙΡΙΑ

02/2022-Σήμερα

Επίκουρος Καθηγητής: Γεωστατιστική στην Περιβαλλοντική Μεταλλευτική-Βιώσιμη Ανάπτυξη

Σχολή Μηχανικών Ορυκτών Πόρων. Σχολή Μηχανικών Ορυκτών Πόρων, Πολυτεχνείο Κρήτης (ΦΕΚ 934, 20/2/2026)

- **Διδασκαλία:** Εφαρμοσμένη Γεωστατιστική, Πιθανότητες & Στατιστική για Μηχανικούς, Γεωστατιστικές Μέθοδοι Προσομοίωσης, Προγραμματισμός για Μηχανικούς, Πεδίο: Γεωστατιστική/Επιστήμη Δεδομένων (Νέο Μεταπτυχιακό).

- **Έρευνα:** Μαθηματική/Εφαρμοσμένη Γεωστατιστική, Χωρο-χρονική γεωστατιστική/Περιβαλλοντική στατιστική/ Στοχαστικές Διεργασίες, Περιβαλλοντική Μεταλλευτική & Βιώσιμη Ανάπτυξη, Εκτίμηση περιβαλλοντικών επιπτώσεων / Στόχοι Βιώσιμης Ανάπτυξης (SDGs), Ανάλυση επικινδυνότητας / Ανάλυση κόστους–οφέλους, Μαθηματικά στις γεωεπιστήμες / Ανάλυση χρονοσειρών, Υπόγεια ύδατα / Υδατικοί πόροι / Μηχανική μάθηση

09/2025- Σήμερα

Συντονιστής Joint MSc Programme EURECA PRO

International Joint Master in Responsible Consumption and Production under Sustainable Mining Montanuniversität Leoben and Technical university of Crete, School of mineral resources Engineering.

9/2023- Σήμερα

Coordinator: "Educational Innovation", EURECA-PRO University Alliance

9/2024- Σήμερα

Επισκέπτης ερευνητής στο πλαίσιο του Ερευνητικού προγράμματος ΕΛΙΔΕΚ GEONE. Πολυτεχνείο Μιλάνου, Σχολή Πολιτικών Μηχανικών και Μηχανικών Περιβάλλοντος.

Advancing Geostatistical Modeling of Hydrogeological Properties for Groundwater Resources Management

ΕΚΠΑΙΔΕΥΣΗ ΚΑΙ ΚΑΤΑΡΤΙΣΗ

2007-2012

Διδακτορικό Δίπλωμα – Χωρο-χρονική Γεωστατιστική στις Γεωεπιστήμες Πρόγραμμα Μεταπτυχιακών Σπουδών Γεωτεχνολογία και Περιβάλλον

Πολυτεχνείο Κρήτης, Σχολή Μηχανικών Ορυκτών Πόρων
Χωρο-χρονική γεωστατιστική, Υδατικοί πόροι, Στοχαστικές μέθοδοι, Ανάλυση δεδομένων, Χρονοσειρές, Εξόρυξη δεδομένων, Μηχανική μάθηση, Χαρτογράφηση.

2004-2006

Μεταπτυχιακό Δίπλωμα Ειδίκευσης, ΠΜΣ Γεωτεχνολογία και Περιβάλλον Ειδικότητα: Γεωστατιστική

Πολυτεχνείο Κρήτης Σχολή Μηχανικών Ορυκτών Πόρων / Σχολή Μηχανικών Περιβάλλοντος
Γεωστατιστική, Τηλεπισκόπηση /Γεωδαισία, Υδρογεωλογία

1996-2000

Δίπλωμα Χημικού Μηχανικού (Συνεκτιμώμενοι τίτλοι σπουδών Αναγνωρισμένοι από το ΔΟΑΤΑΠ - ως ισότιμο και αντίστοιχο προς τα απονεμόμενα από τα Τμήματα Χημικών Μηχανικών του Ε.Μ.Π και των άλλων Πολυτεχνικών Σχολών των Ελληνικών Ανώτατων Εκπαιδευτικών ιδρυμάτων. Αρ. Πράξης 27-28/2001), Μέλος ΤΕΕ Αρ. Μητρ. 91050 (37034/2002)

1999-2000: MSc in Clean Technology School of Chemical and Process Engineering, Newcastle University, UK

1996-1999: BSc in Chemical and Process Engineering, School of Chemical and Process Engineering, Newcastle University, UK

Περιβαλλοντική Στατιστική, Επιχειρησιακή έρευνα, Μηχανική Ρευστών, Μελέτη Περιβαλλοντικών επιπτώσεων, Σχεδιασμός περιβαλλοντικών εγκαταστάσεων, Παρακολούθηση ρύπανσης και αποκατάσταση υδάτων

ΕΚΠΑΙΔΕΥΤΙΚΟ ΕΡΓΟ

Διδακτικό Έργο Αυτοδύναμη Διδασκαλία

09/2025 – Σήμερα, **Προγραμματισμός για Μηχανικούς**, (1ο Εξάμηνο), Σχολή Μηχανικών Ορυκτών Πόρων, Πολυτεχνείο Κρήτης

02/2022 – Σήμερα, **Στατιστική και Πιθανότητες για Μηχανικούς** (4ο Εξάμηνο), Σχολή Μηχανικών Ορυκτών Πόρων, Πολυτεχνείο Κρήτης

10/2021 – Σήμερα, **Εφαρμοσμένη Γεωστατιστική** (7ο εξάμηνο)", Σχολή Μηχανικών Ορυκτών Πόρων, Πολυτεχνείο Κρήτης

10/2024 – Σήμερα, **Exploring Data Analytics**, **(MSc Sustainable Technologies of Energy Resources and Raw Materials),** Σχολή Μηχανικών Ορυκτών Πόρων, Πολυτεχνείο Κρήτης

02/2025 – Σήμερα, **Data Science for Exploration and Exploitation (MSc Sustainable Technologies of Energy Resources and Raw Materials),** Σχολή Μηχανικών Ορυκτών Πόρων, Πολυτεχνείο Κρήτης

02/2025 – Σήμερα, **Emerging technologies for the exploration of raw materials** (Συνδιδασκαλία Prof. A Vafeidis, Prof. P Partsinevelos, Ast. Prof. Varouchakis) **(MSc Sustainable Technologies of Energy Resources and Raw Materials & EURECAPRO European University),** Σχολή Μηχανικών Ορυκτών Πόρων, Πολυτεχνείο Κρήτης

02/2025 – 6/2025 **Επιμορφωτικό Σεμινάριο ''Υπολογιστικά εργαλεία για Μηχανικούς**'', **Συντονιστής** επιμορφωτικού σεμιναρίου για τους προπτυχιακούς φοιτητές της Σχολής Μηχανικών Ορυκτών Πόρων του Πολυτεχνείου Κρήτης.

10/2022– 02/2024, **Ανάλυση χρονοσειρών (Μεταπτυχιακό Πρόγραμμα Σπουδών: Γεωτεχνολογία & Περιβάλλον),** Σχολή Μηχανικών Ορυκτών Πόρων, Πολυτεχνείο Κρήτης

02/2022– 06/2024, **Γεωστατιστική και μέθοδοι προσομοίωση (Μεταπτυχιακό Πρόγραμμα Σπουδών: Γεωτεχνολογία & Περιβάλλον),** Σχολή Μηχανικών Ορυκτών Πόρων, Πολυτεχνείο Κρήτης

Διπλωματικές/μεταπτυχιακές εργασίες

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13 Διπλωματικές Εργασίες ολοκληρωμένες, 6 υπό εξέλιξη
1 Μεταπτυχιακή Διατριβή ολοκληρωμένη, 3 υπό εξέλιξη
Συμμετοχή σε εξεταστικές επιτροπές ΜΔΕ, 7 ολοκληρωμένες
Συμμετοχή σε εξεταστικές επιτροπές Διπλωματικών Εργασιών, 16 ολοκληρωμένες

Διδακτορικές Διατριβές

Evangelos Machairas, **Cost Benefit Analysis and Risk Assessment of Mining Activities in Terms of Circular Economy and Environmental Impact**, completed September 2025

Koltsidopoulou Maria, **Advancements in Geostatistical and Machine Learning Modeling for Enhanced Natural Resources Evaluation**, expected June 2027

Koniditsiotis Anastasios, Stochastic meteorological models, (Μέλος τριμελούς επιτροπής)

Μέλος 3μελών, 7μελών επιτροπών ΔΔ

1 υπό εξέλιξη, 7 ολοκληρωμένες (Επιπλέον έγγραφα υποψηφιότητας)

Ακαδημαϊκός σύμβουλος

Ακαδημαϊκός σύμβουλος 2023-24: 2ο έτος σπουδών

Ακαδημαϊκές διακρίσεις

Συμμετοχή στη λίστα των ερευνητών που ανήκουν στο κορυφαίο 2% παγκοσμίως στην επιστημονική περιοχή τους. Stanford University list (Scopus/Elsevier) 2024 and 2025.

Ερευνητική μονάδα

2022- Σήμερα: Δημιουργία ερευνητικής μονάδας Περιβαλλοντικής Μεταλλευτικής - Βιώσιμης ανάπτυξης/Γεωστατιστικής. https://www.envi-stat.tuc.gr/en/home

ΕΡΕΥΝΗΤΙΚΟ ΕΡΓΟ

Δημοσιεύσεις σε Διεθνή επιστημονικά περιοδικά

80) Nahed Ben-Salem, Amir Rouhani, Nadim K. Copty, **Emmanouil A. Varouchakis**, J. Jaime Gómez-Hernández, George P. Karatzas, Michael Rode, Seifeddine Jomaa, The role of secondary data in estimating groundwater levels in the Iberian Peninsula, Groundwater for Sustainable Development, Volume 33, 2026, 101594, https://doi.org/10.1016/j.gsd.2026.101594.

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78) M. D. Koltsidopoulou, A. Pavlides, D. T. Hristopulos, **E. A. Varouchakis**+, (2025), Enhancing Geostatistical Analysis of Natural Resources Data with Complex Spatial Formations through non-Euclidean Distances, Mathematical Geosciences, accepted 29/12/2025.

77) A. Pavlides, M. D. Koltsidopoulou, M. Chrysanthi, **E. A. Varouchakis**+, (2025). A Kernel-Based Nonparametric Approach for Data Gaussian Anamorphosis, Mathematical Geosciences, https://doi.org/10.1007/s11004-025-10251-z

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73) M. Chrysanthi, A. Pavlides, **E. A. Varouchakis**+. "A Bayesian Geostatistical Approach to Analyzing Groundwater Depth in Mining Areas," Geosciences, 2025, 15(11), 410; https://doi.org/10.3390/geosciences15110410

72) G. Xiroudakis, G. Saratsis, G.E. Exadaktylos, E. Machairas, **E.A. Varouchakis**, S. Mavrigiannakis, The effect of microstructure on the behavior of an underground excavation, Simulation Modelling Practice and Theory, Volume 147, 2026, 103241.

71) **E.A. Varouchakis**+, Konstantinos Komnitsas, Michail Galetakis. "Spatiotemporal Analysis of Vegetation Health and Moisture Dynamics in Rehabilitated Mining Quarries Using Satellite Imagery," Environmental Processes, https://doi.org/10.1007/s40710-025-00781-3

70) **E.A. Varouchakis**+, Ashok Krishnamurthy, Konstantinos Komnitsas. "Modeling Extreme Rainfall Using the Principle of Maximum Entropy," Mining, Metallurgy & Exploration, https://doi.org/10.1007/s42461-025-01274-5

69) **E.A. Varouchakis**+, M. D. Koltsidopoulou and A. Pavlides, 2025, Designing Robust Covariance Models for Geostatistical Applications, Stochastic Environmental Research and Risk Assessment, https://doi.org/10.1007/s00477-025-02982-6

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55) Machairas, E., and **E. A. Varouchakis**+. 2023. Cost–Benefit Analysis and Risk Assessment for Mining Activities in Terms of Circular Economy and Their Environmental Impact, Geosciences, 13(10), doi:10.3390/geosciences13100318.

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49) **E.A. Varouchakis**+, Solomatine, D., Perez, G.A.C., Jomaa, S., Karatzas, G.P., 2023. Combination of geostatistics and self-organizing maps for the spatial analysis of groundwater level variations in complex hydrogeological systems. Stoch. Env. Res. Risk A. 37(8), 3009-3020. DOI:10.1007/s00477-023-02436-x

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---------------------------------- **Πριν την ανάληψη καθηκόντων** --

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37) **E. A. Varouchakis**+, "Gaussian Transformation Methods for Spatial Data", *Geosciences*, 11, 196, 2021, https://doi.org/10.3390/geosciences11050196 (Sole author publication)

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33) **E. A. Varouchakis+**, P.G. Theodoridou, G.P. Karatzas., "Groundwater level spatial distribution and risk assessment using geostatistics in R: a decision making tool" **Journal of Hazardous, Toxic, and Radioactive Waste (ASCE)**", special issue: Sustainable Environmental Management, 24(1), 04019031, 2020, Doi:10.1061/(ASCE)HZ.2153-5515.0000464

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Βιβλία-Κεφάλαια

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Δημοσιεύσεις σε συνέδρια

2025_5 Maria Chrysanthi, Andrew Pavlides, Emmanouil A. Varouchakis*. "Geostatistical Modelling Using Novel Covariance Functions and Application to Heterotopic Datasets." Proceedings of the 4th EURECA-PRO International Conference on Responsible Consumption and Production, Chania, Greece, 23–24 September 2025.

2025_4 Evangelos Machairas, Emmanouil A. Varouchakis*. "Immersive Virtual Tours on Critical Minerals for Clean Energy Transition." Proceedings of the 4th EURECA-PRO International Conference on Responsible Consumption and Production, Chania, Greece, 23–24 September 2025.

2025_3 Koltsidopoulou, M., Recalcati, C., Riva, M., Guadagnini, A., Varouchakis, E. "Characterization of Space-Time Traits of Nanoscale Calcite Dissolution through Multiple-Point Geostatistics," IAMG 2025 Conference Abstracts, Zhuhai, China. October 8-14 2025

2025_2 Alberto Guadagnini, Emmanouil Varouchakis, Laura Ceresa, Chiara Recalcati and Monica Riva, Space-time correlations associated with nanoscale dissolution patternsat calcite-water interfaces, international conference on geochemistry, Goldschmidt2025, Prague, Czech republic

2025_1 Varouchakis, E., Recalcati, C., Ceresa, L., Riva, M., and Guadagnini, A.: Geostastical modeling of space-time dynamics calcite dissolution at the nanoscale, EGU General Assembly 2025, Vienna, Austria, 27 Apr–2 May 2025, EGU25-12283, https://doi.org/10.5194/egusphere-egu25-12283, 2025.

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2. Pavlides, A., Koltsidopoulou, M. D., Chrysanthi, M., & Varouchakis, E. (2025, April). Advancing Multivariate Simulations using Non-Euclidean Metrics. In EGU General Assembly 2025, Vienna, Austria. https://doi.org/10.5194/egusphere-egu25-16370

3. Machairas, E., Varouchakis, E., & Galetakis, M. (2024, April). Cost–Benefit Analysis through Stochastic Risk Assessment on Mining Waste Management. EGU General Assembly 2024, Vienna. https://doi.org/10.5194/egusphere-egu24-10941

4. Varouchakis, E. A., Pavlides, A., & Hristopulos, D. T. (2024, May 17). Enhancing Statistical Analysis of Asymmetric Geoscience Data using Gaussian Anamorphosis. Oral presentation at the Special Session on Big Data and Statistical Analysis in Geosciences, Conference of the Greek Statistical Institute, Kozani, Greece.

5. Galetakis, M., Varouchakis, E., Roumpos, C., & Louloudis, G. (2024, April). Certification Systems for the Ecological Rehabilitation of Mined Areas. EGU General Assembly 2024, Vienna. https://doi.org/10.5194/egusphere-egu24-17569

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8. Varouchakis, E. A. (2024, February). Advancing Geostatistical Precision: Non-Euclidean Distance-Based Covariance Functions in Ordinary Kriging for Enhanced Groundwater Resources Assessment. In FluidNET International Conference 2024, Heraklion, Greece.

9. 9a. Koltsidopoulou, M. D., Pavlides, A., & Varouchakis, E. A. (2024, June). Enhancing Geostatistical Analysis of Natural Resources Data with Complex Spatial Formations through Non-Euclidean Distances. In geoENV2024, Chania, Greece.

   9b. Manoutsoglou, E., Lazos, I., Kallithrakas-Kontos, N., Kanellopoulos, C., Steiakakis, E., & Varouchakis, E. A. (2024, June). Chemostratigraphy and Geostatistical Analysis of Geochemical and Lithological Data from the Trypali Unit, Omalos Region, Western Crete, Greece. In geoENV2024, Chania, Greece.

10. Galetakis, M., Varouchakis, E., Vasileiou, A., Raka, S., et al. (2024, July). Certification and Ecological Reclamation of Mined Areas: Evolving Standards and Practices for Sustainable Mining. In SDIMI 2024, Turin, Italy, pp. 191–194.

11. Leilabadi, S. H., Lottermoser, B. G., Feldmann, Y., et al. (2024, September). Ambitions of the IMMERSE Project - Immersive Virtual Tours on Critical Minerals. In HSCE 2024, Chania, Greece.

12. Christidis, G. E., Guerineau, R., Theodoridou, N. G., Makri, P., & Varouchakis, E. A. (2024, September). Distribution of Smectite and Smectite Layer Charge in the Aggeria Bentonite Deposit, Milos Island, Greece. In Book of Abstracts, 11th Mid-European Clay Conference (MECC 24), Plzeň, Czech Republic, September 15–20, p. 21.

13. Pavlides, A., Koltsidopoulou, M. D., Christopoulos, D., & Varouchakis, E. A. (2024, September). Exploring Complex Fields: A Riemannian Framework for Covariance Formulation. In GEOSTATS2024, Azores, Portugal, pp. 17–18.

14. Varouchakis, E. A. (2024). Integrating Sustainable Mining Practices to Achieve Europe's Green Digital Economy and Climate Neutrality by 2050. In 1st SMI Online Forum 2024, p. 9.

15. Christopoulos, D., De Iaco, S., & Varouchakis, E. (2023, August). Spatiotemporal Methods and Data Analysis. In IAMG 2023, Trondheim, Norway, Aug 27 – Sept 1. Short Abstracts, p. 117.

16. Christidis, G. E., Kalagri, O., Varouchakis, E., Keladinos, A., & Manolis, S. (2023, July). Mineralogy and Geochemistry of a Bentonite Profile from Agia Irini Deposit, Milos Island, Greece: A Geostatistical Analysis. In EuroClay 2023 – SRA Vol. 14, p. 44.

17. Galetakis, M., Biotakis, G., Deligiorgis, V., & Varouchakis, E. (2023). Transforming Decommissioned Mines to a Gravity Energy Storage System. In RawMat2023, Athens, Greece. Mater. Proc. 2023, 15, 14. https://doi.org/10.3390/materproc2023015014

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19. Varouchakis, E., Diamantopoulou, E., & Pavlides, A. (2023, April). Geostatistical analysis of groundwater data in a mining area. In EGU General Assembly 2023, Vienna, Austria, 24–28 April. EGU23-11472. https://doi.org/10.5194/egusphere-egu23-11472

20. Anyfanti, I. V., Karatzas, G. P., Varouchakis, E., & Diakoparaskevas, P. (2022, September). Application of a Fuzzy Inference System in Decision Making for Water Resources Management. In Innovative Water Management in a Changing Climate, IAHR 2022, Athens, Greece, Sept 7–9.

21. Varouchakis, E. A., Azevedo, L., Pereira, J. L., Karatzas, G. P., & Jomaa, S. (2022, September). Blending Geostatistics and Geophysics to Develop the Hydrogeological Structure of a Coastal Aquifer System. In Innovative Water Management in a Changing Climate, IAHR 2022, Athens, Greece, Sept 7–9.

22. Hristopulos, D., Varouchakis, E., & Petropoulos, G. P. (2022, August). Stochastic Local Interaction Models for Gap Filling of Gridded Datasets. In IAMG 2022, Deia, Spain, Aug 29 – Sept 3. Short Abstracts, p. 267.

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Μνημόνια συνεργασίας

The Technical University of Crete, Greece, and the Universidad Católica del Norte, Chile. Key contributors: Assistant Professor Emmanouil Varouchakis from School of Mineral Resources Engineering, specializing in Geostatistics, and Associate Professor Mohammad Maleki: link

Agreement on a cooperation in the frame of the EURECA PRO Joint Degree Programme: "International Master of Science in Advanced Mineral Resources Development" between Technische Universität Bergakademie Freiberg, Montanuniversität Leoben and, Technical university of Crete, School of mineral resources Engineering.

Ερευνητικά έργα
Επιστημονικός Υπεύθυνος

Scientific Coordinator:

MINERVA, AI-Enhanced GIS Platform for Environmental Monitoring in Coal Mine Just Transition, RFCS-2025-01-RPJ, 08/2026-07/2029**, (TUC Scientific Coordinator)**, (261,950 ευρώ)

AI-LEARN: Environmental & Water Learning (Erasmus+ 2025-1-NL01-KA220-HED-000355215), Cooperation partnerships in higher education**, 10/2025-09/2028 (TUC Scientific Coordinator)**, (116,000 ευρώ)

Χρηματοδότηση και Έγκριση από την ΕΘΑΑΕ του νέου κοινού ΠΜΣ (Joint Master Program) "Responsible Consumption and Production under Sustainable Mining" μεταξύ Πολυτεχνείου Κρήτης και Πολυτεχνείου Montanuniversität Leoben της Αυστρίας (2025-2027), Ταμείο Ανάκαμψης και Ανθεκτικότητας και Εθνικό Πρόγραμμα Δημοσίων Επενδύσεων,(**Scientific Coordinator**) (736.746 ευρώ)

Advanced geostatistical modelling for natural resources evaluation (HFRI - Hellenic Foundation for Research & Innovation) 2023-2025 (**Scientific Coordinator**), (189.000 ευρώ) https://www.geone.tuc.gr/en/home

Universidad Católica del Norte, Dr. Mohammad Maleki, has been awarded a Fondecyt Regular 2025 Project N°1250432, called "**Enhanced Geological and Geometallurgical Modeling through Machine Learning**", in interdisciplinary and international collaboration with academics from AMTC - Universidad de Chile, Nadia Mery and Xavier Emery, Pontificia Universidad Católica de Chile, Enrique Jélvez and the **Technical University of Crete, Greece, Emmanouil Varouchakis**, (2025-2027)

Immersive virtual tours on critical minerals for clean energy transitions (IMMERSE), ERASMUS+ research funding, 2023-2025 (**TUC Scientific Coordinator**), (90.000 ευρώ), https://www.envi-stat.gr

Plan4cold, Supporting South Europe municipalities in the definition of Sustainable Local Heating and Cooling Plans" under the LIFE Clean Energy Transition (LIFE-2023-CET) program (2024-2027) **Scientific Coordinator**), (108000 ευρώ), https://fedarene.org/project/plan4cold/

European Geosciences Union (Training School Organization Hydroinformatics) for The 15th International Conference on Geostatistics for Environmental Applications, 2024 (6000 ευρώ)

Proof-of-Concept, GNΩSI, Funding for the Operation of Structures and Technology Transfer Actions – **Database development for Crete hydrological data** - GNΩSI foundation &Technical University of Crete " 2022-2023 (no: 25912/24-11-2022)**,** (**Scientific Coordinator**)

Ερευνητικά έργα
Συνεργαζόμενος Ερευνητής

Research team member:

Gravitational Energy storage in the post-Mine areas (GrEnMine), 2024-2027, RFCS Fund
Topic: Satellite data analysis using Machine learning techniques, Database development

European University on Responsible Consumption and Production/ Eureca Pro 2.0, EU funding, 2023-2027, (**WP3 Leader- EURECA-PRO Doctoral Coordinator**)

REECOL Ecological rehabilitation and long term monitoring of post mining areas, 2023–2026, RFCS Fund. Topic: Satellite data analysis using Machine learning techniques, Database development

OurMED "Sustainable water storage and distribution in the Mediterranean" PRIMA-MED 2023-2026 (**WP2 Leader**)

International mobility Erasmus+ KA171, CALL 2023, 2023-1-EL01-KA171-HED-000147091. (University of Kentucky-School of Mineral Resources Engineering)

Groundwater modelling of three aquifers in the context of the River Basin Management Plan update for the River Basin District of Crete (2022-2023 **TUC Scientific Co-coordinator**)

InTheMed, Innovative and Sustainable Groundwater Management in the Mediterranean, under PRIMA call - Coordination and support for the partnership for research and innovation in the Mediterranean area, April 2020-April 2023. (Associate Researcher)

--Πριν το 2022--

Uncertainty-aware intervention design for Mediterranean aquifer recharge, Funding: Prince Albert II of Monaco Foundation, 2019-2022 (**Scientific coordinator**, Principal proposer and researcher along with IHE-Delft).

Natural Resources Research Postdoc Research Scholarship: A Bayesian space-time geostatistical model for groundwater level variability estimation, Funding: International Association for Mathematical Geosciences (IAMG), 10/2015-10/2016. (**Principal Researcher**)

Sustain-Coast, Sustainable coastal groundwater management and pollution reduction through innovative governance in a changing climate, under PRIMA call - Coordination and support for the partnership for research and innovation in the Mediterranean area, June 2019-June 2022. (Associate Researcher)

ELIDEK 2018 (National grant): Spatio-temporal Modelling of the Significant Wave Height Variability for Estimating the Wave Energy Potential in the Mediterranean Sea, with field applications in the Aegean and Ionian Sea, Foundation of Research and Technology (FORTH), Heraklion, Crete, 2019-2021. (Researchers consortium member)

DESIRES: Platform for Desalination Plant powered with RES design, Sea wave spatiotemporal analysis in the Mediterranean Region, Funding: ERANET-MED, September 07/2017-07/2018. (Associate Researcher)

RECARE: Preventing and remediating degradation of soils in Europe through land care, Funding: EU FP7-ENV, 1/02/2013 – 28/02/2017. (Associate Researcher)

SPARTA: Development of Space-Time Random Fields based on Local Interaction Models and Applications in the Processing of Spatiotemporal Datasets, Excellence Research Grant 2011, 01/2012 – 11/2015. (Associate Researcher)

THALIS – CYBERSENSORS: High frequency monitoring system for integrated water resources management of rivers, Funding: Hellenic Ministry of Education, GSRT-EU-GR, 1/1/2013 – 30/9/2015. (Associate Researcher)

SPATSAT: Development of Spartan Spatial Random Fields for geostatistical applications. The Marie Curie Transfer Of Knowledge Grant, Funding: EU Contract No. MTKD-CT-2004-014135, 1/9/05 – 1/9/08. (Junior Researcher)

Application of geostatistical methods in environmental applications-Geostatistical analysis of hydrological data from the island of Crete. Funding: Hellenic Ministry of Education, Pythagoras Program II, 1/1/06 – 30/4/07. (Junior Researcher)

Spartan Spatial Random Fields for environmental geostatistical applications. Funding: Technical University of Crete. Support funding for basic research, 1/4/05 – 31/3/06. (Scholar Researcher)

Συντάκτης σε διεθνή επιστημονικά περιοδικά	Advisory board: Stochastic Environmental Research & Risk Assessment Journal, Springer, 2025-2027
	Associate editor: Hydrology Research Journal, IWA, 2020-2026
	Guest Editor: Mathematical Geosciences Journal, geoENV2024, Environmental Geostratistics, 2024-2026
	Guest Editor: Hydrogeology Journal, Application of geostatistics to hydrogeology, 2022-2023
	Guest Editor: Entropy Journal: Spatiotemporal Prediction and Simulation Methods at the Nexus of Statistical Physics, Spatial Statistics and Machine Learning, 20 June 2022
	Guest Editor: Stochastic Environmental Research & Risk Assessment Journal, Special Issue: Space–time models for hydrological and environmental applications, July 2020.
	Guest Editor: Spatial Statistics Journal, Special Issue: Spatio-temporal and geostatistical analysis of hydrological events and/or related hazards, December 2019.
Κριτής σε διεθνή επιστημονικά περιοδικά	International Journal of Mining, Reclamation and Environment (2025-today), Mining Metallurgy & Exploration (2025-today), Scientific reports (2024- today), Hydrology and Earth System Sciences (2022-today), Environmental Modelling & Software (2021-today), Science of the total environment (2019-today), International Journal of Systems Science (2019-today), Hydrology Research (2018-today), Environmental Modelling & Assessment,(2017-today), Water Resources Research (2016-today), Advances in Water Resources, (2016-today), Spatial Statistics (2016-today), Applied Statistics (2016-today), Journal of Hydroinformatics (2016-today), Water Resources Management Journal (2016-today), Hydrological Sciences Journal (2016-today), Water Policy Journal (2016-today), Water MDPI (2016-today), Journal of hydrology (2015-today), Hydrogeology Journal (2015-today), Computer & Geosciences (2015-today), Journal of Hydrologic Engineering (ASCE) (2013-today), Environmental Monitoring & Assessment (2012-today), Stochastic Environmental Research and Risk Assessment (SERRA) (2011-today)
Εξωτερικός αξιολογητής ερευνητικών έργων	• EU experts - Horizon Europe - Mission Soil WP2025 • Research Fund for Coal and Steel (RFCS)

- Dutch Research Council (NWO) | Domain Applied and Engineering Sciences (AES)
- Chile, National Science Centre, Reviewer of research proposals, Geosciences
- Polish National Science Centre, Reviewer of research proposals in Physical Sciences and Engineering discipline, (2019,2021,2022)
- External reviewer of proposals for Chile Research Council (2020)
- Undergraduate program evaluator of the new undergraduate program BSc in Environmental Science, Sultan Qaboos University, Oman (2016)
- MSc Thesis evaluator, Faculty of Engineering, Built Environment and Information Technology, University of Pretoria, South Africa (2014)

Προσκεκλημένες Διαλέξεις/Σεμινάρια	PhD course: Modern geostatistics for groundwater bodies characterization 18-22 of November 2024, PhD Programme in Environmental and Infrastructure Engineering, Department of Civil and Environmental Engineering, Politecnico di Milano

Solicited talk on " Fusion of geostatistics and machine learning under a stochastic approach for the spatial analysis of groundwater level variations". Hydrological Sciences Division (HS), Hydroinformatics Session, '' Advances in stochastic analysis, modelling, simulation and prediction for hydrological and water-related processes", EGU 2024

Invited workshop/Seminar, GEOSTAT2018, "Spatial analysis and applications in geological, mining and environmental problems", Wroclaw University of Science and Technology, Poland, 22 – 25 January 2018. (http://geostat2018.pwr.edu.pl/)

Invited Lecture on "Applied Geostatistics, Hydroinformatics for hydrology: geostatistical modelling". Hydrological Sciences Division (HS), Hydroinformatics Session, EGU, 27 of April 2017. (http://meetingorganizer.copernicus.org/EGU2017/session/25340).

Symposium in the area of uncertainty analysis and geostatistical applications in water resources and environmental science, "Space-time geostatistical modelling of aquifer level in conjunction with simulation methods for uncertainty estimation" 28/10/2016 UNESCO-IHE, Delft, Netherlands.

Guest Lecture under Erasmus+ staff mobility action "Geostatistics in water resources management" 10/02/2016, UNESCO-IHE, Delft, Netherlands.

Μέλος επιστημονικών επιτροπών και οργανωτικών επιτροπών διεθνών συνεδρίων	President of geoEnvia geostatistics association 2024-2026

Organizer of the 15th International Conference on Geostatistics for Environmental Applications, Chania, Greece, 19-21 June 2024

Chair of Hydroinformatics, EGU General Union, 2022-2026

Member of the scientific committee of the Spatial Statistics 2023: Climate and the Environment 19 – 22 July 2023 | University of Colorado Boulder, USA

Member of the scientific committee of the 13 th and 14th International Conference on Geostatistics for Environmental Applications, Parma, Italy, 2021,2022

Convener of the sessions at EGU General Assembly Conference, Vienna:
- Geostatistics and Uncertainty, 2025
- Hydroinformatics for Mineral Resources applications, 2023
- Advanced Geostatistics for Water, Earth and Environmental Sciences (2020 & 2021)
- Spatio-temporal and/or geostatistical analysis of hydrological events, extremes, and related hazards (2015-2020)
- Innovation and new challenges in sharing research results and knowledge of soil and water resources: experiences on strategic thinking, technologies and collaborative work (2017)
- Instrumented Catchments and Demonstration Areas: the scientific and social impact of research through experiments and modelling about water and soil (2015)

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