

George N. Zaimes



Associate Professor

Specialization "Management of Streams and Riparian Areas"



Director

Labaratomy of Geomorphology, Edaphology and Riparian Areas (GERi Lab)
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Deputy Chair

UNESCO CHAIR Con-E-Ect
Conservation and Ecotourism of Riparian
and Deltaic Ecosystems
Website: <http://unescochair.teiemt.gr/>



I. Education - Degrees

- Ph.D.** Department of Natural Resources Ecology and Management, Iowa State University, Ames, IA, USA, December 2004.
Dissertation: *Land-use practice impacts on stream bank erosion with an emphasis on grazing practices in three Iowa regions*
- M.S.** Department of Forestry. Iowa State University. Ames, IA, USA, December 1999.
Thesis: *Streambank erosion adjacent to different riparian land-use practices and stream patterns along Bear creek in north central Iowa*
- B.S.** Department of Forestry, Iowa State University. Ames, IA, USA, May 1997.
- Ptyhio** Department of Forestry, Technological Educational Institute of Kavala, Drama Annex, Greece. Spring, 1995.

II. Research Interest

Sustianable management of water resources, management and restoration of riparian areas, climate change and riparian areas, management of intermittent and ephemeral streams/torrents, nature-based solutions, ecosystem-based approaches, water pollution, non-point pollutants, urbanization and riparian areas, urbanization and water quality, urbanization and climate change, conservation practices for soil protection, management and control of mountainous waters, climate change and the hydrological cycle, flood management, drought management, hydrological modeling, watershed management, streams restoration, urbanization and streams, management of terrestrial ecosystems, management of semi-aquatic ecosystems, management of urban natural ecosystems, surface, rill gully and stream bank, fluvial geomorphology, ecohydrology, protected areas.

III. Professional Experiences

<u>Employer</u>	<u>Position</u>	<u>City</u>	<u>Dates of Employment</u>
IHU	Associate Professor	Drama, Greece	06/2021- until today
IHU	Assistant Professor	Drama, Greece	05/2019- 06/2021
EMaTTech	Assistant Professor	Drama, Greece	10/2016- 05/2019
EMaTTech	Senior Lecturer	Drama, Greece	10/2010- 10/2016
TEI Kavalas	Research Assistant	Drama, Greece	03/2008- 09/2010
Univ. of Arizona	Associate	Tucson, USA	02/2009- until today
Univ. of Arizona	Extension Specialist/ Assistant Professor	Tucson, USA	01/2005- 01/2009
Iowa State Univ.	Research Assistant	Ames, USA	08/1997-12/2004

Editor for International Scientific Journals

- Journal of Environemntal Biology,
- International Journal of Environmental Studies,
- Kastamonu University Journal of Forestry Faculty,
- Environmental Chemical Engineering
- Sustainability

Reviewer Board for International Scientific Journals

- Water

Guest Editor Special Issue

- Sustainability – Special Issue "Sustainable Management of Semi-aquatic Ecosystems"
- Sustainability – Special Issue "Assessment and Sustainable Management of Riparian Ecosystems"

Reviewer for International Scientific Journals (some selected presented)

Renewable & Sustainable Energy, Applied Sciences, Ecological Indicators, Remote Sensing, Science of the Total Environment, Sustainability, Journal of Environmental Management, Land Degradation & Development, River Research and Applications, Water, Agriculture, Ecosystems and Environment, Sustainability, Land

Funded Projects – Project Manager (total of 23) (some selected presented)

1. 2021. FROM: European Union - Mundus. BUDGET: 55.000 €. Title: *Erasmus Mundus Integrated Master in Hydro-InfoGraphHics for Mediterranean and arid environments*. International EU project with IHU the lead partner of the project.
2. 2020. FROM: European Union - Black Sea Basin Joint Operational Programme 2014 – 2020. BUDGET: 907,135.00 €. Title: *Protect-Streams-4-Sea - Protecting streams for a clean Black Sea by reducing sediment and litter pollution with joint innovative monitoring and control tools and nature-based practices* IHU the lead partner of the project.
3. 2018. FROM: European Union - Erasmus+, Cooperation for innovation and the exchange of good practices, Capacity Building in higher education. IHU (former EMaTTech) BUDGET: 64.693 €. Title: *Innovations in Water Education Programs: Enhancing Water Security and Socio-Economic Development in the Eastern Mediterranean Under Climate Change*. International EU project with Palestine Technical University - Kadoorie (PTUK) the lead partner of the project.
4. 2018. FROM: The European Regional Development Fund in the framework of the implementation of the "Sustainable Urban Development Strategy of the Municipality of Drama" of the R.O.P. A.M.T. 2014-2020. BUDGET: 62.000 €. Title: *Monitoring and Utilization of the Riparian Areas of Drama Municipality*.
5. 2017. FROM: European Union - Erasmus Multilateral Project 2014. EMaTTech AMOUNT 52,584 €. Title: *Specialisation process for the ecoengineering sector in the Mediterranean environment. Generation of the necessary feedback between enterprises and universities in a changing climate environment (ECOMED)*. International EU project with ETSI Montes - Universidad Politécnica de Madrid, (UPM) the lead partner of the project.
6. 2015. 100% responsible. FROM: Operational Programme "Education and Lifelong Learning" (EdLL) of the National Strategic Reference Framework (NSRF) 2007-2013. Action "Aristia II." BUDGET: 114,810 €. Title: *Management and Prevention of Soil Erosion through an Integrated Information System (Acronym: MaP-Erosion)*. IHU the lead partner of the project.
7. 2014. FROM: European Union - Erasmus Multilateral Project 2014. EMaTTech BUDGET: 44,185 €. Title: *MSc Degree on Management of Sustainable and Ecological Tourism (MEST), 539517-LLP-1-2013-1-ES-ERASMUS-EKA*. International EU project with ETSI Montes - Universidad Politécnica de Madrid, (UPM) the lead partner of the project.
8. 2013. 100% responsible. FROM: European Union - Black Sea Basin Joint Operational Programme 2007 – 2013. BUDGET: 851,249.41 €. Title: *Streams-2-SUPPRESS-Fires - Utilizing Stream Waters in the Suppression of Forest Fires with the Help of New Technologies* International EU project with IHU the lead partner of the project.

Professional and Scientific organization

- 2019 – Network of Mediterranean Experts on Climate and Environmental Change (MedECC)
- 2018 – Water Network, Science and Management of Intermittent and Ephemeral Streams

IV. CONFERENCES - WORKSHOPS

Conferences (Chair)

- **Title of Conference:** *Frontiers in Environmental and Water Management*. City: Kavala, Greece. Dates: May 19-21, 2015.

Conferences - Keynote and Invited Speaker (selected ones)

- **Title of Presentation:** Targeted Approaches to Implement Nature-Based Solutions in Aggitis Watershed, Greece with the Use of New Technologies. **Title of Conference:** “*The 8th International Conference on Water Resource and Environment (WRE 2022)*.” City: Xi’an, China. Dates: November 1-4, 2022.
- **Title of Presentation:** Targeted approaches of nature-based solutions to mitigate nonpoint source pollutants **Title of Conference:** *2022 International Conference on Energy, Power, Environment and Computer Science (EPECS2022)*. Online. Dates: September 26-27, 2022
- **Title of Presentation:** Targeted Placement of Soil Erosion Prevention Works After Wildfires **Title of Conference:** *The 6th International Conference on Water Resource and Environment (WRE 2020)*. Online. Dates: August 23-26, 2020
- **Title of Presentation:** WaSec – Innovative Educational Tools for the Sustainable Management of Semi-Aquatic Ecosystems to Promote Water Security in the Eastern Mediterranean. **Title of Conference:** “*MONITOX International Symposium Deltas and Wetlands*.” City: Tulcea, Romania. Dates: September 15-17, 2019
- **Title of Presentation:** Current and Past Projects of the UNESCO Chair Con-E-Ect. **Title of Conference:** *1st International Workshop on Conservation, Environment and Ecotourism*. City: Nova Friburgo, Brazil. Dates: January 15-17, 2019.
- **Title of Presentation:** Riparian Areas: Their Importance, Uniqueness and Ecotourism Opportunities. **Title of Conference:** *1st International Workshop on Conservation, Environment and Ecotourism*. City: Nova Friburgo, Brazil. Dates: January 15-17, 2019.
- **Title of Presentation:** The ECOMED long term strategy in Mediterranean ecoregion. **Title of Conference:** “*X Conference AEIP-APENA-EFIB-ECOMED Soil and Water Bioengineering in the Mediterranean Region*” City: Madrid, Spain. Dates: November 21-23, 2018
- **Title of Presentation:** Utilizing New and Innovative Tools to Mitigate Surficial Erosion in Mediterranean Environments. **Title of Conference:** *International Forestry Symposium*. City: Kastamonu, Turkey. Dates: December 7-10, 2016

Conferences (Publication Chairs)

- **Title of Conference:** “*2022 International Conference on “Energy, Power, Environment and Computer Science” (EPECS2022)*”. Online. Dates: September 26-27, 2022

Conferences (Scientific Committee) (selected ones)

- **Title of Conference:** “*The 8th International Conference on Water Resource and Environment (WRE 2022)*.” City: Xi’an, China. Dates: November 1-4, 2022.
- **Title of Conference:** “*The 4th International Conference on Advances in Civil and Ecological Engineering Research (ACEER 2022)*” Online. Dates: July 4-5, 2022.
- **Title of Conference:** “*CAJG – 3rd Conference of the Arabian Journal of Geosciences*” City: Sousse, Tunisia. Dates: November 2-5, 2020.
- **Title of Conference:** “*The 2nd International Conference on Advances in Civil and Ecological Engineering Research (ACEER 2020)*” City: Beijing, China. Dates: October 20-23, 2020.
- **Title of Conference:** “*MONITOX International Symposium, Environmental Toxicants in Freshwater and Marine Ecosystems in the Black Sea Basin*”.” City: Kavala, Greece. Dates: September 8-11 2019.
- **Title of Conference:** *The 6th International Conference on Water Resource and Environment (WRE 2020)*. Online. Dates: August 23-26, 2020

- **Title of Conference:** “CAJG - 2nd Conference of the Arabian Journal of Geosciences” City: Sousse, Tunisia. Dates: November 25-28, 2019.
- **Title of Conference:** “MONITOX International Symposium Deltas and Wetlands.” City: Tulcea, Romania. Dates: September 15-17, 2019.
- **Title of Conference:** *The 5th International Conference on Water Resource and Environment (WRE 2019)*. City: Macao, China. Dates: June 16-19, 2019
- **Title of Conference:** “2019 International Conference on Advances in Civil and Ecological Engineering Research (ACEER 2019)” City: Kaohsiung City, Taiwan. Dates: July 1-14, 2019.
- **Title of Conference:** “X Conference AEIP-APENA-EFIB-ECOMED Soil and Water Bioengineering in the Mediterranean Region” City: Madrid, Spain. Dates: November 21-23, 2018.
- **Title of Conference:** *The 4th International Conference on Water Resource and Environment (WRE 2018)*. City: Kaohsiung City, Taiwan. Dates: June 17-21, 2018

V. PUBLICATIONS

EDITOR

1. **Zaimes, G.N.**, Iakovoglou, V., Kaziolas, D., Emmanouloudis, D., Ioannou, K. 2016. Proceedings of the International Conference Frontiers in Environmental and Water Management. ISBN: 978-960-363-064-7.
2. **Zaimes, G.** 2007. Hydrology and Water Resources in: Arizona and the Southwest. Proceedings from the 2006 meeting of the hydrology section of the Arizona-Nevada Academy of Science.
3. **Zaimes G.N.** 2007. *Understanding Arizona’s Riparian Areas*. University of Arizona Cooperative Extension, Publication # AZ1432.

Book Chapters (selected publications, total 16)

4. **Zaimes G.N.**, Tardio G., Iakovoglou V., Gimenez M., Garcia-Rodriguez J.L., Sangalli P. (2020) *New Tools and Approaches for Soil and Water Bioengineering in the Mediterranean to Enhance Water Quality*. In: Naddeo V., Balakrishnan M., Choo KH. (eds) Frontiers in Water-Energy-Nexus—Nature-Based Solutions, Advanced Technologies and Best Practices for Environmental Sustainability. Advances in Science, Technology & Innovation (IEREK Interdisciplinary Series for Sustainable Development). Springer, Cham, pp 485-487. ISBN 978-3-030-13067-1
5. **Zaimes, G.N.**, Iakovoglou V. 2020. *Module 4: Geographic Information System for Soil and Water Bioengineering*. In: Garcia-Rodriguez, J.L., Sangalli, P., Tardio, G., S. Mickovski, Fernandez, J. Gimenez, M. (eds) Specialisation process for the ecoengineering sector in Mediterranean environment. PART I. Training Modules. pp. 277-338. Fundacion Conde del Valle de Salazar, Madrid, Spain.
6. **Zaimes, G.N.**, Iakovoglou, V., Giatas, G., Pagonis, G. 2019. *Wildfire Erosion Control, Thassos, Greece*. In: Garcia-Rodriguez, J.L., Sangalli, P., Tardio, G., S. Mickovski, Fernandez, J. Gimenez, M. (eds) Specialisation process for the ecoengineering sector in Mediterranean environment. PART II. Protcols and Case Studies. pp. 208-227. Fundacion Conde del Valle de Salazar, Madrid, Spain.
7. **Zaimes, G.N.**, Iakovoglou, V., Kosmadakis, I., K. Ioannou, Koutalakis, P., Ranis, G., Laopoulos, T., Tsardaklis P. 2017. *A New Innovative Tool to Measure Soil Erosion*. In: Abdalla, O. Kacimov, A., Chen, M., Al-Maktoumi, A., Al-Hosni, T., Clark, I. (eds.) Water Resources in Arid Areas: The Way Forward, Springer, pp.267-280. ISBN 978-3-319-51855-8
8. **Zaimes, G.N.**, K-H. Lee, M. Tufeckioglu, L.A. Long, R.C. Schultz, T.M. Isenhardt. 2011. *The Effectiveness of Riparian Conservation Practices in Reducing Sediment in Iowa Streams*. In: B.P. Hendriks (ed.) Agricultural Research Updates. Volume 2 Nova Science Publishers, Inc. ISBN 978-1-61470-191-0
9. Emmanouloudis D., J.L. García Rodríguez, **G.N. Zaimes**, M.C. Giménez Suárez, and E. Filippidis. 2011. *Euro-Mediterranean torrents: Case studies on tools that can improve their management*. In: K.E. Richards (ed.) Mountain Ecosystems: Dynamics, Management and Conservation Nova Science Publishers, Inc. ISBN 978-1-61209-306-2

International Scientific Journals (selected publications, total more than 70)

10. Koutalakis P., **Zaimes G.N.** 2022. River Flow Measurements Utilizing UAV-Based Surface Velocimetry and Bathymetry Coupled with Sonar. *Hydrology*, 9(8):148
11. **Zaimes G.N.**, Iakovoglou V., Syropoulos D., Kaltsas D., Avtzis D. 2021. Assessment of two adjacent mountainous riparian areas along Nestos River tributaries of Greece. *Forests*, 12(9):1284.
12. Koutalakis P.D., Tzoraki O.A., Prazioutis G.I., Gkiatas G.T., **Zaimes G.N.** 2021. *Can drones map earth cracks? Landslide measurements in North Greece using UAV photogrammetry for nature-based solutions.* *Sustainability*, 13(9):4697.
13. **Zaimes, G.N.**, Iakovoglou, V. 2021. *Assessing riparian areas of Greece - An overview.* *Sustainability* 13, 309.
14. Koutalakis, P., Tzoraki O., Gkiatas, G., **Zaimes, G.N.** 2020. *Using UAV to capture and record torrent bed and banks, flood debris, and riparian areas.* *Drones*, 4, 77.
15. **INVITED PAPER - Zaimes, G.N.** 2020. *Mediterranean Riparian Areas- Climate change implications and recommendations.* *Journal of Environmental Biology* 41, 957-965.
16. Arthun, D., **Zaimes, G.N.**, 2020. *Channel Changes Following Human Activity Exclusion in the Riparian Areas of Bonita Creek, Arizona, USA.* *Landscape and Ecological Engineering* 16, 263–271.
17. **Zaimes, G.N.**, Tsioras, P.A., Kiosses, C. Tufekcioglu, M., Zibtsev, S., Trombitsky, I., Uratu, R., Gevorgyan, L. 2020. *Perspectives on protected area and wildfire management in the Black Sea region.* *Journal of Forestry Research* 31, 257–268
18. **Zaimes G.N.**, Loisios, P., Fytopoulos, P., Mersina, C., Fyllas, N., Iakovoglou, V., Dimitrios Avtzis, D. 2019. *Ground dwelling insects as environmental indicators of riparian habitats in agricultural Mediterranean landscapes.* *Environmental Engineering and Management Journal* 18(9), 1977-1986
19. **Zaimes G.N.**, Tardio G., Iakovoglou V., Gimenez M., Garcia-Rodriguez J.L., Sangalli P. 2019. *New tools and approaches to promote soil and water bioengineering in the Mediterranean.* *Science of the Total Environment* 693, 133677.
20. **Zaimes, G.N.**, Tufekcioglu, M., Schultz, R.C. 2019. *Riparian land-use impacts on stream bank and gully erosion in agricultural watersheds: what we have learned.* *Water* 11, 1343.
21. **Zaimes, G.N.**, Gounaridis, D., Symeonakis, E. 2019. *Assessing the impact of dams on riparian and deltaic vegetation using remotely-sensed vegetation indices and Random Forests modelling.* *Ecological Indicators* 103:630-641.
22. **Zaimes, G.N.**, Arthun, D., Liordos, V., 2019. *Population trends of the native fish assemblage in Bonita Creek, Arizona, USA.* *Western North American Naturalist* 79(3), 394-402.
23. Schismenos, S., **Zaimes, G.N.**, Iakovoglou, V., Emmanouloudis, D. 2019. *Environmental sustainability and ecotourism of riparian and deltaic ecosystems: opportunities for rural Eastern Macedonia and Thrace, Greece.* *International Journal of Environmental Studies* 76(4):675-688.
24. Kotsiotis, V., **Zaimes, G.N.**, Tsiftsis, S., Kiourtziadis, P., Bakaloudis, D. 2019. *Assessing the influence of riparian vegetation structure on bird communities in agricultural Mediterranean landscapes.* *Agroforestry Systems* 93: 675-687.
25. Koutalakis, P., Tzoraki O., **Zaimes, G.N.** 2019. *UAVs for Hydrologic Scopes: Application of a Low-Cost UAV to Estimate Surface Water Velocity by Using Three Different Image-Based Methods.* *Drones* 3(1): 14
26. **Zaimes, G.N.**, Tardio, G., Gimenez, M.C., Iakovoglou, V., Garcia-Rodriguez J.L. 2018. *Promoting soil bioengineering in the Mediterranean ecoregion with new tools and approaches.* *International Journal of Sustainable Agricultural Management and Informatics* 1(4):68-82.
27. **Zaimes, G.N.**, Manikas, N., Spanos, T., Chrisopoulos, V., Avtzis, D.N. 2017. *Odonata as indicators of riverine habitats in Central Greece.* *Fresenius Environmental Bulletin* 26(7): 4244-4253.
28. Koutalakis, P., **Zaimes, G.N.**, Ioannou K., and Iakovoglou V. 2017. *Application of the SWAT model on torrents of the Menoikio, Greece.* *Fresenius Environmental Bulletin* 26(2): 1210-1215.
29. Mitsopoulos, I., Mallinis, G., Zibtsev, S., Yavuz, M., Saglam, S., Kucuk, O., Bogomolov, V., Borsuk, A., **Zaimes, G.**, 2017. *An integrated approach for mapping fire suppression difficulty in three different ecosystems of Eastern Europe.* *Journal of Spatial Science* 62 (1): 139-155.

30. **Zaimes, G.N.**, R.C. Schultz. 2015. *Riparian land-use impacts on bank erosion and deposition of an incised stream in north-central Iowa, USA*. *Catena*. 125: 61-73
31. Hutmacher, A.M., **G.N. Zaimes**, J. Martin, and D.M. Green. 2015. *Vegetative litter decomposition along urban ephemeral streams in Southeastern Arizona*. *Urban Ecosystems*. 18(2): 431-448.
32. Hutmacher, A.M., **G.N. Zaimes**, J. Martin, and D.M. Green. 2014. *Vegetation structure along urban ephemeral streams in southeastern Arizona*. *Urban Ecosystems*. 17(1): 349-368
33. Gounaridis, D., **G.N. Zaimes**, and S. Koukoulas. 2014. *Quantifying spatio-temporal patterns of forest fragmentation in Hymettus Mountain, Greece*. *Computers, Environment and Urban Systems*. 46: 35-44.
34. Tufekcioglu, M., R.C. Schultz, **G.N. Zaimes**, T.M. Isenhardt, and A. Tufekcioglu. 2013. *Riparian grazing impacts on streambank erosion and phosphorus loss via surface runoff*. *Journal of the American Water Resources Association* 49(1): 103-113.
35. Arthun D., **G.N. Zaimes**, and J. Martin. 2013. *Temporal river channel changes in the Gila Box Riparian National Conservation Area, Arizona, USA*. *Physical Geography* 34:60-73.
36. Martin J., S.A. Kurc, **G.N. Zaimes**, M. Crimmins, A. Hutmacher and D. Green. 2012. *Elevated air temperatures in riparian ecosystems along ephemeral streams: the role of housing density*. *Journal of Arid Environments* 84:9-18.
37. **Zaimes G.N.** and D. Emmanoulooudis. 2012. *Sustainable Management of the Freshwater Resources of Greece*. *Journal of Engineering Science and Technology Review* 5(1):77-82.
38. Gounaridis D. and **G.N. Zaimes**. 2012. *GIS-based Multicriteria Decision Analysis applied for Environmental Issues; the Greek experience*. *International Journal of Applied Environmental Sciences* 3:307-321.
39. **Zaimes G.N.** and R.C. Schultz. 2012. *Assessing Riparian Conservation Land Management Practice Impacts on Gully Erosion in Iowa*. *Environmental Management* 49:1009-1021.
40. **Zaimes, G.N.** and R.C. Schultz. 2011. *Stream bed substrate composition adjacent to different riparian land-uses in Iowa, USA*. *Ecological Engineering* 11: 1692-1699
41. **Zaimes, G.N.**, R.C. Schultz, and T.M. Isenhardt. 2008. *Total phosphorus concentrations and compaction in riparian areas under different riparian land-uses of Iowa*. *Agriculture, Ecosystems and Environment* 127:22-30.
42. **Zaimes, G.N.**, R.C. Schultz, and T.M. Isenhardt. 2008. *Streambank soil and phosphorus losses under different riparian land-uses in Iowa*. *Journal of American Water Resource Association* 44(4):935-947.
43. **Zaimes, G.N.**, R.C. Schultz, and T.M. Isenhardt. 2006. *Riparian land-uses and precipitation influences on stream bank erosion in central Iowa*. *Journal of American Water Resource Association* 42:83-97.
44. **Zaimes, G.N.**, R.C. Schultz, and T.M. Isenhardt. 2004. *Stream bank erosion adjacent to riparian forest buffers, row-cropped fields, and continuously-grazed pastures along Bear Creek in central Iowa*. *Journal of Soil and Water Conservation* 59:19-27.