

Georgios D. Gikas



Position: Professor

Laboratory:

Laboratory of Ecological Engineering & Technology

Specialty:

Environmental Management and Modeling of Rivers, Lakes and Wetlands

Education:

- **B.Sc.:** Department of Chemistry, Aristotle University of Thessaloniki, Thessaloniki, Greece, 1979.
- **Diploma:** Department of Civil Engineering, Democritus University of Thrace, Xanthi, Greece, 1996 (5-Year Curriculum).
- **Ph.D.:** Department of Civil Engineering, Democritus University of Thrace, Xanthi, Greece, May 2002.

Short Description - Research Interests

Dr George Gikas has published more than 130 scientific papers in peer-reviewed scientific journals, books and conference proceedings 63 of which are in international journals.

Among his scientific interests are:

- Hydrological models, runoff quality management of urban and rural areas, non-point pollution, water resources management.
- Environmental hydraulic and hydrodynamic models and surface water quality (rivers, lakes, lagoons and reservoirs).
- Use of natural systems (constructed wetlands, stabilization ponds) to improve the runoff quality from rural and urban areas and to treat wastewater.
- Field measurements, chemical / biological assays in the laboratory.

Undergraduate Courses

1. Ecological Engineering and Technology I (Management of runoff, pollutant and sediments).
2. Environmental Management of Internal and Coastal Ecosystems.
3. Geodesy.
4. Ecological Engineering and Technology II (Natural methods of wastewater treatment).

Indicative research projects:

1. Participation as a post-doc researcher in the scientific program: “Pythagoras II – Support of research groups in Democritus University of Thrace”. Research project title: “Study of existing constructed wetlands facilities for wastewater treatment”.
2. Participation in “MEDOCC – HYDRANET, INTERREG IIIB” (team member). Research project title: “Study of environmental projects and design of constructed wetlands unit”.
3. Participation in the Program “INTERREG IIIA – Pilot system for monitoring transboundary watershed of river Nestos” (team member).
4. Participation in the research project titled: “Phosphorus and Nitrogen release conditions of eutrophic marine sediments”.
5. Participation in the research project titled: “Integrated management of sludge municipal wastewater treatment plant and wastewater with natural systems” for the implementation of the research project titled: “Activated sludge treatment using subsurface flow constructed wetlands”.
6. Participation in the research project titled: “FIGARO: Flexible and Precise Irrigation Platform to Improve Farm Scale Water Productivity”. Funding: EE 7th Framework Program.
7. Participation in the research project titled: “WASTEnet – A Black Sea Network Promoting Natural Systems for the Integrated Water and Wastewater Management at Drainage Basin Scale”. Funding: Joint Operational Programme “BLACK SEA 2007-2013”.
8. Participation in the research project titled: “MARE NOSTRUM: Mitigate implementation gaps in integrated coastal zone management by facilitating cross-border cooperation and the removal of legal and institutional obstacles in the Mediterranean basin”.

Selected publications:

1. **Gikas G.D.**, Yiannakopoulou T. and Tsihrintzis V.A., (2006). Water Quality Trends in a Lagoon Impacted by Non-point Source Pollution after Implementation of Protective Measures, *Hydrobiologia*, 563:385-406.
2. **Gikas G.D.**, Tsihrintzis V.A., Akratos C.S. and Haralambidis G., (2009). Water quality trends in Polyphytos reservoir, Aliakmon river, Greece. *Environmental Monitoring and Assessment*, 149: 163-181, DOI 10.1007/s10661-008-0191-z.
3. **Gikas G.D.** and Tsihrintzis V.A., (2010). On-site Treatment of Domestic Wastewater Using a Small-Scale Horizontal Subsurface Flow Constructed Wetland, *Water Science and Technology* 62(3), pp. 603-614.
4. **Gikas G.D.**, Tsihrintzis V.A. and Akratos C.S., (2011). Performance and modeling of a vertical flow constructed wetland – maturation pond system, *Journal of Environmental Science and Health Part A*, 46(7), pp. 692-708.
5. **Gikas G.D.** and Tsihrintzis V.A., (2012). A small-size vertical flow constructed wetland for on-site treatment of household wastewater, *Ecological Engineering*, 44, pp. 337– 343.
6. **Gikas G.D.** and Tsihrintzis V.A. (2012) Assessment of water quality of first-flush roof runoff and harvested rainwater, *Journal of Hydrology*, 466-467, pp. 115-126.
7. **Gikas G.D.** (2017). Water quantity and hydrochemical quality monitoring of Laspias River, North Greece. *Journal of Environmental Science and Health, Part A*, 52(14), pp. 1312-1321.

8. **Gikas G.D.**, Vryzas Z., Tsihrintzis V.A. (2018). S-metolachlor herbicide removal in pilot-scale horizontal subsurface flow constructed wetlands. *Chemical Engineering Journal*, 339, 108-116.
9. **Gikas, G.D.**, Sylaios, G.K., Tsihrintzis, V.A., Konstantinou, I.K., Albanis, T., Boskidis, I. (2020). Comparative evaluation of river chemical status based on WFD methodology and CCME water quality index. *Science of the Total Environment*, 745, 140849.
10. **Gikas, G.D.**, Vryzas, Z., Koshis, Z. (2022). Experiments on fluometuron removal from simulated agricultural wastewater in porous media filters. *Environmental Processes*, 9(1), 1-19. DOI: <https://doi.org/10.1007/s40710-021-00549-5>

Contact details:

Tel: 25410 79381

email: ggkikas@env.duth.gr