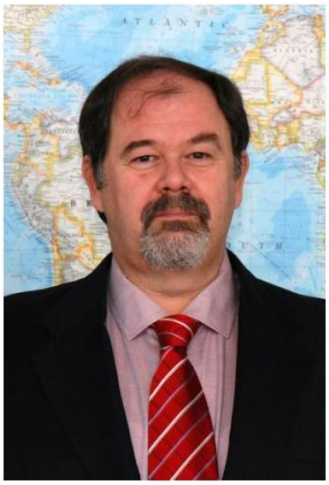

Curriculum Vitae

Dr. Petros Gikas
Professor

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In brief

1985-1990: Bachelor's Degree (5 years degree), Chemical Engineering, National Technical University of Athens (NTUA), Athens, Greece

1991-1996: PhD, Imperial College, Chemical Engineering, London, UK.. *Subject: Wastewater Treatment*

1996-1997: Military service in Greece *(As Chemical Engineer)*

1997-2002: Processes and Operations Manager, Delmar Technology S.A., Thessaloniki, Greece. *Tasks: Development of wastewater treatment processes, Project Manager*

2002-2009: Ministry of Environmental Planning and Public Works. *Tasks: Supervision of the design and construction of the Wastewater Treatment Plant of Athens on Psyttalia Island (capacity 1,000,000 m^3/d, budget 240 million Euros) and the relative Thermal Plant for Sludge Drying (capacity 1400 ton/d (wet basis), budget 36 million Euros)*

2006-2007: Visiting Researcher at the University of California, Davis, USA *(collaboration on research issues on wastewater and solid waste management)*

2009-2015: Assistant Professor, Scholl of Environmental Engineering, Technical University of Crete, Director of the "Design of Environmental Processes Laboratory"

2010-today: Special advisor to the Hellenic Special Secretariat for Water, for issues related with the implementation of the Water Framework Directive 2000/60EC, and representative of Greece to the European Commission Working Group "Chemicals", for the establishment of Environmental Quality Standards (EQS)

2014-today: Collaborating Academic Staff of the Hellenic Open University, teaching the postgraduate course: Wastewater Management

2015-2021: Associate Professor, Scholl of Environmental Engineering, Technical University of Crete, Director of the "Design of Environmental Processes Laboratory"

2021-today: Professor, Scholl of Chemical and Environmental Engineering, Technical University of Crete, Director of the "Design of Environmental Processes Laboratory"

2021-today: Vise Representative of the Scholl of Chemical and Environmental Engineering to the Research Committee of the Technical University of Crete

Member of Editorial Boards: Journal of Environmental Management_Associate Editor (Elsevier), British Journal of Environment and Climate Change (Science Domain International), Biomed Research International (Hindawi) and Heliyon (Elsevier)

Guest Editor: Biomed International *(Subject: Toxicity of Environmental Contaminants)*, Journal of Environmental Management *(Subjects: (a) Waste and Wastewater Management (lead), (b) Sustainable Waste and Wastewater Management, (c) Faecal Sludge Management, (d) Cross-cutting approaches for tackling water security of the Anthropocene)*, Applied and Environmental Soil Science *(Subject: Soil Pollution*

Prevention and Remediation), Water (Subject: Design, Operation and Economics of Wastewater Treatment Plant).

Detailed CV

Dr. Petros Gikas is **Professor** at the **School of Chemical Engineering and Environmental Engineering, Technical University of Crete, Greece**, **Director of the "Design of Environmental Processes Laboratory"** (www.deplab.tuc.gr) and Vise Representative of the Scholl of Chemical and Environmental Engineering to the **Research Committee** of the Technical University of Crete. His research interests are focused on **municipal, industrial and agricultural waste and wastewater management**. He is specifically active in the design of novel wastewater treatment processes with emphasis in low cost – low energy treatment processes and on water reclamation and reuse applications. He is also working on **energy recovery from biosolids and municipal solid waste, utilizing thermal or biological processes**. He is also engaged in research for the development of algorithms for **integrated water recourses management** (with emphasis on water reuse). Since 2005 he teaches the courseσ **"Design of Environmental Processes and Environmental Impact Assessment I & II"** of the 8th and 9th semester and from 2021, the course **"Physical Chemistry"** of the 2nd semester, at the School of Environmental Engineering, Technical University of Crete. He also teaches the postgraduate courses **"Advanced Wastewater Treatment Technologies"**, **"Biorefineries-Waste Valorization"** and **"Environmental Impact Assessment"**. During 2014-2020 he was teaching the postgraduate course **"Wastewater management"** at the **Hellenic Open University**. During the academic year 2006-2007 he visited the **University of California (UC), Davis, USA**, where he was engaged in environmental research at the Departments of Civil and Environmental Engineering, and Biological and Agricultural Engineering. He also thought at the Department of Biological and Agricultural Engineering of UC Davis the postgraduate course "Management and Treatment of Wastewater". Dr. Gikas has scientific collaboration with the Department of Chemical Engineering **University College, London, UK**, with the Faculty of Engineering, **University of Savoie-Mont Blanc, Chambéry, France**, with the Faculty of Sciences and Technology, **University of Reunion, France**, with the Departments of Civil and Environmental Engineering, and Biological and Agricultural Engineering **UC Davis, California**, with the Department of Earth and Environmental Engineering, **Southern Methodists University, Texas**, with the Department of Civil and Environmental Engineering **Columbia University, New York**, with the Department of Environmental Engineering, **Polytechnic of Bari, Italy** with the Swiss Federal Institute for Environmental Science and Technology **(EAWAG), Zurich, Switzerland** and with the Technological Center of Energy and the Environment **(CETENMA), Murcia, Spain**, with the Department of Civil Engineering, **University of Botswana, Gaborone**, with the Department of Civil Engineering, **Kwazulu-Natal University, Durban, South Africa**, with the Faculty of Chemical Technologies and Environmental Engineering, **National Polytechnic University of Armenia, Yerevan**, with the Faculty of Engineering, **National University of Laos**, **Vientiane**, with the Department of Civil and Environmental Engineering, **University of Auckland, New Zealand**, with the Department of Environmental Sciences and Renewable Resources **University of Chile, Santiago**, and with **Melinda and Bill Gates Foundation, Seattle, USA**. During his academic carrier, Dr. Gikas has supervised a number of European and Nationally funded projects, and various projects in collaboration with the industry and with public enterprises.

During his academic carrier, Dr. Gikas has served, as research consultant, in a number of projects, including, the preliminary studies for **water reclamation and reuse** for **Santorini**, **Paros** and **Skiathos** islands, the **water preservation study for Procter and Gamble S.A**., the development of **Anammox process for municipal wastewater treatment** for **M2 Renewables, Inc., California**, as well as a study for the improvement of the **energy efficiency of the water supply and sewerage pumping stations of the Municipality of Rethymno**. Also, he elaborated the **Water Management Plan for the Aegean Islands**, focusing on point pollution sources and a study assigned by ESDAK (United Association of Solid Waste Management for Crete) for the **exploitation of electric energy from the largest landfill** in Crete, in Heraklion. He is currently working on the development of a **novel positive energy wastewater treatment process**, through the **LIFE program**, with title **"New Concept for Energy Self-Sustainable Wastewater Treatment Process and Biosolids Management" (**www.biosolids2energy.eu**)**, where he serves as **Project Coordinator**. Also he is engaged in a National research program, on **"Bioconversion of CO_2 into High-added Value Bioproducts through Sustainable Microalgae Cultivation Processes" (**www.co2-

bioproducts.gr**)**. Recently he is engaged on the design and construction of **two novel low energy consumption wastewater treatment plants** (one in Paros Island and one in Cyprus), under the framework of the **Interreg Program** (www.anelixi.tuc.gr). The Water Supply and Sewerage Company of Athens (EYDAP SA) has assigned Prof. Gikas to draft the regulatory framework for the reuse of treated wastewater, for EYDAP SA. Finally, Prof. Gikas offers expertise support to ESDAK (United Association of Solid Waste Management for Crete) for the **design of a pilot unit for the gasification of solid waste** in Heraklion, Crete.

Dr. Gikas currently serves a special advisor for the **Hellenic Central Water Agency**, for issues related with the implementation of the **Water Framework Directive 2000/60EC,** and represents Greece in the **European Commission Working Group "Chemicals"**, for Environmental Quality Standards. He is also advisor to the **Greek-German Assembly** (Deutsch-Griechische Versammlung-DGV), for waste and wastewater management issues. Between April-November 2013 he served as **member of the board of directors for the Centre for Renewable Energy Sources and Saving** (CRES).

Between 2002-2009, Dr. Gikas was employed by the **Ministry of Environmental Planning and Public Work**s, supervising the construction of wastewater treatment plant of Athens on Psyttalia Island (capacity: 1,000,000 m^3/d, budget 240 million Euros) and the plant for thermal processing of municipal sludge management (capacity 1400 ton/d (wet basis), budget 36 million Euros), and as staff of the **Hellenic Central Water Agency**. During the above period he represented Greece in the WG5 Special Committee of European Union, which was responsible for the elimination of toxic substances from surface and underground waters, in relation with the **Water Framework Directive 2000/60EC.** In 2008, Dr. Gikas **drafted the first legislation on water reuse criteria for Greece** (FEK B2089/9.10.2008). He was also member of the committee of the Ministry of Environmental Planning and Public Works for the revision of discharge limits to the **Asopos basin**, and for the remediation of the grater Asopos region. In 2007, he worked on a research study ordered by the **Integrated Waste Management Board of the State of California**, on the potential for biogas production from municipal solid waste.

Dr. Gikas studied **Chemical Engineering at the Technical University of Athens**. His bachelor thesis was on the "Production of Proteinase from Genetically Modified Cells *Lactobaccilus plantarum*". He did his PhD at the **Department of Chemical Engineering, Imperial College, London**, UK, with title "The Influence of Biomass Activity on the Performance of Immobilized Cell Bioreactors". During his postgraduate studies he received the "Eugenides Foundation" grant, a grant from the British "Science and Engineering Research Council" and two grants from the European Union ("BRIDGE" and "Human Capital and Mobility" programs). He also received two grants for the presentation of his work in international conferences (from the "Society of Chemical Industry, UK" and from the "Institution of Chemical Engineering, UK"). After he got his PhD, he worked in Imperial College for the scale up of a College's patent on the remediation of toxic wastewaters using membrane technologies and microbial degradation. This last work awarded the "Smart Award" of the British Ministry of Research and Technology.

Between 1997-2002, Dr. Gikas worked as **Processes and Operations Manager** of "Delmar Technology S.A.", a company specializing in industrial wastewater treatment. Among other tasks, he was responsible for the **scaling up** of a patented process for chemical treatment of industrial wastewaters. During his occupation to the above company, he supervised industrial and research projects in more than 10 countries with total budget over one million Euros.

Dr. Gikas is the author of more than 70 scientific articles, and he has presented his research findings in more than 150 conferences. Dr. Gikas is serving as reviewer in more than 30 scientific journals. Dr. Gikas serves as **associate editor** for the **"Journal of Environmental Management"**, an ISI journal published by Elsevier, with Impact Factor of 6.789, member of the **editorial boards** of the **"British Journal of Environment and Climate Chang"** (Science Domain International), the **"Journal of Biomedicine and Biotechnology"** (Hindawi) and **"Heliyon"** (Elsevier), a new multidisciplinary journal by Elsevier. Moreover, he has participated in the edition of a number of **Special Issues** in scientific journals: Biomed International (Subject: Toxicity of Environmental Contaminants), Journal of Environmental Management (Subjects: (a) Waste and Wastewater Management (lead), (b) Sustainable Waste and Wastewater Management, (c) Faecal Sludge Management, (d) Cross-cutting approaches for tackling water security of the Anthropocene), Applied and Environmental Soil Science (Subject: Soil Pollution Prevention and Remediation), Water (Subject: Design, Operation and Economics of Wastewater Treatment Plant).

Between 2010-2013, Dr. Gikas was an **elected member of council of Technical Chamber of Western Crete**,

Greece, and vice member of the steering committee of the above council, since 2010. In 2012, Dr. Gikas was **elected as head of the union committee of academic staff of the Technical University of Crete**.

Selected Publications in Scientific Journals

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E. Ranieri, A. Gorgoglione, A. Pertella, V. Petrutzzelli and **P. Gikas**, 2015, "Benzene removal in Horizontal Subsurface Flow Constructed Wetlands treatment", International Journal of Applied Engineering Research, **10**(6), 14603-14614.

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E. Ranieri, A. Gorgoglione, C. Montanaro, A. Iacovelli and **P. Gikas**, 2014, "Removal Capacity of BTEX and Metals of Constructed Wetlands under the Influence of Hydraulic Conductivity", Desalinated Water, **56**(5), 1256-1263.

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