

Dr Demetris Francis Lekkas

Contact info

Associate Professor, Analysis and Simulation of Environmental Systems
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Education

Post Doc – Pythagoras II, School of Chemical Engineering, National Technical University of Athens, Environmental & Energy Management Research Unit – EEMRU (3/2005 – 12/2006).

Post Doc, Department of Civil and Environmental Engineering Imperial College London, UK (5/2002 - 4/2004).

Ph.D., DIC in Hydrology, Department of Civil and Environmental Engineering Imperial College London, UK.

B.Sc. in Environmental Studies, Department of Environmental Sciences, University of the Aegean, Greece (10/1994 - 7/1998).

WORK EXPERIENCE:

- 2016 – today Associate Professor in Analysis and Simulation of Environmental Systems, Department of Environment, University of Aegean, Greece
- 2014 – 2016 Associate Professor in Statistical Methods of Simulation and Data Mining. Department of Statistics and Actuarial-Financial Mathematics. University of the Aegean, Samos Greece
- 2006 – 2014 Assistant Professor in Statistical Methods of Simulation and Data Mining. Department of Statistics and Actuarial-Financial Mathematics. University of the Aegean, Samos Greece
- 2005 – 2006 Lecturer, Department of Marine, University of the Aegean (2005-2006)

Research Projects

- Coordinator of the project: Geo-Ergon Paideia” «Start Up Farm: Skills for future eco-farmers». European programme Erasmus+, through the Greek State Scholarship Foundation. Launch date 9/2016, duration 24 months.
- Coordinator of the project “Support and development of Waste Management practices for the Municipality of Paxos Island - Municipality of Paxos Island Launch date 12/2016, duration 12 months
- Coordinator of the project “Practices for integrated Municipal Waste Management for the Island of Kythnos Launch date 11/2016, duration 12 months
- Coordinator of the project “Evaluation and optimization of a mobile treatment unit for Municipal Solid - Municipality of Kalamata” financed by the Municipality of Kalamata, 2013 – 2016
- Researcher for the project “ΘΑΛ-ΧΩΡ- Cross-border Cooperation for the development of Marine Spatial Planning” financed by INTERREG IVC Programme Greece-Cyprus 2007-2013.
- Coordinator of the project “Reduction of operating cost of tourist corporation via sustainable management of water and energy” financed by the National Strategic Reference Framework (NSRF) Operational Programme “Education and Lifelong Learning 2007-2013. Launch date 3/2014, duration 5 months.
- Coordinator of the project “EarthBias 2014 - Summer School in Big Data Analysis in Earth Sciences” financed by the National Strategic Reference Framework (NSRF) - Operational Programme “Education and Lifelong Learning 2007-2013. MIS 355434. Start 1/2014, duration 8 months.
- Scientific responsible for the project “Identification of water bodies as part of the Water Framework Directive management plan for the islands in the Aegean water district”, financed by the Ministry of Environment, Energy and Climate Change - Start 7/2013, Duration 10 months.
- Researcher for the project “ISLA - Physical and Economic Impacts of Sea Level Changes on the Island Beaches of the Aegean Archipelago” financed by the Operational Program Education and Lifelong Learning of the National Strategic Reference Framework (NSRF) - Research Funding Program: THALES, Start 2012, duration 36 months
- Researcher for the project “DROUGHT R-SPI - Fostering European Drought Research and Science-Policy Interfacing” School of Chemical Engineering, National Technical University of Athens, financed by the European Commission, 7th Framework Programme, Collaborative Project - Start 10/2011, Duration 36 months.

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- Researcher for the project “WASSERMed - Water Availability and Security in Southern Europe and the Mediterranean” School of Chemical Engineering, National Technical University of Athens, financed by the European Commission, 7th Framework Programme, Collaborative Project - start 1/2010, Duration 36 months.
 - Researcher for the project “SWITCH - Sustainable Water management Improves Tomorrow’s Cities’ Health”, School of Chemical Engineering, National Technical University of Athens. Joint project between a UN organization and the European Commission. - Start 1/2006, duration 60 months.
 - Researcher for the project “AquaStress - Mitigation of Water Stress through new approaches to Integrating Management, Technical Economic and Institutional Instruments”, School of Chemical Engineering, National Technical University of Athens, financed by European Commission, DG Research, 6th Framework Programme, 511231, (2005-2008).
 - Researcher for the project “WaterStrategy Man - Developing Strategies for Regulating and Managing Water Resources and Demand in Water Deficient Regions” School of Chemical Engineering, National Technical University of Athens, financed by European Commission, DG Research, 5th Framework Programme, Water Key Action, EVK1-CT-2001-00098, (2001-2005).
 - Researcher for the project “Development of a methodology for assessing the change of water quality in a water system incorporating environmental cost” School of Chemical Engineering, National Technical University of Athens, financed by EPEAEK Programme - PYTHAGORAS II (2005-2006).
 - Research assistant (Post-Doc) “Improved Methods for National Spatial-Temporal rainfall and Evaporation Modelling for Broad Scale Modelling (BSM)” EWRE, Dept. of Civil and Environmental Engineering, Imperial College, London, UK financed by DEFRA UK (2002-2004).
 - Research assistant, Department of Environment, University of Aegean. Project Title “Alternative methods for water disinfection – EYDAP” (2002-2005).
 - Research assistant, Department of Environment, University of Aegean. Project Title: Determination of Environmental state in inland waters with respect to Priority Substances of Directives 76/464/EEC (1998-2000).
 - Research assistant, Department of Environment, University of the Aegean. Project Title: Monitoring Priority Substances of Directives 76/464/EEC and 2000/60/EC in Greek Water Bodies (1996-1998)
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PUBLICATIONS:

Journals

- Pavlogeorgatos G., Karantanelli M., **Lekkas D.**, (1999) Determination of Cadmium in the surface waters of the Northern Greece. *Toxicological and environmental chemistry*, vol. 69, 165 – 169.
 - **Lekkas D.F.**, Imrie C.E., Lees M.J., (2001) Improved non-linear transfer function and neural network methods of flow routing for real-time forecasting. *Journal of Hydroinformatics*, vol. 3(3), 153-164.
 - Koumenides K., Sakkas N., **Lekkas D.F.**, Xylourgidis N., (2001) Using GAC to control THMs in drinking water. An experimental study at the Athens water works and a first economic evaluation of the method. *GLOBAL NEST: the International Journal*, vol. 3(3), 189-197.
 - Golfopoulos S.K., Nikolaou A.D., Kostopoulou M.N., Xilourgidis N.K., Vagi M.Ch., **Lekkas D.**, (2003). Organochlorine pesticides in the surface waters of Northern Greece, *Chemosphere*, vol. 50(4), 507 – 516.
 - Lekkas T., Kostopoulou M., Petsas A., Vagi M., Golfopoulos S., Stasinakis A., Thomaidis N., Pavlogeorgatos G., Kotrikla A., Gatidou G., Xylourgidis N., Kolokythas G., Makri C., Babos D., **Lekkas D.F.** and Nikolaou A., (2003) Monitoring Priority Substances of Directives 76/464/EEC and 2000/60/EC in Greek Water Bodies. *Jour. Environ. Monitoring* vol. 5(4), 593 - 597.
 - **Lekkas D.F.**, Maxey R.T., Wheeler H.S., (2004) Intercomparison of forecasting methods for flood warning in the river catchment. *GLOBAL NEST: the International Journal*, vol. 5(2), 87-95.
 - Lekkas T., Kostopoulou M., Kolokythas G., Thomaidis N., Golfopoulos S., Kotrikla A., Pavlogeorgatos G., Stasinakis A., Nikolaou A., Gatidou G., Petsas A., Vagi M., Babos D., **Lekkas D.**, Makri M. (2004) Optimization of analytical methods for determination of trace concentrations of toxic pollutants in drinking and surface waters. *GLOBAL NEST: the International Journal*, vol. 5(3), 133-143.
 - Lekkas T., Kolokythas G., Nikolaou A., Kotrikla A., Gatidou G., Thomaidis N., Golfopoulos S., Makri C., Vagi M., Stasinakis A., Petsas A., **Lekkas D.F.**, (2004) Evaluation of the pollution of the surface waters of Greece from the priority compounds of list II, 76/464/EEC Directive. *Environment International*, vol. 30, 995-1007.
 - **Lekkas D.F.**, Onof C., Lees M.J., Baltas E.A., (2004) Application of artificial neural networks for flood forecasting. *GLOBAL NEST: the International Journal*, vol. 6(3), 209-215.
 - Wheeler H.S., Chandler R.E., Onof C.J., Isham V.S., Bellone E., Yang C., **Lekkas D. F.**, Lourmas G., Segond M-L., (2005) Spatial-temporal rainfall modelling for flood risk estimation. *Stochastic and Environmental Research and Risk Assessment*. vol. 19(6), 403-416.
 - **Lekkas D.F.**, (2005) Identification of water quality changes in Athens water system – limitations and perspectives. *Transactions on Environment and Development*. vol. 1(1), 69-74.
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- **Lekkas D.F.**, Onof C., (2006) Introducing the variation of advective time delay (ATD) to Transfer Function models. *Environmental Modelling and Software*, vol. 21, 1180 -1189.
- Kanaki M, Nikolaou A., Makri C.A, **Lekkas D.F.**, (2007) The occurrence of priority PAHs, nonylphenol and octylphenol in inland and coastal waters of Central Greece and the island of Lesbos, *Desalination*, vol. 210, 16-23.
- Nikolaou A.D., Meric S., **Lekkas D.F.**, Naddeo V., Belgiorno V., Groudev S., Tanik C., (2008) A Multi-parametric water quality monitoring approach according to the WFD application in Evros trans-boundary river basin: Priority pollutants. *Desalination*, vol. 226, 306-320.
- **Lekkas D.F.**, (2008) Using complementary methods for improved flow forecasting. *Journal of Hydrological Sciences*, vol. 53(4), 696-706
- **Lekkas D. F.**, Manoli E., Assimacopoulos D., (2008) Integrated urban water modelling using Aquacycle model. *Global NEST Journal* vol. 10(3), 310-319.
- Lekkas T. D., Babi, K. G., Koumenides, K. M., Makri, C. A., **Lekkas, D. T.**, Nikolaou, A. D., (2009) Removal of specific DBPs by GAC in Galatsi WTP, Athens. *GLOBAL NEST Journal* , vol. 11(3), Sp. Iss. SI, 349-356.
- Malmsten M., **Lekkas D.F.**, (2010) An econometric cost analysis of urban water supply and waste water treatment processes. Application to a number of Swedish communities. *Desalination*, vol. 18, 327–340, (doi: 10.5004/dwt.2010.1961).
- Kampragou E., **Lekkas DF.**, Assimacopoulos D. (2010) Water demand management: Implementation principles and indicative success stories. *Water and Environment Journal*, vol. 25 (2011) 466–476 (doi: 10.1111/j.1747-6593.2010.00240.x).
- Karka P., **Lekkas D.F.**, Grigoropoulou, E., Assimacopoulos, D., (2011). Conceptual modelling for quantifying wastewater production. A case study for Athens wastewater system. *Journal of Environmental Science and Engineering*, vol. 5, 1-4.
- Anastasiadis S., Boglis A., Pechlivanidis I.G., **Lekkas D.F.**, Baltas E., 2013, Application of GIS-based Clark's Unit hydrograph and transfer function model to describe runoff response in a small catchment - Case study: Lykoremma River, Greece, *Fresenius Environmental Bulletin*, 22(7B), 2152-2158
- Pechlivanidis I.G., Anastasiadis S. and **Lekkas D.F.** (2015) Development and testing of the MWBMT toolbox to predict runoff response at the poorly gauged catchment of Mornos, Greece *European Water Issue* 39, 3-18
- Ioannidis K., Karagrigoriou A., **Lekkas DF.**, (2015). Analysis and Simulation of Rainfall Events. *Mathematics in Engineering, Science & Aerospace (MESA)*,6(4).
- Klontza E.E., Kampragkou E., Ververidis K. Papadopoulos M.P., **Lekkas D.F.** (2016) Evaluation of a water saving methodology for mid-sized tourist lodging units. *European Journal of Environmental Sciences* Vol. 6, No. 1, pp. 37–42
- **Lekkas D.F.** Kazamias G., Klontza E.E., (2016) Low cost and efficient method for municipal solid waste management- the case of Kalamata municipality **in preparation**
- Golfinopoulos S.K, Nikolaou Ad, Thomaidis NS, Kotrikla AM, Vagi M, Petsas A, **Lekkas DF** and Lekkas TD. (2016) Determination of the priority substances regulated by 2000/60/EC and 2008/105/EC Directives in the surface waters supplying water treatment plants of Athens, Greece *JOURNAL OF ENVIRONMENTAL SCIENCE AND HEALTH, PART A, Toxic/Hazardous Substance & Environmental Engineering (Accepted)*

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- Karantanelli M., Golfinopoulos S., Kotrikla A., Pavlogeorgatos G., Xilourgides N., Makri Ch., Kolokithas G., **Lekkas D.**, (1997) Determination of the substances of the Catalog I of the 76/464 EEC Directive in the surface waters of the Northern Greece, *5th Conference on Environmental Science and Technology*, Volume B', 346-356, Molyvos, Lesbos, Greece, (ISSN 1106-5516).
- Karadanelli M., Golfinopoulos S., Kotrikla A., Pavlogeorgatos G., Xilourgides N., Makri Ch., Kolokithas G., **Lekkas D.**, Nikolaou A.D., (1998) Occurrence of micropollutants in the surface waters of Northern Greece (Catalogue I, 76/464/EEC Directive), *4th International Conference Protection and Restoration of the Environment*, Vol. I, 153-160, Halkidiki, Makedonia Greece.
- **Lekkas D.**, Plomaritis Th., Tsiartsis G., Karydis M., (1999) Antifouling toxicity on marine microalgae. *6th Conference on Environmental Science and Technology*, Volume A, 473-479.
- Imrie C.E., **Lekkas D.F.**, Lees M.J., (2000) Comparison of non-linear transfer function and artificial network for flow routing. *7th National Hydrology Symposium, British Hydrological Society* p. 5.15-5.16, Newcastle upon Tyne, UK.
- **Lekkas D.F.**, Baltas E., Mimikou M., Onof C., (2001) Preliminary study of a new non-linear Transfer Function model for real-time river flow forecasting and control. *Proceedings of the Mahadevan Birth Centenary International Symposium on Challenges of Water Resources Management in the Developing Countries in the 21st Century*. Andhra University, Visakhapatnam, India.
- **Lekkas D.F.**, Baltas E., Mimikou M., Onof C., (2001) River flood forecasting with a Transfer Function model. *7th Int. Conference on Environmental Science and Technology*, Vol. B p.518-523, Ermoupolis, Syros Greece.
- Lekkas T., Kostopoulou M., Kolokythas G., Petsas A., Vagi M., Stasinakis A., Thomaidis N., Gatidou G., Kotrikla A., Golfinopoulos S., Makri C., **Lekkas D.**, Nikolaou A. (2003) Investigation of priority pollutants belonging to the new water framework directive in the surface waters of Greece. *HELLECO 2003*, Vol. A, p 232-239, Thessaloniki, Greece.
- Wheeler H.S., Isham V., Onof C.J., Chandler R.E., Bellonie E., Chi Y., **Lekkas D.F.**, Segond M-L. (2003) Stochastic Modelling of Rainfall and Evaporation for Continuous Simulation Rainfall-Runoff Modelling. *EGS - AGU - EUG Joint Assembly, Nice, France.*

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- **Lekkas D.F.**, Onof C., (2005) Improved flow forecasting using Artificial Neural Networks. *9th int. conference on Environmental Science and Technology*. vol. A, 877-884.
 - Kanaki M., Nikolaou A., Makri C., **Lekkas D.F.**, (2005) The occurrence of priority PAHs in inland and coastal waters in Athens and Mytilene, Greece. *9th int. conference on Environmental Science and Technology* vol. A, 653-658.
 - **Lekkas D.F.**, Makri C., Gkolfinopoulos S., Nikolaou, A.D., Babi, A., Koumenidis, K. (2005) Alternative disinfection methods. – Minimisation of toxic organic compounds: Application in Athens water supply Σο ΕΕΔΥΠ (in greek).
 - Minasidou K., **Lekkas D.F.**, Nikolaou A., Gkolfinopoulos S., (2006) Water quality changes during storage - The case of Mornos reservoir International Conference *Protection and Restoration of the Environment VIII*, Chania, Crete, Greece.
 - Nikolaou A.D., Meric S., **Lekkas D.F.**, Naddeo V., Belgiorno V., Groudev S., Tanik A., (2006) Multi-parametric water quality monitoring approach according to the WFD in the Evros transboundary river basin: Priority pollutants. *DIPCON*, Istanbul, TURKEY.
 - Karka P., **Lekkas D.F.**, Grigoropoulou E., Assimacopoulos D., (2006) Stochastic modelling of organic material in urban waste water systems, *Aqua 2006 - Water Science and Technology Integrated Management of Water Resources*, 23 – 26, Greece.
 - Karka P., Manoli E., **Lekkas D.F.**, Assimacopoulos D., (2007) A case study on integrated urban water modelling using Aquacycle. *10th int. Conference on Environmental Science and Technology*, vol. A, 629-639.
 - Apostolaki S., **Lekkas D.F.**, Assimacopoulos D., Elbadawy O., Abuzeid K. Batchelor C., Bury P.J. (2007) Integrating Visioning, RIDA and DSS activities in Alexandria. 2nd SWITCH Scientific Meeting, Tel-Aviv, Israel.
 - Lekkas T.D., Babi K.G., Koumenidis K.M., Makri C.A., **Lekkas D.F.**, Nikolaou A.D. (2008) REMOVAL OF SPECIFIC DBPs BY GAC IN GALATSI WTP, ATHENS In *Protection and Restoration of the Environment IX*, Corfu, Greece.
 - **Lekkas D.F.**, Gkaras A., Boukas L. (2009) Spatial Representation of Rainfall Field Using Cellular Backbone Networks. Κοινό Συνέδριο - 11^ο της Ελληνικής Υδροτεχνικής Ένωσης & 7^ο της Ελληνικής Επιτροπής Διαχείρισης Υδατικών Πόρων.
 - Boglis A., Evelpidou N., Vasilopoulos A., **Lekkas D.F.**, Foudoulis I. (2009) Urban flood modeling in Karlovassi area – Samos Island. *11th int. Conference on Environmental Science and Technology Chania, Crete*.
 - **Lekkas D.F.**, Modarres R., (2009) Investigation of the watershed area- peak flow relationship using artificial neural networks. *EGU General Assembly* vol 11.
 - **Lekkas D.F.**, Boukas L., (2009) High resolution rainfall estimation platform for urban flooding protection *URBAN FLOOD CONFERENCE - PARIS*.
 - Kakoura V.I., Boukas L., **Lekkas D.F.**, Konofaos N., (2010) Examining the performance of an open space laser network link under various weather conditions, Pan-Hellenic Conference EUREKA, 2010, Patras, Greece.
 - Mammias K., Anastasiadis S., **Lekkas D.F.**, (2011) Statistical Analysis of Precipitation Indexes and Investigation of Climate Change in Naxos Island, *12th int. Conference on Environmental Science and Technology*, Rhodes, Greece.
 - Anastasiadis S., Boglis A., Pechlivanidis I., **Lekkas D.F.**, Baltas E., (2011) Evaluation of a GIS-based method to describe runoff response in ungauged catchments. *CEMEPE 2011*.
 - Anastasiadis S., **Lekkas D.F.**, Mammias K., (2012) Detection and Statistical Analysis of Severe Drought Events Using Meteorological Drought Definition, Case Study: Greek Region *EGU General Assembly 2012*.
 - Stavros Anastasiadis, **Demetris F. Lekkas**, Georgios Liagkas (2012) Comparison of various distribution parameter estimation methods in Annual Maximum and Peak over Threshold models for modelling extreme rainfall events” *Presented in Advanced Methods for Flood Estimation in a Variable and Changing Environment» organized as a Mid-term Conference of COST ES0901 ‘FloodFreq’ Action, in Volos, 24-26 October 2012*.
 - Velegrakis A.F., Monioudi I.N., Poulos S.E., **Lekkas D.F.**, Hatzopoulos J.N., Hasiotis Th., Karambas Th., Kontogianni A., Vousdoukas M.I., Andreadis O., Rigos A., Tsekouras G., Psarros F., Ghionis G., Karditsa A., Chatzipavlis A., Anastasiadis S., Kokkoris G., Petrakis S., Tsimplis M.N., Peduzzi P. and Collins M.B. (2013) Physical and economic impacts of sea level changes on the island beaches of the Aegean Archipelago (ISLA); concepts and preliminary results. *13th Int. Conference on Environmental Science and Technology, Athens, Greece*.
 - Pechlivanidis I.G., Anastasiadis S. and **Lekkas D.F.** (2013) Development of a semi-distributed hydrological model toolbox to predict runoff response in the ungauged catchment of Mornos, Greece *13th Int. Conference on Environmental Science and Technology, Athens, Greece*
 - Gkolfinopoulos S.K., Nikolaou A.D., Thomaidis N.S., Stasinakis A., Kotrikla A., Gatidou G.M., Vagi M., Petsas A., **Lekkas D.F.**, Makri C. and Lekkas T.D. (2015) The occurrence of priority substances regulated by 76/464/EEC and 2000/60/EC WFD directives in the surface waters supplying water treatment plants of Athens, Greece *14th Int. Conference on Environmental Science and Technology, Rhodes, Greece*
 - Klontza E.E., Giannopoulou K. and **Lekkas D.F.** (2015) Assessment of different practices for composting the organic fraction of municipal solid wastes *14th Int. Conference on Environmental Science and Technology, Rhodes, Greece*
 - Klontza E.E., Kampragkou E., Ververidis K. Papadopoulou M. and **Lekkas D.F.** (2015) Water-energy saving methodologies for mid-sized tourist lodging units *14th Int. Conference on Environmental Science and Technology, Rhodes, Greece*
 - Klontza E.E., Giannopoulou K., **Lekkas D. F.**, (2015) Assessment of different practices for composting the organic fraction of
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- Klontza E.E., Giannopoulou K., **Lekkas D. F.**, (2015) Studies on Waste Management on the example of Kalamata Municipality. 5th International Conference on Environmental Management, Engineering, Planning and Economics (CEMEPE) and SECOTOX Conference, Mykonos, Greece
 - Ioannidis K., Karagrigoriou A., **Lekkas D.F.**, (2015). Analysis and Simulation of Rainfall Events. 28th National Conference of Statistics. Athens Greece
 - Kazamias G., Klontza E.E., **Lekkas D.F.** (2016) An application of sewage sludge co-composting with organic fraction of municipal solid waste: fate of PAH's and PCB's 5th International Conference on Industrial and Hazardous Waste Management Chania Crete, Greece (September 2016)
 - Kazamias G., Klontza E.E., **Lekkas D.F.** (2016) Evaluation of composting system plant in Kalamata Municipality 10th International Conference on "Circular Economy and Organic Waste" Heraklion, Crete, Greece (June 2016)
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Citations: (google scholar) <http://scholar.google.gr/citations?user=yj1jsC4AAAAJ&hl=en>
All (557), Since 2012 (298)

Reviewer for International Journals

Global NEST Journal ([associate editor](#)),
Urban Water,
Hydrological Science Journal,
Desalination (reviewer and Guest editor in Special Issue),
Environmental Modelling and Software,
Journal of Water and Climate Change,
Frontiers in Environmental Engineering (FIEE)

International Scientific Organisations

Global Network on Environmental Science and Technology (executive director),
International Association of Hydrological Science
British Hydrological Society

International Conference on Environmental Science and Technology – <http://cest.gnest.org>

Chairman of Scientific and Programme Committee

Summer school [Big Data Analysis in Earth Sciences](#) (coordinator)