

# **Dr. Zoi Dokou**

**Assistant Research Professor**

**Civil and Environmental Engineering, University of Connecticut**

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## **EDUCATION**

**2002 – 2008:** PhD in Civil and Environmental Engineering, University of Vermont, USA.

**1997 – 2002:** B.S in Environmental Engineering, Technical University of Crete, Greece.

## **PhD THESIS**

Optimal search strategy for the definition of a DNAPL (Dense Non-Aqueous Phase Liquid) source.

**Advisor: Dr. George Pinder.**

## **B.S. THESIS**

Modeling the groundwater flow and mass transport of nitrates in the unconfined aquifer of the Korinth's bay area.

**Advisor: Dr. George Karatzas.**

## **RESEARCH INTERESTS**

My primary research interests revolve around the area of hydrogeology. I specialize in employing, as well as developing, numerical, statistical and surrogate approaches to integrate complex system models with laboratory and field scale observations, with particular focus on:

- Integration of remote sensing and groundwater modeling
- Groundwater flow modeling under unsaturated/saturated conditions
- Contaminant transport modeling
- Groundwater-surface water interaction
- Stochastic modeling and uncertainty analysis
- Contaminant source search methods
- Non aqueous phase liquid (NAPL) fate in the subsurface and remediation
- Geostatistics and spatial data analysis using GIS
- Saltwater intrusion modeling
- Kalman Filtering for incorporating monitoring data in modeling
- Optimization methods in groundwater resources including evolutionary algorithms
- Artificial Neural Networks
- Fuzzy logic

## RESEARCH AND WORK EXPERIENCE

08/23/2017 – Assistant Research Professor. *Department of Civil and Environmental Engineering, University of Connecticut, USA.*  
Project Manager, NSF PIRE: Taming Water in Ethiopia

*Project:*

NSF PIRE: Taming Water in Ethiopia - An Interdisciplinary Approach to Improve Human Security in a Water-Dependent Emerging Region.

06/01/2016 – 08/22/2017 Postdoctoral Fellow. *Department of Civil and Environmental Engineering, University of Connecticut, USA.*

*Project:*

NSF PIRE: Taming Water in Ethiopia - An Interdisciplinary Approach to Improve Human Security in a Water-Dependent Emerging Region.

03/01/2008 – 05/31/2016 Postdoctoral Research Associate. *School of Environmental Engineering, Technical University of Crete, Greece.*

*Projects:*

1. Multi-objective optimization of cosolvent flushing of NAPLs from contaminated groundwater
2. LIFE ENV CHARM - Chromium in Asopos groundwater system: Remediation technologies and Measures
3. Development of a groundwater simulator (numerical model) of the Malia coastal aquifer
4. Development of an electrical tomography study and groundwater modeling of the coastal area of PIRKAL
5. Development of a remediation design of the coastal area of PIRKAL
6. FLOODMED 5D214 – Monitoring, forecasting and best practices for flood mitigation and prevention in the CADGES region (INTERREG IIIB, 2006-2008)

01/01/2013 – 31/10/2015 Senior Research Associate. *Department of Natural Resources and Environment, Technological Educational Institute of Crete, Greece*

*Projects:*

1. Thales -Geodiametris: Integrated geoinformatics technologies for time-lapse monitoring of land pollution from the disposal of olive-oil mills wastes
2. Archimedes III: Interdisciplinary study for exploring, understanding and management of groundwater resources. Pilot field investigation northwest and central Crete, Aquadam

11/12/2007 – 31/2/2008 Postdoctoral Research Associate. *Department of Civil and Environmental Engineering, University of Vermont, USA.*

*Project:*

Optimal search strategy for the definition of a DNAPL (Dense Non-Aqueous Phase Liquid) source. Utilizing stochastic optimization (Monte Carlo simulation) and a Kalman filter for the definition of a DNAPL source location, depth and magnitude. Research grant from United States Department of Defense (DoD) and SERDP (Strategic Environmental Research and Development Project).

1/1/2003 – 10/12/2007 Graduate Research Assistant. *Department of Civil and Environmental Engineering, University of Vermont, USA.*

*Project:*

Optimal search strategy for the definition of a DNAPL (Dense Non-Aqueous Phase Liquid) source. Research grant from United States Department of Defense (DoD) and SERDP (Strategic Environmental Research and Development Project).

19/7/2000 – 19/9/2000 Undergraduate Student Intern. *Steam-electric power plant in Chania, Greece.*

*Responsibilities:*

Laboratory analysis of the wastewater treatment plant effluent and statistical analysis of the data.

**TEACHING EXPERIENCE**

**Independent Lecturer**

<b>Semester</b>	<b>Course</b>	<b>Department</b>
<b>Fall 2017</b>	<ul style="list-style-type: none"> <li><i>Fluid Mechanics</i></li> </ul>	Civil and Environmental Engineering, <b>University of Connecticut</b>
<b>Fall 2016</b>	<ul style="list-style-type: none"> <li><i>Groundwater Flow Modeling (graduate level)</i></li> </ul>	Civil and Environmental Engineering, <b>University of Connecticut</b>
<b>Spring 2016</b> <b>Spring 2015</b> <b>Spring 2014</b> <b>Spring 2013</b>	<ul style="list-style-type: none"> <li><i>Applied Fluid Mechanics</i></li> </ul>	Mineral Resources Engineering, <b>Technical University of Crete, Greece</b>
<b>Spring 2013</b>	<ul style="list-style-type: none"> <li><i>Mathematical Methods in Environmental Engineering</i></li> </ul>	Environmental Engineering, <b>Technical University of Crete, Greece</b>
<b>Spring 2012</b>	<ul style="list-style-type: none"> <li><i>Groundwater Flow and Contaminant Transport</i></li> </ul>	Environmental Engineering, <b>Technical University of Crete, Greece</b>
<b>Fall 2011</b>	<ul style="list-style-type: none"> <li><i>Fluid Mechanics</i></li> </ul>	Environmental Engineering, <b>Technical University of Crete, Greece</b>

**Co-Instructor**

<b>Semester</b>	<b>Course</b>	<b>Department</b>
<b>Fall 2016</b> <b>Spring 2017</b>	<ul style="list-style-type: none"> <li><i>Fluid Mechanics Lab</i></li> </ul>	Civil and Environmental Engineering, <b>University of Connecticut</b>

### Teaching Assistant

<b>Semester</b>	<b>Course</b>	<b>Department</b>
<b>Spring 2013-2016</b>	<ul style="list-style-type: none"><li>• <i>Optimization of Environmental Systems</i></li></ul>	Environmental Engineering, <b>Technical University of Crete, Greece</b>
<b>Spring 2008-2016</b>	<ul style="list-style-type: none"><li>• <i>Groundwater Flow and Contaminant Transport</i></li></ul>	Environmental Engineering, <b>Technical University of Crete, Greece</b>
<b>Fall 2008-2015</b>	<ul style="list-style-type: none"><li>• <i>Fluid Mechanics</i></li></ul>	Environmental Engineering, <b>Technical University of Crete, Greece</b>
<b>Fall 2002</b>	<ul style="list-style-type: none"><li>• <i>Mechanics of Materials</i></li></ul>	Civil and Environmental Engineering, <b>University of Vermont</b>

### Short-course Lecturer

<b>Year</b>	<b>Short-course</b>	<b>Department</b>
<b>2004</b>	<i>Optimization and Groundwater Remediation (instructor)</i>	Civil and Environmental Engineering, <b>University of Vermont</b>
<b>2003</b>	<i>Modeling Groundwater Contamination by Non-Aqueous Phase Liquids (NAPLs) (assistant)</i>	Civil and Environmental Engineering, <b>University of Vermont</b>

### Thesis Advising - Mentoring

<b>Academic Year</b>	<b>Type and number of theses</b>	<b>Program</b>
<b>2016-present</b>	<ul style="list-style-type: none"><li>• <i>3 PhD students (mentoring)</i></li></ul>	Civil and Environmental Engineering, <b>University of Connecticut</b>
<b>2013-2014</b>	<ul style="list-style-type: none"><li>• <i>3 Master students (advising)</i></li></ul>	Postgraduate program: 'Environmental Design of Infrastructure Works', <b>Hellenic Open University, Greece.</b>
<b>2010-2016</b>	<ul style="list-style-type: none"><li>• <i>2 PhD students (mentoring)</i></li><li>• <i>4 Master students (mentoring)</i></li><li>• <i>15 undergraduate students (mentoring)</i></li><li>• <i>Committee member of 10 undergraduate theses</i></li></ul>	School of Environmental Engineering, <b>Technical University of Crete, Greece</b>

### BOOK CHAPTERS

1. Soupios P., N.N. Kourgialas, **Z. Dokou**, G.P. Karatzas, G. Panagopoulos, A. Vafidis, and E. Manoutsoglou (2015) Modeling saltwater intrusion at an agricultural coastal area using geophysical methods and the FEFLOW model, *Engineering Geology for Society and Territory - Volume 3: River Basins, Reservoir Sedimentation and Water Resources*, , ISBN 978-3-319-09053-5, 249-252.

## **PUBLICATIONS IN PEER REVIEWED JOURNALS**

\* denotes that lead author is a student I mentor/co-advise

1. M. Siaka\*, **Z. Dokou** and G.P. Karatzas. Management of the saltwater intrusion phenomenon in the alluvial aquifer of Katapola, Amorgos, Greece, *Water Science and Technology Journal* **(in press)**
2. A. Pappa\*, **Z. Dokou** and G.P. Karatzas (2016) Simulation and management of saltwater intrusion at a coastal aquifer in Crete, Greece, *Desalination and Water Treatment Journal* **(accepted)**
3. A. Staboultzidis\*, **Z. Dokou** and G.P. Karatzas (2017) Capture zone delineation and protection area mapping in Agia, Crete, Greece, *Environmental Processes* **(online first)** [doi: 10.1007/s40710-017-0221-3](https://doi.org/10.1007/s40710-017-0221-3)
4. C. Gamvroudis\*, **Z. Dokou**, N.P. Nikolaidis and G.P. Karatzas (2017) Impacts of surface and groundwater variability response to future climate change scenarios in a large Mediterranean watershed, *Environmental Earth Sciences*, 76:385, [doi: 10.1007/s12665-017-6721-7](https://doi.org/10.1007/s12665-017-6721-7)
5. **Z. Dokou**, M.D. Dettoraki, G.P. Karatzas, E.A. Varouchakis and A. Pappa (2017). Utilizing successive linearization optimization to control the saltwater intrusion phenomenon in unconfined coastal aquifers in Crete, Greece, *Environmental Modeling and Assessment*, 22: 115, [doi: 10.1007/s10666-016-9529-z](https://doi.org/10.1007/s10666-016-9529-z)
6. **Z. Dokou**, G.P. Karatzas, I. Panagiotakis and D. Dermatas (2017). Groundwater modeling and remediation scenarios of a hexavalent chromium plume released from an industrial site, *Bulletin of Environmental Contamination and Toxicology*, 98(3), 338-346, [doi: 10.1007/s00128-016-1951-z](https://doi.org/10.1007/s00128-016-1951-z)
7. D. Aydin-Sarikurt, **Z. Dokou**, N.K. Copty and G.P. Karatzas (2016) Experimental Investigation and Numerical Modeling of Enhanced DNAPL Solubilization in Saturated Porous Media, *Water, Air, & Soil Pollution*, 227:441, [doi: 10.1007/s11270-016-3136-0](https://doi.org/10.1007/s11270-016-3136-0)
8. N.N. Kourgialas, **Z. Dokou**, G.P. Karatzas, G. Panagopoulos, P. Soupios, A. Vafidis, E. Manoutsoglou, M. Schafmeister (2016). Saltwater intrusion in an intensively irrigated agricultural area: combining density-dependent modeling and geophysical methods, *Environmental Earth Sciences*, 75:15. [doi: 10.1007/s12665-015-4856-y](https://doi.org/10.1007/s12665-015-4856-y)
9. P.N. Stratis, **Z. Dokou**, G.P. Karatzas, E.P. Papadopoulou, Y.G. Saridakis (2016). PTC simulations, stochastic optimization and safety strategies for groundwater pumping management: case study of the Hersonissos coastal aquifer in Crete, *Applied Water Science*, [doi: 10.1007/s13201-016-0438-8](https://doi.org/10.1007/s13201-016-0438-8)
10. I. Athanasakis, **Z. Dokou**, E. Mathioudakis, P. Stratis and N. Vilanakis (2015). Combining stochastic optimization and numerical methods-software for the pumping management of coastal aquifers: Case study of a rectangular homogeneous aquifer, *International Journal of Mathematical Models and Methods in Applied Sciences*, 9, 727-732.

11. **Z. Dokou**, N.N. Kourgialas and G.P. Karatzas (2015). Assessing groundwater quality in Greece based on spatial and temporal analysis, *Environmental Monitoring and Assessment*, 187:774. [doi: 10.1007/s10661-015-4998-0](https://doi.org/10.1007/s10661-015-4998-0)
12. **Z. Dokou**, V. Karagiorgi, G.P. Karatzas, N.P. Nikolaidis and N. Kalogerakis (2015). Large scale groundwater flow and hexavalent chromium transport modeling under current and future climatic conditions: The case of Asopos River Basin, *Environmental Science and Pollution Research*, 23: 5307. [doi:10.1007/s11356-015-5771-1](https://doi.org/10.1007/s11356-015-5771-1)
13. G.P. Karatzas, **Z. Dokou** (2015). Optimal management of saltwater intrusion in the coastal aquifer of Malia, Crete (Greece), using particle swarm optimization, *Hydrogeology Journal*, 23(6), 1181-1194. [doi:10.1007/s10040-015-1286-6](https://doi.org/10.1007/s10040-015-1286-6)
14. N.N. Kourgialas, **Z. Dokou**, G.P. Karatzas (2015). Statistical analysis and ANN Modeling for Predicting Hydrological Extremes under Climate Change Scenarios. *Journal of Environmental Management*, 154, 86–101. [doi:10.1016/j.jenvman.2015.02.034](https://doi.org/10.1016/j.jenvman.2015.02.034)
15. E. Tapoglou\*, I.C. Trichakis, **Z. Dokou**, G.P. Karatzas and N. Nikolos (2014). Groundwater level forecasting under climate change scenarios using an artificial neural network trained with particle swarm optimization. *Hydrological Sciences Journal*, 59(6), 1225–1239. [doi:10.1080/02626667.2013.838005](https://doi.org/10.1080/02626667.2013.838005)
16. E. Seferou, P. Soupios, N. Kourgialas, **Z. Dokou**, G. Karatzas, E. Candasayar, N. Papadopoulos, V. Dimitriou, A. Sarris, M. Sauter (2013). Olive oil mill waste transport in unsaturated and saturated laboratory conditions using geophysical techniques and the FEFLOW model. *Hydrogeology Journal*, 21(6), 1219-1234. [doi:10.1007/s10040-013-0996-x](https://doi.org/10.1007/s10040-013-0996-x)
17. **Z. Dokou**, G.P. Karatzas (2013). Multi-objective optimization for free phase LNAPL recovery using evolutionary computation algorithms, *Hydrological Sciences Journal* 58(3), 671–685. [doi:10.1080/02626667.2012.754103](https://doi.org/10.1080/02626667.2012.754103)
18. D. Moraetis, N.P. Nikolaidis, G.P. Karatzas, **Z. Dokou**, N. Kalogerakis, L. Winkel, A. Palaiogianni-Bellou (2012). Origin and mobility of hexavalent chromium in North-Eastern Attica, Greece. *Applied Geochemistry*, 27(6), 1170-1178. [doi:10.1016/j.apgeochem.2012.03.005](https://doi.org/10.1016/j.apgeochem.2012.03.005)
19. **Z. Dokou** and G.P. Karatzas (2012). Saltwater intrusion estimation in a karstified coastal system using density-dependent modelling and comparison with the sharp-interface approach. *Hydrological Sciences Journal*, 57(5), 985 – 999. [doi:10.1080/02626667.2012.690070](https://doi.org/10.1080/02626667.2012.690070)
20. **Z. Dokou**, G.F. Pinder (2011). Extension and field application of an integrated DNAPL source identification algorithm that utilizes stochastic modeling and a Kalman filter. *Journal of Hydrology*, 398(3-4), 277-291. [doi:10.1016/j.jhydrol.2010.12.029](https://doi.org/10.1016/j.jhydrol.2010.12.029)
21. **Z. Dokou**, G.F. Pinder (2009) Optimal search strategy for the definition of a DNAPL source. *Journal of Hydrology*, 376(3-4), 542-556. [doi:10.1016/j.jhydrol.2009.07.062](https://doi.org/10.1016/j.jhydrol.2009.07.062)



## CONFERENCE PUBLICATIONS

1. C. Goumas\*, **Z. Dokou**, G.G. Morianou, N.N. Kourgialas and G.P. Karatzas (2017) Using groundwater flow simulation of the Chania Plain area to propose a proper irrigation plan, *10<sup>th</sup> WORLD CONGRESS on Water Resources and Environment “Panta Rhei”, Athens, Greece, 5-8 July*.
2. **Z. Dokou**, G.P. Karatzas D. Aydin-Sarikurt and N.K. Copty (2016) Optimizing ethanol enhanced NAPL remediation using evolutionary algorithms, *2nd EWaS International Conference on “Efficient & Sustainable Water Systems toward Worth Living Development”, Chania, Greece, June 1-4, Procedia Engineering, 162, 317-323. doi:10.1016/j.proeng.2016.11.068*
3. M. Siaka\*, **Z. Dokou** and G.P. Karatzas (2016) A study of groundwater flow and saltwater intrusion at the alluvial aquifer of Katapola at the island of Amorgos, Greece, *2nd EWaS International Conference on “Efficient & Sustainable Water Systems toward Worth Living Development”, Chania, Greece, June 1-4*.
4. A. Staboultzidis\*, **Z. Dokou** and G.P. Karatzas (2016) Delineation of wellhead protection areas in Crete, Greece using an analytic element model, *2nd EWaS International Conference on “Efficient & Sustainable Water Systems toward Worth Living Development”, Chania, Greece, June 1-4, Procedia Engineering, 162, 324-331, doi.org/10.1016/j.proeng.2016.11.070*
5. A. Pappa\*, T.N. Olsthoorn, **Z. Dokou** and G.P. Karatzas (2016) Simulation and management of saltwater intrusion at a coastal aquifer in Crete, Greece, *2nd EWaS International Conference on “Efficient & Sustainable Water Systems toward Worth Living Development”, Chania, Greece, June 1-4*.
6. C. Gamvroudis\*, N.P. Nikolaidis, G.P. Karatzas and **Z. Dokou** (2016) Simulating the spatio-temporal distribution of groundwater levels under climate change scenarios using an integrated surface-ground water model, *2nd EWaS International Conference on “Efficient & Sustainable Water Systems toward Worth Living Development”, Chania, Greece, June 1-4*.
7. I. Athanasakis, **Z. Dokou**, E. Mathioudakis, P. Stratis and N. Vilanakis (2015) Combining stochastic optimization and numerical methods-software for the pumping management of coastal aquifers: case study of a rectangular homogeneous aquifer, *Conference in Mathematical Methods and Computational Techniques in Science and Engineering, Bratislava, Slovakia, November 28-30*.
8. **Z. Dokou**, A. Stampouli, G.P. Karatzas, D. Aydin Sarikurt and N.K. Copty (2015) Modeling ethanol-enhanced DNAPL remediation in a two-dimensional experimental setting, *14th International Conference on Environmental Science and Technology, Rhodes, Greece, September 3-5*.
9. P.N. Stratis, **Z. Dokou**, G.P. Karatzas, E.P. Papadopoulou and Y.G. Saridakis (2015) Stochastic optimization and numerical simulation for pumping management of the Hersonissos fresh water coastal aquifer in Crete, *19<sup>th</sup> International Conference on Circuits, Systems, Communications and Computers, (CSCC 2015), Zakynthos, Greece, July 16-20*.

10. D. Aydin Sarikurt, K. Yakşi, N.K. Copty, E. Tapoglou, **Z. Dokou** and G.P. Karatzas (2015) Cosolvent flushing for remediation of groundwater contaminated with DNAPL, *7<sup>th</sup> International Conference on Porous Media & Annual Meeting, Padova, Italy, May 18 – 21.*
11. P. Soupios, N.N. Kourgialas, **Z. Dokou**, G.P. Karatzas, G. Panagopoulos, A. Vafidis, and E. Manoutsoglou (2014) Modeling saltwater intrusion at an agricultural coastal area using geophysical methods and the FEFLOW model, *Engineering Geology for Society and Territory, IAEG XII CONGRESS, Torino, Italy, September 15-19.*
12. **Z. Dokou**, G.P. Karatzas, N.P. Nikolaidis and N. Kalogerakis (2013) Mapping of chromium in the greater area of Asopos river basin, *13<sup>th</sup> International Conference on Environmental Science and Technology (CEST), Athens, Greece, September 5-7.*
13. **Z. Dokou**, N.N. Kourgialas and G.P. Karatzas (2013) Spatial and temporal distribution of groundwater contamination in Greece based on historical data, *8<sup>th</sup> International Conference of EWRA, Water Resources Management in an Interdisciplinary and Changing Context, Porto, Portugal, June 26-29.*
14. N.N. Kourgialas, **Z. Dokou** and G.P. Karatzas (2013) An ANN technique for flood and drought forecasting in a Mediterranean river basin using global change scenarios, *8<sup>th</sup> International Conference of EWRA, Water Resources Management in an Interdisciplinary and Changing Context, Porto, Portugal, June 26-29.*
15. G. Christodoulou, **Z. Dokou**, O. Tzoraki, P. Gaganis and G.P. Karatzas (2013) Attenuation capacity of a coastal aquifer under managed recharge by reclaimed wastewater, *First International Conference on Remote Sensing and Geoinformation of Environment, Paphos, Cyprus, April 8-10.*
16. E. Tapoglou\*, I.C. Trichakis, **Z. Dokou** and G.P. Karatzas (2012) Use of a particle swarm optimization for training an artificial neural network: Application in groundwater resources, *2<sup>nd</sup> Joint Conference of E.Y.E. – E.E.Δ.Y.II.: Integrated Water Resources Management towards Sustainable Growth, 11-13 October, Patras, Greece (in Greek).*
17. M.D. Dettoraki\*, **Z. Dokou**, E.A. Varouchakis and G.P. Karatzas (2012) Optimal pumping scenarios for the estimation of the saltwater intrusion front in the coastal aquifer of Tympaki, Crete–Greece, *EGU General Assembly, Vienna, Austria, April 22- 27.*
18. E. Tapoglou\*, I.C. Trichakis, **Z. Dokou**, and G.P. Karatzas (2012) Groundwater level forecasting using an artificial neural network trained with particle swarm optimization, *EGU General Assembly, Vienna, Austria, April 22 – 27.*
19. M.P. Papadopoulou, **Z. Dokou**, G.P. Karatzas and C.I. Zahariadi (2010) Estimation of the seawater intrusion front in a coastal karstified system using a density-dependent flow approach, *6<sup>th</sup> International Symposium of Environmental Hydraulics, Athens, Greece, June 23-25.*
20. **Z. Dokou**, G.P. Karatzas (2010) Employing evolutionary algorithms for optimizing free phase LNAPL recovery, *XVIII International Conference on Computational Methods in Water Resources, Barcelona, Spain, June 21 – 24.*



21. G.F. Pinder, **Z. Dokou** (2009) Optimal search strategy for the definition of a Dense Non-Aqueous Phase Liquid (DNAPL) source, Hydrology Days Award Lecture, *American Geophysical Union (AGU) Hydrology Days*, USA, March 25 - 27.
22. **Z. Dokou**, G.F. Pinder (2007) Optimal search strategy for the definition of a DNAPL source. *Partners in Environmental Technology Technical Symposium and Workshop*, Washington DC, USA, December 4-6.
23. **Z. Dokou**, G.F. Pinder (2006) Least cost search algorithm for the identification of a DNAPL source. *XVI International Conference "Computational Methods in Water Resources"*, Copenhagen, Denmark, June 18-22.
24. **Z. Dokou**, G.F. Pinder, Y. Zhang and M. Ozbek (2004) Search strategy for a DNAPL source. *AGU Fall Meeting*, San Francisco, California, USA, December 13-17.
25. **Z. Dokou**, G.F. Pinder (2004) Search strategy for the definition of a DNAPL source. *Partners in Environmental Technology Technical Symposium and Workshop*, Washington DC, USA, December 13-17.
26. **Z. Dokou**, G.F. Pinder and Y. Zhang (2004) Optimal search strategy for the definition of a DNAPL source. *XV International Conference "Computational Methods in Water Resources"*, Chapel Hill, North Carolina, USA, June 13-17.
27. **Z. Dokou**, G.F. Pinder and Y. Zhang (2003) Optimal search strategy for the definition of a DNAPL source, *AGU Fall Meeting*, San Francisco, California, USA, December 8-12.
28. **Z. Dokou**, A-S.A. Mouskeftara, D.K. Pagalou and G.P. Karatzas (2003) Modeling Groundwater and Nitrate Transport in the Upper Aquifer of the Coastal Area of the Corinthian Gulf, *9th Conference of Hellenic Hydrotechnical Association*, Thessaloniki, Greece, 345-352, April 2-5.
29. T. Manios, A. Mouskeftara, **Z. Dokou**, D. Pagalou and A. Tsitonaki (2002) Reviewing the basic design parameters affecting the disinfection of sand filters. *Regional Symposium on Water Recycling in Mediterranean Region - Iraklio, Crete, Greece*, September 26 - 29.

### **INVITED TALKS**

1. **The saltwater intrusion problem in coastal aquifers and sustainable management options.** Research Lecture Series for the Postgraduate Program: 'Environmental and Sanitary Engineering', *Department of Environmental Engineering, Technical University of Crete, Greece, November 2014.*
2. **Decision Support Systems for the management of LNAPL (Light Non-Aqueous Phase Liquid) contamination.** Research Lecture Series for the Postgraduate Program: 'Environmental and Sanitary Engineering', *Department of Environmental Engineering, Technical University of Crete, Greece, November 2012.*
3. **Groundwater flow and transport simulation models. Applications in the field.** Research Lecture Series for the Postgraduate Program: 'Environmental and Sanitary

Engineering', *Department of Environmental Engineering, Technical University of Crete, Greece, October 2009.*

### **JOURNAL REVIEWER**

1. Water Resources Research (Wiley)
2. Advances in Water Resources (Elsevier)
3. Journal of Hydrology (Elsevier)
4. Journal of Environmental Informatics (ISEIS)
5. Environmental Science and Pollution Research (Springer)
6. Journal of Contaminant Hydrology (Elsevier)
7. Water Resources Management (Springer)
8. Stochastic Environmental Research and Risk Assessment (Springer)
9. Hydrogeology Journal (Springer)
10. Hydrological Sciences Journal (Taylor & Francis)
11. Journal of Environmental Engineering (ASCE)
12. Water (MDPI )
13. Journal of Hydroinformatics (IWA)
14. Int. Journal of Water Resources Development (Taylor & Francis)
15. Civil Engineering and Environmental Systems (Taylor & Francis)
16. Global Nest
17. Environmental Processes (Springer)

### **EXTERNAL REVIEWER OF RESEARCH GRANT PROPOSALS**

Le Studium (Loire Valley Institute for Advanced Studies) Research Fellowships (co-funded by a Horizon 2020 grant in the category of the Marie Skłodowska-Curie Actions).

### **OTHER PROFESSIONAL SERVICE**

**Organizing Committee Member** EWaS2 International Conference, Chania, Greece, 2016  
**Scientific Committee Member** EWaS2 International Conference, Chania, Greece, 2016  
EWaS3 International Conference, "Insights on the Water-Energy-Food Nexus", Lefkada, Greece, 2018.  
**Session Chair** EWaS2 International Conference, Chania, Greece, 2016  
**Other:**  
Conference and scientific meetings organization and secretarial work (ExTECH2014, EWaS2 International Conferences)  
Grant proposal writing, editing, budgeting and partner coordination.

## **RECOGNITION - AWARDS**

- Fall 2016 Commendation for Excellence in Teaching by the University of Connecticut's Provost's Office.
- December 2015 Congratulatory note by the National Ground Water Association (NGWA) on the publication of the paper entitled "Large scale groundwater flow and hexavalent chromium transport modeling under current and future climatic conditions: the case of Asopos River Basin."
- 1/2003 – 2/2008 United States Department of Defense (DoD) grant for PhD research.
- September 2004 Hellenic Hydrotechnical Association undergraduate thesis award (2<sup>nd</sup> place).

## **PROGRAMMING EXPERIENCE**

- Operating systems: Windows, Microsoft Office
- Programming languages: Fortran, Matlab
- Groundwater models: PTC with ArgusOne GUI, MODFLOW, FEFLOW, BIGFLOW, NAPL Simulator 2D and 3D, FEHM, UTCHEM, MOVER, BIOF&T, Bioscreen, Biochlor, WhAEM, GWM
- Other software: ArcGIS, AutoCAD, WaterCAD, MathCAD

## **LANGUAGES**

- Greek: fluent (native language), English: fluent, Spanish: good knowledge
- French: basic knowledge, German: basic knowledge

## **PROFESSIONAL SOCIETY MEMBERSHIPS**

- 10/2016 – today Earth Science Women's Network
- 12/2012 – today European Water Resources Association (EWRA)
- 7/2004 – today Technical Chamber of Greece (TEE)
- 1/2003 – today American Geophysical Union (AGU)
- 9/2002 – today Research Center for Groundwater Remediation Design (RCGRD)

## **VOLUNTEER WORK**

- 04/08/2017 *School of Engineering Open House* – Spring 2017, University of Connecticut. Participated with lab demonstrations on groundwater flow, contaminant transport and saltwater intrusion in coastal aquifers.
- 12/07/2013 *Science & Technology Day*, one-day event for elementary school children, Technical University of Crete, Chania, Greece. Participated with lab demonstration on groundwater flow and contaminant transport.

## **PROFILES**

- [https://www.researchgate.net/profile/Zoi\\_Dokou](https://www.researchgate.net/profile/Zoi_Dokou)
- <https://scholar.google.com/citations?user=YxP-N24AAAAJ&hl>
- <http://ucwater.engr.uconn.edu/person/zoi-dokou/>
- <http://pire.engr.uconn.edu/zoi-dokou>

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