

**EVANGELIA D. FARSIROTOU**

**Professor**

*Department of Ichthyology & Aquatic Environment  
School of Agricultural Sciences University of Thessaly*

**Dr Civil Engineer**

**MSc Hydraulic Engineering**

**CIRRICULUM VITAE**

**Volos, June 2022**

## PERSONAL DATA

Name : **Evangelia**  
Last Name: **Farsirotou**  
Father's name : Dimitrios  
Position: Professor Department of Ichthyology and Aquatic Environment  
University of Thessaly / Dr Civil Engineer  
Scientific area: Hydrodynamic and Flood Prevention Works  
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## 1. EDUCATION -SCIENTIFIC EXPERTISE

- 1.1 June 1996 – March 2000 Doctoral Thesis, Faculty of Engineering, Department of Civil Engineering, Aristotle University of Thessaloniki. Subject: "Numerical and experimental simulation of erosion in rivers". Degree: "Excellent".
- 1.2 Academic year 1998 – 1999 Master, Department of Civil Engineering/Fluid Mechanics/Hydraulics Division, Democritus University of Thrace, with the title: "Hydraulic Engineering".
- 1.3 Academic year 1996 – 1997 Postgraduate program, Department of Civil Engineering/ Environmental and Hydraulics Division, Aristotle University of Thessaloniki.
- 1.4 1991-June 1996 Diploma of Civil Engineer, Faculty of Engineering, Department of Civil Engineering, Aristotle University of Thessaloniki. Degree: Very Good. Graduate project: "Sediment transport".
- 1.5 1991 Graduation from the 3rd General Lyceum of Volos with "Excellent" and succeed to the Faculty of Engineering, Aristotle University of Thessaloniki, Department of Civil Engineering.

## 2. PROFESSIONAL EXPERIENCE

### 2.1 PROFESSIONAL WORK

- 2.1.1 November 2019- today Professor on Hydrodynamic and Flood Prevention Works, Depth. of Ichthyology & Aquatic Environment, School of Agricultural Sciences, University of Thessaly, Greece.
- 2.1.2 October 2018- October 2019 Professor in University of Thessaly, General Department of Larissa. Research area: "Hydrodynamic and Flood Prevention Works"
- 2.1.3 September 2009- Associate Professor in the Department of Civil Engineering T.E. Larissa, Faculty of Applied Sciences, Technological

	October 2018	Educational Institute of Thessaly. Research area: "Hydrodynamic and Flood Prevention Works"
<b>2.1.4</b>	March 2002 - September 2009	Dr Civil Engineer in the Ministry of Interior, Region of Thessaly, Volos Supervisor of Public Hydraulic Works Studies, Environmental Impact Studies and supervisor of Public Hydraulic Works (Construction) in the Region of Thessaly.
<b>2.1.5</b>	January 2000 – March 2002	Dr Civil Engineer in the Ministry of Interior, Region of Thessaly, Larissa. Supervisor of Public Hydraulic Works Studies, Environmental Impact Studies and supervisor of Public Hydraulic Works (Construction) in the Region of Thessaly.
<b>2.1.6</b>	October 1996	Licence to practice profession (Technical Chamber of Greece).

## **2.2 PARTICIPATION IN RESEARCH PORGRAMS**

<b>2.2.1</b>	January 1994 - December 1994:	Research Assistant. Department of Civil Engineering, Aristotle University of Thessaloniki. Research project: "Hydrodynamic and Biogeochemical outflows in the Cretan sea: Aegean Sea, Eastern Mediterranean gulf".
<b>2.2.2</b>	March 1998 - May 1998:	Research Assistant. Department of Civil Engineering, Aristotle University of Thessaloniki. Research project: "Modeling of renewal rates and water quality of enclosed med basins".
<b>2.2.3</b>	1/9/2003-30/6/2004	Participation in the research project: "Reformation- upgrade and modernization of the Undergraduate Studies of the Department of Infrastructure Engineering/T.E.I. of Larissa" in order to develop educational material for the course: "Hydrodynamic and Flood Prevention Works" .
<b>2.2.4</b>	2013-2015	Participation as a member of the Main Research Group in the Project AGROCLIMA (11SYN_3_1913) that is funded by the Action "Cooperation 2011-2015" of the Operational Programme "Competitiveness and Entrepreneurship" co-funded by the European Regional Development Fund (ERDF) and the General Secretariat for Research and Technology (Hellenic Ministry of Education) titled: "Water resources management of coastal agricultural environments-resilience of climate change impacts".
<b>2.2.5</b>	2013-2015	Participation as a member of the Main Research Group in the Project THALES-DAPHNE (MIS: 375908) of the Operational Program: "Education and lifelong learning, 2007-2013" of the Hellenic Ministry of Education and Religious Affairs, Culture and Sports co-funded by the European Union and the Greek Government, titled: "Investigation of the effects of climate change on river delta areas. Application to Pinios river delta plain.

## 2.3 TEACHING EXPERIENCE

- 2.3.1** 2009-  
today University of Thessaly (Technological Educational Institute of Thessaly, Department of Civil Engineering). Teaching undergraduate courses:
- Hydraulics I
  - Hydraulics II
  - Regulations of Rivers and Streams –Flood Prevention Works
  - Hydrodynamic works-Dams (Theory and Laboratory)
  - Computation of Hydraulic works (Theory και Laboratory)
- Excellent evaluation of the educational process by the students. *The average rating of Mrs. Evangelia Farsirotou is 4.40 with an excellent 5.0.*
- 2.3.2** 2015-  
2020 Postgraduate Studies: “Advanced Environmental Management Technologies in Engineering Works”, University of Thessaly.  
Teaching courses:
- Environmental Management of Natural Rivers
  - Flood Protection and Sustainable Development
- 2.3.3** 2010-2015 Teaching in the Postgraduate Studies titled: «Management of Hydrometeorological Hazards» of the Department of Civil Engineering at the University of Thessaly. Teaching Course:
- Planning for HydroHazard Prevention and Management
- 2.3.4** 2000-2012 Lecturer, University of Thessaly, Department of Civil Engineering with convention (P.D. 407/80).  
Teaching courses:
- Regulations of Rivers and Streams
  - Environmental Fluid Mechanics
- 2.3.5** 2001-2009 Teacher with convention. Department of Infrastructure Engineering, School of Technological Applications, Technological Educational Institute of Larissa Teaching course:
- Hydrodynamic and Flood Prevention Works

## 2.4 POSITIONS OF RESPONSIBILITY

- 2.4.1** 2015-2021 Director of the Graduate Program «*Advanced Environmental Management Technologies in Engineering Works*» at the University of Thessaly (Department of Civil Engineering at the Technological Educational Institute of Thessaly).
- 2.4.2** 29-10-2015 until  
31-8-2018 Member of Postgraduate Studies Committee of TEI of Thessaly
- 2.4.3** 2013-2018 Quality Assurance System Manager at the Department of Civil Engineering T.E. and Chairman of the Internal Evaluation Group of the Department.
- 2.4.4** November 2017-  
2021 Scientific Director of the "Higher Education Practice" Program and Chairman of the Exercise Supervision Committee at the Department of Civil Engineering T.E. Larissa.
- 2.4.5** 1-9-2010 until Vice Head of the Department of Civil Engineering T.E.

- 31-8-2012 & 8/9/2014-2018 Larissa, Technological Educational Institute of Thessaly.
- 2.4.6** 2015-2017 Member of MODIP TEI of Thessaly and participation in the external evaluation process of TEI / Thessaly
- Quality Assurance System Manager in two Departments of Faculty as a member of MODIP
- 2.4.7** 1/1/2013-31/08//2014 Head of the Department of Civil Engineering T.E., Technological Educational Institute of Thessaly.
- 2.4.8** 2013-2014 Vice Dean of the Faculty, Faculty of Applied Sciences, Technological Educational Institute of Thessaly

### 3. SCIENTIFIC ACTIVITY

#### 3.1 SELECTED PUBLICATIONS IN INTERNATIONAL PEER –REVIEWED JOURNALS

- 3.1.1 Evangelia D. Farsirotou**, Johannes V. Soulis and Vassilios D. Dermissis, "A Numerical Method for Two-Dimensional Bed Morphology Calculations", International Journal of Computational Fluid Dynamics, Taylor & Francis, 2002, Vol. 16 (3), pp. 187-200.  
<http://www.tandfonline.com/doi/abs/10.1080/10618560290034654>
- 3.1.2 Evangelia D. Farsirotou**, Vassilios D. Dermissis and Johannes V. Soulis, "Test Case for Bed Morphology Computations", International Journal of Computational Methods in Sciences and Engineering, IOS Press, 2007, Vol. 7 (2), pp. 105-131.  
<https://content.iospress.com/articles/journal-of-computational-methods-in-sciences-and-engineering/jcm00187>
- 3.1.3 E. Farsirotou**, D. Kasiteropoulou and D. Stamatopoulou, "Experimental investigation of fluid flow in horizontal pipes system of various cross-section geometries", The European Physical Journal Conferences 02/2014, vol. 67, pp. 02026, 1-5, 2014. DOI: 10.1051/epjconf/20146702026  
[https://www.epj-conferences.org/articles/epjconf/pdf/2014/04/epjconf\\_efm-13\\_02026.pdf](https://www.epj-conferences.org/articles/epjconf/pdf/2014/04/epjconf_efm-13_02026.pdf)
- 3.1.4 Evangelia D. Farsirotou** and Spiridon I. Kotsopoulos, "Free-Surface Flow Over River Bottom Sill: Experimental and Numerical Study", International Journal of Environmental Process, DOI 10.1007/s40710-015-0090-6, 30 August 2015, Springer, pp. S133-S139.  
<https://link.springer.com/article/10.1007/s40710-015-0090-6>
- 3.1.5 E. Farsirotou** and N. Xafoulis, "An experimental study of local scour depth around bridge abutments", International Journal of New Technology and Research, vol 3(9), 2017, pp. 01-10.  
[https://www.ijntr.org/download\\_data/IJNTR03090028.pdf](https://www.ijntr.org/download_data/IJNTR03090028.pdf)
- 3.1.6 E. Farsirotou** and N. Xafoulis, "Numerical simulation of scour depth variation around vertical wall abutments", World Journal of Research and Review, ISSN: 2455-3956, vol 5(6), 2017, pp. 25-30.  
[https://www.wjrr.org/download\\_data/WJRR0506006.pdf](https://www.wjrr.org/download_data/WJRR0506006.pdf)
- 3.1.7 Evangelia D. Farsirotou**, "Two-Dimensional numerical simulation of bed level variation around vertical wall abutments", International Journal of Engineering Research and Science, ISSN: 2395-6992, vol 4(11), 2018, pp. 1-9.  
<http://www.ijer.com/Paper-January-2018/IJOER-JAN-2018-1.pdf>

- 3.1.8 Evangelia Farsirotou** and Athanasios Blantas, "Hydrodynamic numerical simulation and flood risk assessment in a natural river", *International Journal of New Technology and Research*, ISSN:2454-4116, vol 4(2), 2018, pp. 34-41.  
[https://www.ijntr.org/download\\_data/IJNTR04020020.pdf](https://www.ijntr.org/download_data/IJNTR04020020.pdf)
- 3.1.9 Evangelia Farsirotou**, Nikolaos Xafoulis, Theophanis Athanasiou and Georgia Katsaridou, "Clear-water experimental scour depths at abutments", *International Journal of Engineering Research and Science*, ISSN: 2395-6992, vol 4 (4), April 2018, pp. 30-38.  
<https://ijoer.com/Paper-April-2018/IJOER-APR-2018-5.pdf>
- 3.1.10 Farsirotou E.D.** and Soulis J.V., "A multi-grid finite-volume method for free-surface flows", *Journal of Engineering Research and Science*, ISSN: 2395-6992, vol 4 (8), August 2018, pp. 01-13.  
[https://ijoer.com/assets/articles\\_menuscripts/file/IJOER-AUG-2018-1.pdf](https://ijoer.com/assets/articles_menuscripts/file/IJOER-AUG-2018-1.pdf)
- 3.1.11 Evangelia D. Farsirotou**, Alexander D. Panagiotopoulos and Johannes V. Soulis, "Explicit and implicit finite-volume methods for depth averaged free-surface flows", *Journal of Applied and Computational Mechanics*, Volume 6, 2020, pp. 1270-1282.
- 3.1.12** Grigorios Papageorgiou, Christos Zografos, Nikolaos Alamanis, Nikolaos Xafoulis, **Evangelia Farsirotou**, "Local versus full widths pavement rehabilitation in the frame of old water supply network repair", *International Journal of Engineering and Advanced Technology (IJEAT)*, ISSN: 2249-8958, Volume -9 Issue 3, February 2020, pp. 152-157, DOI:10.35940/ijeat.C5006.029320.
- 3.1.13** Nikolaos Alamanis, Christos Zografos, Grigorios Papageorgiou, Nikolaos Xafoulis, **Evangelia Farsirotou**, "Risk of retaining systems for deep excavations in urban road infrastructure with respect to work staff perception", *International journal of scientific & Technology Research*, volume 9, issue 02, ISSN 2277-8616, February 2020, pp.4168-4175.
- 3.1.14** Alamanis N. Papageorgiou G., Chouliaras I., Xafoulis N., Kotsopoulos S., **Farsirotou E.**, Lazogiannis K. and Soulis G., "Proposals for upgrading and modernizing the teaching of Geotechnical courses", *Universal Journal of educational Research* 8(5), 2020, pp. 1752-1758, DOIQ 10.13189/ujer.2020.080511.
- 3.1.15 Evangelia Farsirotou**, Nikolaos Xafoulis and Spyridon Kotsopoulos, "Experimental and numerical simulation of local scouring downstream of sharp-crested weirs in natural rivers", *European Water*, 69/70, 2020, pp. 33-44.
- 3.1.16** Nikolaos Xafoulis, **Evangelia Farsirotou**, Spyridon Kotsopoulos, Nikolaos Alamanis. (2022). Flood hazard assessment in a mountainous river basin in Thessaly, Greece, based on 1D/2D numerical simulation. *Energy Nexus*, Elsevier. Manuscript ID: NEXUS-D-22-00002 (accepted for publication).
- 3.1.17** Nikolaos Xafoulis and **Evangelia Farsirotou**. (2022). Three-dimensional computational flow dynamics analysis of free-surface flow in a converging channel. *Energy Systems*, Springer. Manuscript ID: ENSY-D-22-00033 (accepted for publication).

## 3.2 SELECTED PUBLICATIONS IN INTERNATIONAL PEER-REVIEWED CONFERENCES PROCEEDINGS

- 3.2.1 **E. D. Farsirotou**, J.V. Soulis and V. D. Dermissis, "A Numerical Algorithm for Bed Morphology Equations", *International Conference on European River Development, 16-18 April 1998, Budapest, Hungary*.
- 3.2.2 J. V. Soulis, **E. D. Farsirotou** and V. D. Dermissis, " Bed Formation Due to Floods", *International Conference on Protection and Restoration of the Environment IV, 1-4 July 1998, Sani, Halkidiki, Greece*.
- 3.2.3 **E. D. Farsirotou**, J.V. Soulis and V. D. Dermissis, "Two - Dimensional, Multi - Grid, Viscous, Free Surface Flow Calculation", *International Conference on Hydraulic Engineering Software, HYDROSOFT 98, 16-18 September 1998, Como, Italy*.
- 3.2.4 **E. D. Farsirotou**, J.V. Soulis and V. D. Dermissis, "Hydrodynamic modeling of flow around bridge piers", *International Conference on Hydraulic Engineering Software, HYDROSOFT 2000, 12-14 June 2000, Lisbon, Portugal*.
- 3.2.5 **E. D. Farsirotou**, V. D. Dermissis, J.V. Soulis, "Comparison of bed load equations for scour around bridge abutments", *International Conference on Protection and Restoration of the Environment V, 1-4 July 2000, Thassos, Greece, pp. 363-370*.
- 3.2.6 **E. D. Farsirotou**, J. V. Soulis, V. D. Dermissis, "Comparison of 2-d and 1-d modeling of non-uniform flow in rivers", *6<sup>th</sup> International Conference on Protection and Restoration of the Environment, 1-5 July 2002, Skiathos Island, Greece, pp. 311-317*.
- 3.2.7 **E. D. Farsirotou**, J. V. Soulis, V. D. Dermissis, "Numerical Simulation of Two-Layered, Unsteady, Stratified Flow", *International Conference of Computational Methods in Sciences and Engineering 2004 (ICCMSE 2004), 19-23 November 2004, Athens, Greece, pp. 177-180*.
- 3.2.8 **E. D. Farsirotou**, J. V. Soulis, V. D. Dermissis, "Numerical simulation of scouring around bridge piers ", *8<sup>th</sup> International Conference on Protection and Restoration of the Environment, 3-7 July 2006, Chania, Greece*.
- 3.2.9 **Farsirotou E.D.**, J.V. Soulis and P.G. Lokkas, "Numerical modeling of river bed evolution in abrupt hydraulic changes", *6<sup>th</sup> International Symposium on Environmental Hydraulics, 23-25 June, 2010, Athens, Greece, Taylor & Francis Group. London, ISBN 978-0-415-58475-3, pp. 311-315*.
- 3.2.10 **Evangelia D. Farsirotou**, Athanasios J. Klonidis, Johannes V. Soulis, "Three-dimensional numerical simulation of supercritical flow in expansion channel", *13<sup>th</sup> International Conference on Applied Mathematics and Computational Methods in Engineering, July 16-19, 2013, Rhodes (Rodos) Island, Greece, ISBN: 978-1-61804-200-2, pp. 272-275*.
- 3.2.11 **E. Farsirotou**, S. Kotsopoulos, N. Xafoulis and G. Sanatsios, "Experimental investigation of non-uniform flow in rivers", *Proceedings of the 12<sup>th</sup> International Conference on Protection and Restoration of the Environment, June 29 – July 3, 2014, Skiathos island, Greece, ISBN 978-960-88490-6-8, pp. 873-880*.
- 3.2.12 S. Kotsopoulos, P. Nastos, G. Ghionis, K. Lazogiannis, S. Poulos, I. Alexiou, A. Panagopoulos, **E. Farsirotou**, N. Alamanis, "Evaporation and evapotranspiration estimates under present and future climate conditions", *Proceedings of the 12<sup>th</sup> International Conference on Protection and Restoration of the Environment, June 29 – July 3, 2014, Skiathos island, Greece, ISBN 978-960-88490-6-8, pp. 91-97*.
- 3.2.13 K. Lazogiannis, V. Paraskevopoulou, S. Poulos, X. Teou, S. Kotsopoulos, **E. Farsirotou**, G. Ghionis, I. Matiatos, A. Panagopoulos, D. E. Sifnioti, D. I. Giannouli, K. Tsanakas, M. Dassenakis, P.G. Drakopoulos, F. Botsou, I. Alexiou and J.D. Alexopoulos, "Seasonal variation of water discharge and suspended sediment concentration of the Pinios River (Thessaly) during the hydrological year 2012/13", *Proceedings of the 12<sup>th</sup> International Conference on Protection and Restoration of*

*the Environment, June 29 – July 3, 2014, Skiathos island, Greece, ISBN 978-960-88490-6-8, pp. 325-331.*

- 3.2.14** S. Kotsopoulos, P. Nastos, K. Lazogiannis, I. Alexiou, S. Poulos, A. Ilias, A. Panagopoulos, G. Ghionis, I. Matiatos, V. Pisinaras, E. Farsirotou, N. Alamanis, G. Arampatzis, G. Kakagiannis, "Crop water requirements under present and future weather conditions", *Proceedings of the 10th International Congress of the Hellenic Geographical Society, 22-24 October 2014, Thessaloniki, Greece, pp. 1118–1129.*
- 3.2.15** S. Kotsopoulos, P. Nastos, K. Lazogiannis, S. Poulos, A. Ilias, A. Panagopoulos, G. Ghionis, I. Matiatos, V. Pisinaras, **E. Farsirotou**, N. Alamanis, "Evaporation, evapotranspiration and crop water requirements under present and future climate conditions at Pinios delta plain", *Proceedings of the 14th International Conference on Environmental Science and Technology, Rhodes, Greece, 3-5 September 2015, pp. 961-965.*
- 3.2.16** Nikolaos Xafoulis, **Evangelia Farsirotou**, Spyridon Kotsopoulos, Aris Psilovikos and Nikolaos Alamanis (2021). "Flood Inundation Mapping using 1D/2D Numerical Model. A Case Study of Flood Event in Greece". 8th International Conference on "Energy, Sustainability and Climate Change", August 30-September 3, 2021, Volos, Greece.
- 3.2.17** **E. Farsirotou** and N. Xafoulis (2021). "Numerical simulation of hydrodynamic parameters over river control structures". 4th International Congress on Applied Ichthyology, Oceanography & Aquatic Environment (HydroMedit, 2021), 4-6 November 2021, Virtual.
- 3.2.18** N. G. Xafoulis and **E.D. Farsirotou** (2022). "Simulation of Local Scour at Submerged Weir Structure" *XVI International Conference on Protection and Restoration of the Environment, 5-8 July, 2022, Kalamata, Greece.*
- 3.2.19** Nikolaos Xafoulis and **Evangelia Farsirotou** (2022). "CFD modelling of water flow field in open channel". 9th International Conference on "Energy, Sustainability and Climate Change", August 29 - September 2, 2022, Paphos, Cyprus (accepted for publication).

#### **4. REVIEWER IN INTERNATIONAL JOURNALS AND CONFERENCES**

- EWRA Journal European Water.
- Physical Science International Journal.
- 12th International Conference on Protection and Restoration of the Environment, June 29 – July 3, 2014, Skiathos island, Greece.
- Hellenic Hydro-technical Union Conference (2019-2022).

#### **5. RESEARCH INTERESTS**

Computational fluid dynamics in free-surface flows. In the scientific area of Hydrodynamic and Flood Prevention Works, and generally in river hydraulics, development of numerical simulation models with finite volume method and finite difference method in order to simulate hydrodynamic and sediment transport parameters in natural rivers, water surface and bed level variation, erosion and deposition in rivers. Integrated river ecosystem management. Environmental hydraulics. Mapping and Flood hazard management.

Experimental laboratory simulation of hydrodynamic parameters, sediment transport and erosion and deposition conditions.



## **6. PROFESSIONAL PARTICIPATIONS**

- Member of Hellenic Hydro-technical Union (E.Y.E.) (2000).
- Member of Technical Chamber of Greece (1996).
- Member of Hellenic Union of Civil Engineers (1996).

## **7. AWARDS**

- IKY scholarship for graduate studies at the Department of Civil Engineering of the Aristotle University of Thessaloniki during the academic year 1995-1996.
- Prize from the Technical Chamber of Greece for the performance in studies at the Department of Civil Engineering of the Aristotle University of Thessaloniki in the academic year 1995-1996