

# **CURRICULUM VITAE**

**GEORGE PAPAIOANNOU**

**Assistant Professor of Forest Hydrology  
and Mountain River Training  
Department of Forestry and Management  
of the Environment and Natural Resources  
Democritus University of Thrace**

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## Contents

<b>CURRICULUM VITAE</b>	<b>3</b>
<b>1.1. PERSONAL INFORMATION</b>	<b>3</b>
<b>1.2. ACADEMIC QUALIFICATIONS</b>	<b>3</b>
<b>1.3. SCHOLARSHIPS - ACADEMIC PRIZES – AWARDS</b>	<b>4</b>
<b>1.4. TEACHING AND RESEARCH EXPERIENCE</b>	<b>5</b>
<b>1.5. SUPERVISION OF PHD DISSERTATIONS, MASTER AND DIPLOMA THESES</b>	<b>7</b>
1.5.1. Phd dissertation .....	7
1.5.2. MSc Thesis .....	7
1.5.3. Bachelor Thesis .....	7
<b>1.6. ACADEMIC ADMINISTRATIVE EXPERIENCE</b>	<b>8</b>
<b>1.7. PARTICIPATION IN RESEARCH PROJECTS</b>	<b>9</b>
<b>1.8. PARTICIPATION IN TECHNICAL REPORTS</b>	<b>9</b>
<b>1.9. ASSOCIATIONS AND SCIENTIFIC BODIES</b>	<b>12</b>
<b>1.10. MEMBER OF SCIENTIFIC COMMITTEES’ EDITORIAL BOARDS AND JOURNAL PUBLICATIONS REVIEWER</b>	<b>12</b>
<b>1.11. COMPUTER KNOWLEDGE</b>	<b>13</b>
<b>1.12. SOFTWARE AND TOOLS DEVELOPMENT</b>	<b>13</b>
<b>1.13. LANGUAGES</b>	<b>13</b>
<b>1.14. SEMINARS - WEBINARS</b>	<b>13</b>
<b>1.15. OTHER SIGNIFICANT TRAINING AND SKILLS</b>	<b>15</b>
<b>1.16. PROFESSIONAL EXPERIENCE</b>	<b>15</b>
<b>1.17. MEDIA REPORTS ON Dr. PAPAIOANNOU WORKS.</b>	<b>15</b>
<b>1.18. RESEARCH INTERESTS</b>	<b>16</b>
<b>1.19. PUBLICATIONS:</b>	<b>17</b>
1.19.1. Dissertations and Thesis.....	17
1.19.2. Journal Publications.....	17
1.19.3. Referred Conferences (full paper review).....	19
1.19.4. Referred Presentations (abstract and extended abstract review) .....	21
1.19.5. Special Editions and Books.....	24
1.19.6. Non-Referred Presentations .....	24
1.19.7. Under preparation articles .....	25
<b>1.20. CITATIONS IN REFERRED JOURNALS, BOOKS AND CONFERENCES</b>	<b>25</b>

# CURRICULUM VITAE

## 1.1. PERSONAL INFORMATION

Name/ surname:	George Papaioannou
Date of birth:	19 February 1984
Place of birth:	Drama, Greece
Family status:	Married, one child
Home Address:	Solonos 1, 68200, Orestiada
Office Address:	Ath Pantazidou 193, 68200, Orestiada
Email:	gpapaio@fmenr.duth.gr
Office phone:	+30-25520-41165

## 1.2. ACADEMIC QUALIFICATIONS

### 1) POSTGRADUATE STUDIES

#### a) University of Thessaly, 2008 - 2017

PhD in Hydrology and Water Resources, Department of Civil Engineering, University of Thessaly.

Supervisor: Professor Athanasios Loukas

Thesis title: Flood Hazard and Risk Modelling Framework for Ungauged Streams and Watersheds.

PhD degree: Excellent

#### b) Democritus University of Thrace, 2006 - 2008

M.Sc. “Sustainable Management of the Environment and Natural Resources” with specialization at the sector of “Sustainable Management of Mountainous Watersheds with Intelligent Information Systems and GIS”. Department of Forestry and Management of the Environment and Natural Resources, Democritus University of Thrace.

Supervisor: Assistant Professor, Fotis Maris.

M.Sc. Thesis: The torrential environment of Kosynthos river basin.

M.Sc. Thesis grade: 10

M.Sc, grade: 9,61 / 10

### 2) UNDERGRADUATE STUDIES

#### Democritus University of Thrace, 2001 – 2006

BSc Department of Forestry and Management of the Environment and Natural Resources, Democritus University of Thrace.

Supervisor: Assistant Professor, Fotis Maris.

BSc thesis title: Water potential and water balance of the stream watersheds Kamenikion, Agion Anargiron and Eleona, Serres, Greece.

BSc thesis grade: 10

BSc grade: 7,75 / 10

### 1.3. SCHOLARSHIPS - ACADEMIC PRIZES – AWARDS

- Scholarship - University of Thessaly - Department of Civil Engineering Scholarships Program, Academic years 2010-2011, 2011-2012, 2012-2013.
- Scholarship for PhD candidates from State Scholarships Foundation for 3 months, LLP-ERASMUS scholarship. University of Messina, Department of Civil Engineering, Italy. With the scholarship a part of the PhD were incorporated with title “Uncertainty analyse of flood risk mapping”, which count 20 ECTS units.
- Scholarship from COST (European Cooperation in Science and Technology) program for the participation in the seminar “Advanced techniques for flood hazard assessment in a changing environment”, COST- FLOODFREQ training course, 8-12 October 2012, Limassol, Cyprus.
- Scholarship from COST (European Cooperation in Science and Technology) / program COST- FLOODFREQ, for Short Term Scientific Mission (STSM) to Slovak University of Technology in Bratislava (STU), Faculty of Civil Engineering, Department of Land and Water Resources Management, 1-31 October 2013, Bratislava, Slovakia.
- Post-doc scholarship, Program “Supporting researchers with emphasis on young researchers – Round B” - Development of Human Resources, Education and Lifelong Learning, Ministry of Economics and Development - Project. Coordinator: Research Director, Dr. E. Dimitriou (Implementation Period: 2020-2022). MIS 5048553, Project title: “Remote sensing methodology for roughness estimation in ungauged streams and sensitivity analysis of floods using different hydraulic/hydrodynamic modeling approaches (1D,2D,1D/2D)”. The project received pass mark (95,77 / 100) in the scientific field of MATHEMATICS AND NATURAL SCIENCES, specialization sector HYDROLOGY ([https://empedu.gov.gr/wp-content/uploads/2019/06/Results\\_Final\\_Mikra\\_Ereunitika\\_B.xlsx](https://empedu.gov.gr/wp-content/uploads/2019/06/Results_Final_Mikra_Ereunitika_B.xlsx)).
- The journal paper “**Papaioannou, G.**, Varlas, G., Terti, G., Papadopoulos, A., Loukas, A., Panagopoulos, Y., & Dimitriou, E. (2019). Flood Inundation Mapping at Ungauged Basins Using Coupled Hydrometeorological–Hydraulic Modelling: The Catastrophic Case of the 2006 Flash Flood in Volos City, Greece. *Water*, 11(11), 2328. <https://doi.org/10.3390/w11112328>” was selected as the cover of Issue 11, November 2019, *Water* (MDPI), after the evaluation of all 229 published papers of the specific issue (<https://www.mdpi.com/2073-4441/11/11>).
- The journal paper “**Papaioannou, G.**, Efstratiadis, A., Vasiliades, L., Loukas, A., Papalexou, S.M., Koukouvinos, A., Tsoukalas, I., & Kossieris, P. (2018). An operational method for Flood Directive implementation in ungauged urban areas. *Hydrology*, 5(2), 24. <https://doi.org/10.3390/hydrology5020024>” awarded with the **Best Paper Award for 2020** from *Hydrology* (MDPI) journal ([https://www.mdpi.com/journal/hydrology/awards.pdf/0/pdf\\_177\\_2020\\_1\\_award.pdf](https://www.mdpi.com/journal/hydrology/awards.pdf/0/pdf_177_2020_1_award.pdf))
- The journal paper “**Papaioannou, G.**, Vasiliades, L., Loukas, A., Alamanos, A.,

Efstratiadis, A., Koukouvinos, A., Tsoukalas, I., Kossieris, P. (2021). A Flood Inundation Modeling Approach for Urban and Rural Areas in Lake and Large-Scale River Basins. *Water*, 13, 1264. <https://doi.org/10.3390/w13091264>”, was selected as Editor’s Choice Paper ([https://www.mdpi.com/journal/water/editors\\_choice?listby=type&page\\_no=3&page\\_count=50](https://www.mdpi.com/journal/water/editors_choice?listby=type&page_no=3&page_count=50) ).

- The journal paper “Alamanos, A., Rolston, A., **Papaioannou, G.** (2021). Development of a Decision Support System for Sustainable Environmental Management and Stakeholder Engagement. *Hydrology*, 8(1), 40. <https://doi.org/10.3390/hydrology8010040>”, was selected as Editor’s Choice Paper (<https://www.mdpi.com/about/announcements/4918>)

#### 1.4. TEACHING AND RESEARCH EXPERIENCE

- Teaching Assistant at the course “Hydrology” for the academic years of 2009-2010, 2010-2011, 2011-2012, 2012-2013 and 2013-2014, Department of Civil Engineering, University of Thessaly.
- Teaching Assistant at the course “Surface and groundwater hydrological systems modelling” for the academic years of 2010-2011, 2011-2012 at the MSc program “Applied Mechanics and Systems Modelling and Simulation”, Department of Civil Engineering, University of Thessaly.
- Teaching Assistant at the courses of “Floods” and “Hydrohazard Forecasting” for the academic years of 2010-2011, 2011-2012 and at the courses of “Planning for HydroHazard Prevention and Management” and “GIS and Remote Sensing Applications in Hydrohazards Analysis” for the academic years of 2010-2011, 2011-2012, 2012-2013, 2013-2014, 2014-2015, 2015-2016. Common Greek-French MSc program, Management of Hydrometeorological Hazards – Hydrohasards, Department of Civil Engineering, University of Thessaly.
- Adjunct Lecturer, teaching (lectures, laboratory sessions, notes, grading) the undergraduate course “Forest hydrology – Watershed Protection” of the Larisa General Department, Studies program of the Department of Forestry and Natural Resources Management, University of Thessaly, Academic Years 2019-2020 and 2020-2021.
- Assistant Professor, Department of Forestry and Management of the Environment and Natural Resources, Democritus University of Thrace, Academic Year 2021-2022. Teaching Courses:
  1. Geographic Environmental Information Systems (Compulsory 7<sup>th</sup> Semester)
  2. Mountainous Water Management and Control (Compulsory 7<sup>th</sup> Semester)
  3. Water Resources Management (Elective 5<sup>th</sup> Semester)
  4. Hydro-meteorological Disaster Management (Compulsory 8<sup>th</sup> Semester)
  5. Bioengineering Control Works (Elective 8<sup>th</sup> Semester)

- Assistant Professor, Department of Forestry and Management of the Environment and Natural Resources, Democritus University of Thrace, Academic Year 2022-2023, Autumn Semester. Teaching Courses:
  1. Mountainous Water Management and Control (Compulsory 7<sup>th</sup> Semester)
  2. Water Resources Management (Elective 5<sup>th</sup> Semester)
- Assistant Professor, Department of Forestry and Management of the Environment and Natural Resources, Democritus University of Thrace, Postgraduate Program “Environmental Education and Communication”, Specialization sector A: «Environmental Planning and Management of Natural Resources», Academic Year 2021-2022. Teaching Courses:
  1. Sustainable Management of Mountainous Watersheds (Spring Semester)
- Visiting Professor, Department of Civil Engineering, Democritus University of Thrace, Postgraduate Program “Hydro-meteorological Disaster Management”, Academic Year 2021-2022. Teaching Courses:
  1. Hydrometeorology – Hydrology and Climate Change (Autumn Semester)
  2. Modelling, Forecasting and Flood Risk Management. (Autumn Semester)
  3. Hydroinformatics and Decision Support Systems (DSS) for Flood Risk Assessment in Urban Areas (Autumn Semester)
- Visiting Professor, Department of Civil Engineering, Democritus University of Thrace, Postgraduate Program “Hydraulic Engineering and Environment”, Academic Year 2021-2022. Teaching Courses:
  1. Hydrogeoinformatics. (Spring Semester)
- Visiting Professor, Department of Civil Engineering, Democritus University of Thrace, Postgraduate Program “Hydro-meteorological Disaster Management”, Academic Year 2022-2023, Autumn Semester. Teaching Courses:
  1. Hydrometeorology – Hydrology and Climate Change (Autumn Semester)
  2. Modelling, Forecasting and Flood Risk Management. (Autumn Semester)
- Assistant Professor, Department of Forestry and Management of the Environment and Natural Resources, Democritus University of Thrace, 15-25 July 2022. Teaching course: “Module 2: Securing the island ‘s freshwater resources”, Summer School Programme “Sustainable Samothraki 2022”, Erasmus Blended Intensive Programmes (BIP).
- Post-doctoral Researcher, Hellenic Centre for Marine Research, Institute of Marine Biological Resources and Inland Waters, March 2018 – October 2021.
- Post-doctoral Researcher, Democritus University of Thrace, Department of Civil Engineering, April 2021 – October 2021.
- Collaborator, Laboratory of Hydrology and Aquatic Systems Analysis, Department of Civil Engineering, University of Thessaly, 2008– today.
- Collaborator, Institute of Marine Biological Resources and Inland Waters, Hellenic Centre for Marine Research 2018 – today.

- Collaborator, Department of Transportation and Hydraulic Engineering, School of Rural and Surveying Engineering, Aristotle University of Thessaloniki, 2018 – today.
- Collaborator, Laboratory of Hydrology and Hydraulic Works, Hydraulic Division, Department of Civil Engineering, Democritus University of Thrace, 2021 – today.

## **1.5. SUPERVISION OF PHD DISSERTATIONS, MASTER AND DIPLOMA THESES**

### **1.5.1. Phd dissertation**

Main supervisor of one (1) Ph.D. Dissertation:

- “Stochastic flood hydrograph modelling framework for ungauged watersheds under climate and land use change scenarios” Ioannis Tsitroulis, Democritus University of Thrace, Department of Forestry and Management of the Environment and Natural Resources (In progress).

Member of supervisory committee of one (1) Ph.D. Dissertation:

- “Flood resilience and risk assessment in urban environment” Dimitra Vitori, Democritus University of Thrace, Department of Civil Engineering (In progress).

### **1.5.2. MSc Thesis**

Member of supervisory committee of two (2) Master Theses:

- “Mountain river basin and urban areas flood management assessment. Investigation of the impact of initial wetness conditions and the roughness coefficient uncertainty” Apostolos Katsiolas, Postgraduate Program «Water Resources», Aristotle University of Thessaloniki, School of Rural and Surveying Engineering (In progress).
- “Dam break flood inundation modelling” Eleftheria Tzimika, Postgraduate Program «Water Resources», Aristotle University of Thessaloniki, School of Rural and Surveying Engineering (In progress).

### **1.5.3. Bachelor Thesis**

Main supervisor of four (4) Diploma Theses:

- “Hydrologic and hydraulic modelling of a torrential stream. The case study of Potistiko stream, Protokklisi, Evros, Greece” George Balis, Democritus University of Thrace, Department of Forestry and Management of the Environment and Natural Resources (In progress).
- “Estimation of hydrologic modeling sensitivity based on specific parameters. The case study of Vathi Rema, Mandra, Evros, Greece” Alma Kalia, Democritus University of Thrace, Department of Forestry and Management of the Environment and Natural Resources (In progress).

- “Design flood hydrograph sensitivity due to different rainfall temporal distribution methods used. The case study of Vathi Rema, Mandra, Evros, Greece” Melpomeni Grigoriadou, Democritus University of Thrace, Department of Forestry and Management of the Environment and Natural Resources (In progress).
- “Design hydrograph estimation under wildfire event scenarios”, Athanasios Drosoglou, Democritus University of Thrace, Department of Forestry and Management of the Environment and Natural Resources (In progress).

Member of supervisory committee of two (2) Diploma Theses:

- “Modelling the impact of dam failure on flood inundation” Argiris Zaralis, Aristotle University of Thessaloniki, School of Rural and Surveying Engineering (In progress).
- “Flood hazard design in Enipeas River, Olympus” Nikos Papatheodorou and George Dolgiras, Aristotle University of Thessaloniki, School of Rural and Surveying Engineering (Finished – November 2022).

Bachelor thesis support as PhD Candidate, Hydraulic Sector, Department of Civil Engineering, University of Thessaly (2008-2017):

- a. Moukos, A. & Paraskeuas, I. (2013). “Hydrologic and hydraulic simulation and composing flood maps with the use of HEC-RAS, HEC-HMS and GIS – Implementation to Xerias stream, Magnesia, Greece”, Department of Civil Engineering, University of Thessaly (in Greek, available abstract in English). <https://ir.lib.uth.gr/xmlui/handle/11615/43337>
- b. Asaridis, P. (2017). “Flood design sensitivity analysis for the urban area of Krafssidonas stream that cross Volos city, Greece”, Department of Civil Engineering, University of Thessaly (in Greek, available abstract in English). <https://ir.lib.uth.gr/xmlui/handle/11615/48547>
- c. Vasilopoulos, E. (2018). Flood hazard and uncertainty analysis assessment at watershed scale: The case study of Xerias stream, Magnesia, Greece. Department of Civil Engineering, University of Thessaly (in Greek, available abstract in English). <https://ir.lib.uth.gr/xmlui/handle/11615/48458>

## **1.6. ACADEMIC ADMINISTRATIVE EXPERIENCE**

- Director of Laboratory of Mountain River Training and Risk Management, Department of Forestry and Management of the Environment and Natural Resources, Democritus University of Thrace, 2021- today.
- Evaluator at the Research Ethics Committee (REC-DUTH), Department of Forestry and Management of the Environment and Natural Resources, Democritus University of Thrace.
- Member of the Department of Forestry and Management of the Environment and Natural Resources - Democritus University of Thrace committees, such as Member of the committee for partial attendance (setup the program for partial attendance), etc., 2021-today.



## 1.7. PARTICIPATION IN RESEARCH PROJECTS

- “Reconnaissance Study of Dam and Reservoir Development in the Position of Gavroneri Stomiou” (2013) – MIS 3962, Department of Civil Engineering, University of Thessaly, Scientific supervisor: Prof. N. Mylopoulos.
- “Investigation of the surface runoff routing of the subwatershed of Velestino area through a technical project and conjunction with ground water modeling” (2013) MIS 4756 – Operational programme: OP Environment & Sustainable Development, Department of Civil Engineering - University of Thessaly, Management body of ecodevelopment area of Karla-Maurovouniou-Kefalovrisou-Velestinou, Magnesia, Greece, Scientific supervisor: Prof. N. Mylopoulos.
- “Sustainable Use of Irrigation Water in the Mediterranean Region (SIRRIMED)” (2011-2014) – FP7-KBBE-2009-3 – Proposal Reference Number: FP7-245159. Scientific Responsible: Dr. Juan José Alarcón.
- “Development of an Integrated System for the Water Resources Quality and Quantity Monitoring and Management of Agricultural Watersheds Under Climate Change Conditions. Application to Lake Karla Watershed (HYDROMENTOR)” (2011-2015), General Secretariat for Research and Technology. National Action “Cooperation”, Coordinator: Prof. A. Loukas.
- “Monitoring and Recording of the Water Status (Quality, Quantity, Pressures, Use) in Greece” (2017-2023). National project: Y.ME.PER.A.A. 2014-2020, Project coordinator: Research Director, Dr. E. Dimitriou.
- “Remote sensing methodology for roughness estimation in ungauged streams and sensitivity analysis of floods using different hydraulic/hydrodynamic modeling approaches (1D,2D,1D/2D)” (2020-2022) MIS 5048553, Supporting researchers with emphasis on young researchers – Round B - Development of Human Resources, Education and Lifelong Learning, Ministry of Economics and Development, Project Coordinator: Research Director, Dr. E. Dimitriou.
- “Strengthening the water management practices (in EMT-R) through the development of innovative ICT methodologies and improvement of research infrastructures” (2021-2023) MIS 5047246, Operational Programme: «Competitiveness, Entrepreneurship and Innovation (EPAnEK)» – Axis: «Development of mechanisms to support entrepreneurship» – Action: «Regional Excellence Support», Funding: Co-financed by the European Regional Development Fund (ERDF), Department of Civil Engineering, Democritus University of Thrace, Project Coordinator: Prof. Ifigenia Kagkalou.

## 1.8. PARTICIPATION IN TECHNICAL REPORTS

TR1. Mylopoylos, N., Loukas, A., Vasiliades, L., **Papaioannou, G.**, Sidiropoulos, P., Tzampyras, J., Lysitsa G., Mihailidou-Notara, P. [UTH team, Phase B, Deliverable 4] (2013). “Climate Change Effects Estimation on Hydrometeorological Data in

- Thessaly, Epirus and West Sterea Ellada” Incl. “River basin management plan of the water districts of Epirus”/ “Drought and water scarcity management plan”, Special Secretariat of Water, Ministry of Environment and Climate Change, Consortium J. Karavokyris and Associates Consulting Engineers S.A, Technical report, Scientific Responsible: Assoc. Prof. N. Mylopoulos. (Official Journal of the Hellenic Republic - 2292 B/13.09.2013) ([http://wfdver.ypeka.gr/wp-content/uploads/2017/04/files/GR05/GR05\\_P24\\_Leipsidria\\_Xirasia.pdf](http://wfdver.ypeka.gr/wp-content/uploads/2017/04/files/GR05/GR05_P24_Leipsidria_Xirasia.pdf)) (in Greek)
- TR2. Mylopoylos, N., Loukas, A., Vasiliades, L., **Papaioannou, G.**, Sidiropoulos, P., Tzampyras, J., Lysitsa G., Mihailidou-Notara, P. [UTH team, Phase B, Deliverable 4] (2014). “Climate Change Effects Estimation on Hydrometeorological Data in Thessaly, Epirus and West Sterea Ellada” Incl. “River basin management plan of the water districts of Thessaly” / “Drought and water scarcity management plan” , Special Secretariat of Water, Ministry of Environment and Climate Change, Consortium J. Karavokyris and Associates Consulting Engineers S.A, Technical report, Scientific Responsible: Assoc. Prof. N. Mylopoulos. (Official Journal of the Hellenic Republic - 2561 B/25.09.2014) ([http://wfdver.ypeka.gr/wp-content/uploads/2017/04/files/GR08/GR08\\_P24\\_Leipsidria\\_Xirasia.pdf](http://wfdver.ypeka.gr/wp-content/uploads/2017/04/files/GR08/GR08_P24_Leipsidria_Xirasia.pdf)) (in Greek)
- TR3. Mylopoylos, N., Loukas, A., Vasiliades, L., **Papaioannou, G.**, Sidiropoulos, P., Tzampyras, J., Lysitsa G., Mihailidou-Notara, P. [UTH team, Phase B, Deliverable 4] (2014). “Climate Change Effects Estimation on Hydrometeorological Data in Thessaly, Epirus and West Sterea Ellada” Incl. “River basin management plan of the water districts of Western Greece, Greece”/ “Drought and water scarcity management plan”,, Special Secretariat of Water, Ministry of Environment and Climate Change, Consortium J. Karavokyris and Associates Consulting Engineers S.A, Technical report, Scientific Responsible: Assoc. Prof. N. Mylopoulos. (Official Journal of the Hellenic Republic - 2562 B/25.09.2014) ([http://wfdver.ypeka.gr/wp-content/uploads/2017/04/files/GR04/GR04\\_P24\\_Leipsidria\\_Xirasia.pdf](http://wfdver.ypeka.gr/wp-content/uploads/2017/04/files/GR04/GR04_P24_Leipsidria_Xirasia.pdf)) (in Greek)
- TR4. Iakovakis, K., Loukas, A., Vasiliades, L., Sidiropoulos, P., Tzabyras, J., **Papaioannou, G.** (2014) “Hydraulic-Hydrogeological study for irrigation from Pinios River – Pumping station B”, Regional unit of Thessaly, Technical report, General Coordinator: Iakovakis, K., Scientific supervisor from UTH: Prof. Loukas, A. (in Greek)
- TR5. Mylopoylos, N., Fafoutis, C., **Papaioannou, G.**, Mihailidou-Notara, P., Memtsas, D. (2014). “Investigation of the surface runoff routing of the subwatershed of Velestino area through a technical project and conjunction with ground water modeling”. Management body of ecodevelopment area of Karla-Maurovouniou-Kefalovrisou-Velestinou, Magnesia, Greece, Technical report, Scientific supervisor: Prof. N. Mylopoulos, (in Greek)
- TR6. Loukas, A., Vasiliades, L., Ganoulis F., **Papaioannou, G.**, Sidiropoulos, P., Chronis, I., Fotakis, D. [Team n. 2, Deliverable 5] (2018). “Flood Risk Management Plans for the River Basins of Epirus Region, Greece”, In “Flood Risk Management

- Plans for the River Basins of Thessaly, Epirus and Westren Greece Regions”, Special Secretariat of Water, Ministry of Environment and Climate Change, Consortium J. Karavokyris and Associates Consulting Engineers S.A. Scientific Responsible: Prof. A. Loukas.(Official Journal of the Hellenic Republic - 2684 B / 6.07.2018) ([http://thyamis.itia.ntua.gr/egyffloods/sdkp/EL05/ΦΕΚ\\_2684\\_06072018.pdf](http://thyamis.itia.ntua.gr/egyffloods/sdkp/EL05/ΦΕΚ_2684_06072018.pdf)). (in Greek)
- TR7. Loukas, A., Vasiliades, L., Ganoulis F., **Papaioannou, G.**, Sidiropoulos, P., Chronis, I., Fotakis, D. [Team n. 2, Deliverable 5] (2018). “Flood Risk Management Plans for the River Basins of Thessaly Region, Greece”, In “Flood Risk Management Plans for the River Basins of Thessaly, Epirus and Westren Greece Regions”, Special Secretariat of Water, Ministry of Environment and Climate Change, Consortium J. Karavokyris and Associates Consulting Engineers S.A. Scientific Responsible: Prof. A. Loukas.(Official Journal of the Hellenic Republic - 2685 B / 6.07.2018) ([http://thyamis.itia.ntua.gr/egyffloods/sdkp/EL08/ΦΕΚ\\_2685\\_06072018.pdf](http://thyamis.itia.ntua.gr/egyffloods/sdkp/EL08/ΦΕΚ_2685_06072018.pdf)). (in Greek)
- TR8. Dimitriou, E., **Papaioannou, G.**, Panagopoulos, Y., Mentzafou, A., Markogianni, V., Papadaki, C., Doumenis, D., Poulis, G., [HCMR Project team] (2019), “1.1 Requirements and design of smart sensors technical report”, Project title: “ Open Internet of Things infrastructure for online environmental services - Open ELIoT”, Action « RESEARCH - CREATE - INNOVATE », EPAnEK 2014-2020, Operational Programme: «Competitiveness, Entrepreneurship and Innovation (EPAnEK)», Project Coordinator: Research Director, Dr. E. Dimitriou (MIS:T1EAK-01613) ([https://www.openeliot.com/wp-content/uploads/2020/08/D1-1.1-Sensors-requirements\\_FINAL.pdf](https://www.openeliot.com/wp-content/uploads/2020/08/D1-1.1-Sensors-requirements_FINAL.pdf)).
- TR9. Dimitriou, E., **Papaioannou, G.**, Panagopoulos, Y., Mentzafou, A., Markogianni, V., Papadaki, C., Doumenis, D., Poulis, G., [HCMR Project team] (2019), “1.2 Technical report on the description of the data collection, processing, and visualization platform operation”, Project title: “ Open Internet of Things infrastructure for online environmental services - Open ELIoT”, Action « RESEARCH - CREATE - INNOVATE », EPAnEK 2014-2020, Operational Programme: «Competitiveness, Entrepreneurship and Innovation (EPAnEK)», Project Coordinator: Research Director, Dr. E. Dimitriou (MIS:T1EAK-01613) ([https://www.openeliot.com/wp-content/uploads/2020/08/D2-1.2-Platform-requirements\\_FINAL.pdf](https://www.openeliot.com/wp-content/uploads/2020/08/D2-1.2-Platform-requirements_FINAL.pdf)).
- TR10. Kalogianni, E., Vardakas, L., **Papaioannou, G.**, Karaouzas, I., Smeti, E., Laschou, S., Giakoumi, S., Kouraklis, P., Koutsikos, N., Kapakos, Y., Skoulidikis, N., Dimitriou, E. (2021). PARNON “Actions to improve the conservation status of the protected fish species *Squalius keadicus* (Endangered) and *Pelagus laonicus* (Critically Endangered)”, Deliverable n. 2: “Hydrological characterization of summer fish refugia in the Evrotas basin and sites of implementation of conservation actions for the two target species within the boundaries of the protected Natura 2000 area - EKVOLES EVROTA, PERIOCHI VRONTAMA KAI THALASSIA PERIOCHI LAKONIKOU KOLPOU”, 2<sup>nd</sup> Technical Report, January 2021, HCMR (in Greek with English summary).

TR11. **Papaioannou, G.**, Dimitriou, E., Vardakas, L., Kouraklis, P., Kalogianni, E. (2021). PARNON “Actions to improve the conservation status of the protected fish species *Squalius keadicus* (Endangered) and *Pelagus laonicus* (Critically Endangered)”, Deliverable n. 3: “Specifications for the protection and improvement of the summer fish habitats’ hydrological status in the catchment area of the Evrotas river within the Management body's administrative boundaries”, 3<sup>rd</sup> technical Report, March 2021, HCMR (in Greek with English summary).

## 1.9. ASSOCIATIONS AND SCIENTIFIC BODIES

1. Geotechnical chamber of Greece
2. Hellenic forestry society
3. European Geophysical Union (EGU)

## 1.10. MEMBER OF SCIENTIFIC COMMITTEES’ EDITORIAL BOARDS AND JOURNAL PUBLICATIONS REVIEWER

- Member Of Scientific Committees Editorial Boards:
  1. Guest Editor of *Hydrology* (MDPI) for the special issue “Current Status and Future Prospects of Hydromorphological Assessment of Rivers” ([https://www.mdpi.com/journal/hydrology/special\\_issues/hydrology\\_river\\_alt\\_eration](https://www.mdpi.com/journal/hydrology/special_issues/hydrology_river_alt_eration)).
  2. Guest Editor of *Land* (MDPI) for the special issue “Urban Floods and/or Floods after Severe Wildfire Events” ([https://www.mdpi.com/journal/land/special\\_issues/urban\\_flood\\_wildfire](https://www.mdpi.com/journal/land/special_issues/urban_flood_wildfire))
- Member of national and international conference committees:
  - a. International Conference “Advanced Methods for Flood Estimation in a Variable and Changing Environment”, COST Action ES0901 “European Procedures for Flood Frequency Estimation – FloodFreq”, 24-26 October 2012, Volos, Greece (member of the organizing committee).
  - b. International Conference “Managing Water-Energy-Land-Food under Climatic, Environmental and Social Instability”, 12<sup>th</sup> WORLD CONGRESS OF EWRA on Water Resources and Environment (EWRA2023), 27 June - 1 July 2023, Thessaloniki, Greece (member of the Congress International Scientific Committee).
- Reviewer in journals (<https://publons.com/a/1650706>):
  1. IEEE Computational Intelligence Magazine [IEEE] (I.F. 9.809)
  2. Journal of Hydrology [Elsevier] (I.F. 6.708)
  3. Hydrology and Earth System Sciences [Copernicus Publications] (I.F. 6.617)
  4. Remote Sensing [MDPI] (I.F. 5.349)
  5. Land Degradation & Development [Taylor & Francis] (I.F. 4.377)
  6. Hydrological Sciences Journal [Taylor & Francis] (I.F. 3.942)
  7. Geomatics, Natural Hazards and Risk [Taylor & Francis] (I.F. 3.922)
  8. Land [MDPI] (I.F. 3.905)
  9. Water (Switzerland) [MDPI] (I.F. 3.530)
  10. Natural Hazards [Springer] (I.F. 3.158)
  11. Transactions in GIS [Wiley] (I.F. 2.568)

12. Canadian Journal of Civil Engineering [Canadian Science Publishing] (I.F. 1.771)
13. Hydrology [MDPI]
14. European Water

### 1.11. COMPUTER KNOWLEDGE

- Microsoft Office Word, Microsoft Office Excel, Internet, Visual Basic, Access, GIS Arcview, Introduction to C++. With certification from the Department of Forestry and Management of the Environment and Natural Resources, Democritus University of Thrace.
- Microsoft Office Power-Point, Microsoft Windows, HEC-RAS, HEC-GeoRas, HEC-HMS, HEC-GeoHMS, HEC-DSSVue, ArcGIS, AutoCAD, Saga-GIS, Adobe Photoshop, Adobe Acrobat, Edraw, Polyworks 10, ArgusONE, Matlab, Surfer 10, R-Studio, R-Cran, MIKE FLOOD, MIKE-GIS, MIKE-11, MIKE-21, XPSTORM, LISFLOOD-FP, FLO2D, SPSS-v20.

### 1.12. SOFTWARE AND TOOLS DEVELOPMENT

- Development of the EcoFlowTool tool. This tool has been developed in ArcGIS model-builder environment and contains EcoFlow software conversion tools. It also contains the spatial distributed Weighted Usable Area Index (WUA) estimation tool, with or without the optimization criterion of 0.5 (WUA<sub>0.5</sub>). Moreover, the toolbox contains the Habitat Suitability Index (HSI) estimation tool. The tool is available for free and can be downloaded from the website: <http://ecoflow.hcmr.gr/εφαρμογές/>  
<http://ecoflow.hcmr.gr/wp-content/uploads/2019/12/EcoFlowToolV1.zip>  
The desirable citation format is:  
**Papaioannou, G.**, Papadaki, Ch., and Dimitriou, E., 2019 EcoFlowTool Arc Toolbox version 1.0, Hellenic Center of Marine Research – Institute of Marine Biological Resources and Inland Waters. [online-only]

### 1.13. LANGUAGES

- Certification in English language - LOWER level (First Certificate), TOEIC exams, Hellenic American Union.

### 1.14. SEMINARS - WEBINARS

- “Introduction to Geographical information system (GIS) -ArcGIS, ArcInfo, ArcView” 23-24 October 2003, Democritus University of Thrace, Orestiada. Marathon Data System.
- “Advanced techniques for flood hazard assessment in a changing environment”, COST- FLOODFREQ training course, 8-12 October 2012, Limassol, Cyprus.
- “MIKE FLOOD, INTEGRATED 1D AND 2D RIVER MODELLING”, MIKE by DHI training course, 25-26 April 2013, Athens, Greece.

- “Do-It-Yourself Geo Apps” online course (webinar), ESRI & UDEMY, 03 Feb - 2 March 2016.
- “Introduction to Synthetic Aperture Radar” NASA’s Applied Remote Sensing Training Program (ARSET) (webinar), NASA, 28 June - 6 July 2017.
- “Advanced Webinar: Change Detection for Land Cover Mapping” NASA’s Applied Remote Sensing Training Program (ARSET) (webinar), NASA, 28 September - 5 October 2018.
- “Dam Breach Modelling”, Australian Water School, webinar, 11 December 2018.
- “Using Earth Observations to Monitor Water Budgets for River Basin Management” NASA’s Applied Remote Sensing Training Program (ARSET) (webinar), NASA, 13 March – 3 April 2019.
- “Integrating Remote Sensing into a Water Quality Monitoring Program” NASA’s Applied Remote Sensing Training Program (ARSET) (webinar), NASA, 5 June – 19 June 2019.
- “Remote Sensing for Freshwater Habitats” NASA’s Applied Remote Sensing Training Program (ARSET) (webinar), NASA, 17 September – 1 October 2019.
- “Applications of GPM IMERG Reanalysis for Assessing Extreme Dry and Wet Periods” NASA’s Applied Remote Sensing Training Program (ARSET) (webinar), NASA, 28,30 January and 4 February 2020.
- “Using Earth Observations to Monitor Water Budgets for River Basin Management II” NASA’s Applied Remote Sensing Training Program (ARSET) (webinar), NASA, 21 July – 4 August 2020.
- “Going Places with Spatial Analysis” online course (webinar), ESRI - “THE SCIENCE OF WHERE”, 6 weeks, completed on 21 September 2020.
- “Spatial Data Science: The New Frontier in Analytics” online course (webinar), ESRI - “THE SCIENCE OF WHERE”, 6 weeks, completed on 6 December 2020.
- “Imagery in Action” online course (webinar), ESRI - “THE SCIENCE OF WHERE”, 6 weeks, completed on 22 September 2021.
- “Wiley Open Access Account Agreement and Author Workflow Training – HEAL-Link”, WILEY, 31 May 2022.
- “Monitoring and Modeling Floods using Earth Observations” NASA’s Applied Remote Sensing Training Program (ARSET) (webinar), NASA, 14 & 21 September 2022.

- “Introduction to ecosystem restoration” Three-week Massive open online course (Part 1), United Nations Development Programme (UNDP) and Convention on Biological Diversity (CBD), 19 September - 20 November 2022.

### **1.15. OTHER SIGNIFICANT TRAINING AND SKILLS**

- Certificate of Remote Pilot Competency [EASA]: 1) A1/A3 OPEN SUB CATEGORY, 2) A2 OPEN SUB CATEGORY (Expiration date 21/12/2026).
- UAS OPERATOR REGISTRATION [EASA] (Expiration date 21/12/2024).

### **1.16. PROFESSIONAL EXPERIENCE**

- Practice Occupation at forestry service, Drama, Greece. **01/08/2005 – 31/08/2005**
- Practice Occupation at the forestry office of George Logothetis, Theofanis Karampatzakis and Gesthimani Christoforidou (Ifaistionos 3, Drama, Greece). **01/08/2006 – 30/09/2006.**
- Participate in a part of the study design “River basin management plan of the water districts of Thessaly, Epirus and Western Sterea Hellas, Greece” according to the EU Directive 2000/60/EC and the Greek Law 3199/2003, P.D. 51/2007. Specifically the study was focused on “Climate Change Effects Estimation on Hydrometeorological Data in Thessaly, Epirus and West Sterea Ellada”, Special Secretariat of Water, Ministry of Environment and Climate Change, Consortium J. Karavokyris and Associates Consulting Engineers S.A. Scientific Responsible: Assoc. Prof. N. Mylopoulos. **2011.**
- Field data collection for the development of the background presentation design of the Lake Karla’s Masterplan. **2012**
- “Hydraulic-Hydrogeological study for irrigation from Pinios River – Pumping station B”, Regional unit of Thessaly, General Coordinator: Iakovakis, K., Scientific supervisor from UTH: Prof. Loukas, A. **2014**
- Participate in a part of the study design “Management Plans of Flood Risks for River Basins in Thessaly and Epirus Regions, Greece”, Special Secretariat of Water, Ministry of Environment and Climate Change, Consortium J. Karavokyris and Associates Consulting Engineers S.A. Scientific Responsible: Prof. A. Loukas. **2015-2017.**

### **1.17. MEDIA REPORTS ON Dr. PAPAIOANNOU WORKS.**

- Article in newspaper “Thessaly”, title: “Flood risk in Neapoli area”. The article is related with the PhD dissertation, (2012) [article in Greek]. <https://e-thessalia.gr/κίνδυνος-πλημμύρας-στη-νεάπολη/>
- Article in newspaper “Taxydromos”, title: “Areas prone to floods”. The article is related with the PhD dissertation, (2015) [article in Greek].

<https://www.taxydromos.gr/E.Chanou/172967-synoikies-epikindynes-gia-plhmmyres.html>

- Article in newspaper “Taxydromos”, title: “Xerias stream, the Achilles' heel of Volos city”. The article is related with the professional experience (participation in the “Management Plans of Flood Risks for River Basins in Thessaly and Epirus Regions, Greece”) (2017) [article in Greek]. <https://www.taxydromos.gr/Topika/280846-o-3hrias-axilleios-pterna-toy-boloy.html>
- Article in newspaper “Magnesia”, title: “Volos and Almyros cities are vulnerable to floods”. The article is related with the professional experience (participation in the “Management Plans of Flood Risks for River Basins in Thessaly and Epirus Regions, Greece”) (2017) [article in Greek]. <https://magnesianews.gr/slider/volos-ke-almyros-evaloti-stis-plimmyres.html>
- Article in the online newspaper larissanet.gr, title: “Areas that are in danger from floods in Larisa prefecture” The article is related with the professional experience (participation in the “Management Plans of Flood Risks for River Basins in Thessaly and Epirus Regions, Greece”) (2017). <https://www.larissanet.gr/2017/11/30/oi-perioches-pou-kindynefoun-apo-plimmyra-sto-n-larissas/>

## 1.18. RESEARCH INTERESTS

Random listing of research interests of Dr. George Papaioannou:

- Hydrologic simulation of watersheds with conceptual and stochastic models,
- Methodologies for the runoff estimation in ungauged watersheds,
- Methodologies for the estimation and study of floods,
- Uncertainty analysis in hydrology
- Hydrodynamic flood routing modeling (mountain streams, urban and suburban areas),
- Mountain river training
- Forest hydrology and the impact of vegetation on the hydrological cycle
- Impacts of climate change on hydrological processes, extremes and water resources,
- Integrated water resources management,
- Applications of G.I.S. and Remote Sensing in hydrology and water resources management,
- Methodologies for the estimation of soil loss, erosion and deposition areas (sediment transport and erosion processes).
- Impacts of land-use changes on water resources,
- Mountain hydrology,
- Temporal and spatial distribution of hydrometeorological parameters,
- Design and simulation of water works operation,
- Watershed water quality simulation,
- Natural environmental hazards and their impacts.
- Hydroinformatics



## 1.19. PUBLICATIONS:

### 1.19.1. Dissertations and Thesis

- A.1. **Papaioannou, G.** (2006). “Water potential and water balance of the stream watersheds Kamenikion, Agion Anargiron and Eleona, Serres,Greece”, B.Sc. Diploma Thesis, Department of Forestry and Management of the Environment and Natural Resources, Democritus University of Thrace. (in Greek)
- A.2. **Papaioannou, G.** (2008). “The torrential environment of Kosynthos river basin”, M.Sc. Thesis, Department of Forestry and Management of the Environment and Natural Resources, Democritus University of Thrace. (in Greek)  
<https://repo.lib.duth.gr/jspui/handle/123456789/2193>
- A.3. **Papaioannou, G.** (2017). “Flood Hazard and Risk Modelling Framework for Ungauged Streams and Watersheds”, Ph.D. Dissertation, Department of Civil Engineering, University of Thessaly. (in English)  
<https://www.didaktorika.gr/eadd/handle/10442/42228>

### 1.19.2. Journal Publications

- B.1. **Papaioannou, G.,** Vasiliades, L., & Loukas, A. (2015). Multi-criteria analysis framework for potential flood prone areas mapping. *Water Resources Management*, 29(2), 399-418. <https://doi.org/10.1007/s11269-014-0817-6>
- B.2. **Papaioannou, G.,** Loukas, A., Vasiliades, L., & Aronica, G.T. (2016). Flood inundation mapping sensitivity to riverine spatial resolution and modelling approach. *Natural Hazards*, 83(1), 117-132. <https://doi.org/10.1007/s11069-016-2382-1>
- B.3. **Papaioannou, G.,** Kohnova, S., Bacigal, T., Szolgay, J., Hlavcova, K., & Loukas, A. (2016). Joint modelling of flood peaks and volumes. A copula application for Danube River. *Journal of hydrology and Hydromechanics*, 64(1), 382-392. <https://doi.org/10.1515/johh-2016-0049>
- B.4. **Papaioannou, G.,** Vasiliades, L., Loukas, A., & Aronica, G.T. (2017). Probabilistic flood inundation mapping at ungauged streams due to roughness coefficient uncertainty in hydraulic modelling. *Advances in Geosciences*, 44, 23-34. <https://doi.org/10.5194/adgeo-44-23-2017>
- B.5. **Papaioannou, G.,** Loukas, A., Vasiliades, L., & Aronica, G.T. (2017). Sensitivity analysis of a probabilistic flood inundation mapping framework for ungauged catchments. *European Water*, 60, 9-16. [https://www.ewra.net/ew/pdf/EW\\_2017\\_60\\_02.pdf](https://www.ewra.net/ew/pdf/EW_2017_60_02.pdf)
- B.6. **Papaioannou, G.,** Efstratiadis, A., Vasiliades, L., Loukas, A., Papalexiou, S.M., Koukouvinos, A., Tsoukalas, I., & Kossieris, P. (2018). An operational method for Flood Directive implementation in ungauged urban areas. *Hydrology*, 5(2), 24. <https://doi.org/10.3390/hydrology5020024>

- B.7. Sidiropoulos, P., Tziatzios, G., Vasiliades, L., **Papaioannou, G.**, Mylopoulos N., & Loukas, A. (2018). Modeling Flow and Nitrate Transport in an Over-Exploited Aquifer of Rural Basin Using an Integrated System: The Case of Lake Karla Watershed. *Proceedings*, 2(11), 667. <https://doi.org/10.3390/proceedings2110667>
- B.8. **Papaioannou G**, Loukas A, & Vasiliades L. (2019). Flood Risk Management Methodology for Lakes and Adjacent Areas: The Lake Pamvotida Paradigm. *Proceedings*. 7(1), 21. <https://doi.org/10.3390/ECWS-3-05825>
- B.9. Alamanos, A., Latinopoulos, D., **Papaioannou, G.**, & Mylopoulos N. (2019). Integrated Hydro-Economic Modeling for Sustainable Water Resources Management In Data-Scarce Areas: The Case of Lake Karla Watershed in Greece. *Water Resources Management*, 33, 2775-2790. <https://doi.org/10.1007/s11269-019-02241-8>
- B.10. Stefanidis, K., **Papaioannou, G.**, Markogianni, V., & Dimitriou, E. (2019). Water Quality and Hydromorphological Variability in Greek Rivers: A Nationwide Assessment with Implications for Management. *Water*, 11(8), 1680. <https://doi.org/10.3390/w11081680>
- B.11. **Papaioannou, G.**, Varlas, G., Terti, G., Papadopoulos, A., Loukas, A., Panagopoulos, Y., & Dimitriou, E. (2019). Flood Inundation Mapping at Ungauged Basins Using Coupled Hydrometeorological–Hydraulic Modelling: The Catastrophic Case of the 2006 Flash Flood in Volos City, Greece. *Water*, 11(11), 2328. <https://doi.org/10.3390/w11112328>
- B.12. **Papaioannou, G.**, Papadaki, C., & Dimitriou, E. (2020). Sensitivity of habitat hydraulic model outputs to DTM and computational mesh resolution. *Ecology*, 13(2). <https://doi.org/10.1002/eco.2182>
- B.13. Alamanos, A., & **Papaioannou, G.** (2020). A GIS-Multi-Criteria Analysis tool for a low-cost, preliminary evaluation of wetland effectiveness for nutrient buffering at watershed scale: 4The case study of Grand River, Ontario, Canada. *Water*, 12(11). <https://doi.org/10.3390/w12113134>
- B.14. **Papaioannou, G.**, Varlas, G., Papadopoulos, A., Loukas, A., Katsafados, P., & Dimitriou, E. (2020). Investigating sea-state effects on flash flood hydrograph and inundation forecasting. *Hydrological Processes*. 35:e14151. <https://doi.org/10.1002/hyp.14151>
- B.15. Alamanos, A., Rolston, A., & **Papaioannou, G.** (2021). Development of a Decision Support System for sustainable environmental management and stakeholder engagement. *Hydrology*. 8(1):40. <https://doi.org/10.3390/hydrology8010040>
- B.16. Latsiou, A., Kouvarda, Th., Stefanidis, K., **Papaioannou, G.**, Gritzalis, K., & Dimitriou, E. (2021). Pressures and Status of the Riparian Vegetation in Greek

- Rivers: Overview and Preliminary Assessment. *Hydrology* 2021, 8(1), 55; <https://doi.org/10.3390/hydrology8010055>
- B.17. **Papaioannou, G.**, Vasiliades, L., Loukas, A., Alamanos, A., Efstratiadis, A., Koukouvinos, A., Tsoukalas I. & Kossieris, P. (2021). A flood inundation and modelling approach for urban and rural areas in ungauged lake and large-scale river basins. *Water*, 13(9), 1264; <https://doi.org/10.3390/w13091264>
- B.18. Varlas, G., Papadopoulos, A., **Papaioannou, G.**, & Dimitriou, E (2021). Evaluating the Forecast Skill of a Hydrometeorological Modelling System in Greece. *Atmosphere*, 12(7), 902; <https://doi.org/10.3390/atmos12070902>
- B.19. Kaffas, K., **Papaioannou, G.**, Varlas, G., al Sayah, M. J., Papadopoulos, A., Dimitriou, E., Katsafados, P., & Righetti, M. (2022). Forecasting soil erosion and sediment yields during flash floods: The disastrous case of Mandra, Greece, 2017. *Earth Surface Processes and Landforms*. <https://doi.org/10.1002/esp.5344>
- B.20. Stefanidis, K., Kouvarda, T., Latsiou, A., **Papaioannou, G.**, Gritzalis, K., & Dimitriou, E. (2022). A Comparative Evaluation of Hydromorphological Assessment Methods Applied in Rivers of Greece. *Hydrology*, 9(3), 43. <https://doi.org/10.3390/hydrology9030043>
- B.21. Varlas, G., Stefanidis, K., **Papaioannou, G.**, Panagopoulos, Y., Pytharoulis, I., Katsafados, P., Papadopoulos, A., & Dimitriou, E. (2022). Unravelling Precipitation Trends in Greece since 1950s Using ERA5 Climate Reanalysis Data. *Climate*, 10(2). <https://doi.org/10.3390/cli10020012>
- B.22. Stefanidis, K., Varlas, G., **Papaioannou, G.**, Papadopoulos, A., & Dimitriou, E. (2022). Trends of lake temperature, mixing depth and ice cover thickness of European lakes during the last four decades. *Science of The Total Environment*, 830, 154709. <https://doi.org/https://doi.org/10.1016/j.scitotenv.2022.154709>
- B.23. **Papaioannou, G.**, Markogianni, V., Loukas, A., & Dimitriou, E. (2022). Remote Sensing Methodology for Roughness Estimation in Ungauged Streams for Different Hydraulic/Hydrodynamic Modeling Approaches. *Water*, 14(7), 1076. <https://doi.org/10.3390/w14071076>
- B.24. Stefanidis, K., Varlas, G., **Papaioannou, G.**, Papadopoulos, A., & Dimitriou, E. (2023). Assessing temporal variability of lake turbidity and trophic state of European lakes using open data repositories. *Science of the Total Environment*, 857. <https://doi.org/10.1016/j.scitotenv.2022.159618>

### 1.19.3. Referred Conferences (full paper review)

- C.1. **Papaioannou, G.**, Drosos, V., (2007). “Materials and construction methods for earth and rockfill dams: Past – Present - Future”, 13<sup>th</sup> National forestry conference, Hellenic forestry society, 7-10 October 2007, Kastoria, Greece (in Greek).

- C.2. **Papaioannou, G.**, Maris, F., Loukas, A., (2009). “Estimation of the erosion of the mountainous watershed of river Kosynthos”, Joint Conference Hellenic Hydrotechnical Union - Greek Committee for Water Resources Management, Volos, 27-30 May 2009 (in Greek).
- C.3. **Papaioannou, G.**, Loukas, A., & Georgiadis, Ch. (2013). The effect of riverine terrain spatial resolution on flood modeling and mapping. *First International Conference on Remote Sensing and Geoinformation of the Environment*, 8-10 April 2013, Paphos, Cyprus, SPIE Proceedings Vol. 8795. <https://doi.org/10.1117/12.2028218>
- C.4. **Papaioannou, G.**, Loukas, A., & Vasiliades, L. (2013). Multi-criteria analysis framework for mapping of potential flood prone areas. *Proceedings of 8<sup>th</sup> International Conference of EWRA on Water Resources Management in an Interdisciplinary and Changing Context*, 26-29 June 2013, Porto, Portugal.
- C.5. Vasiliades, L., Sidiropoulos, P., Jabiras, J., **Papaioannou, G.**, Kokkinos, K., Loukas, A., & Mylopoulos, N. (2015). An integrated modelling system for assessing water resources management practices. *Proceedings of 9<sup>th</sup> World Congress of EWRA: Water resources management in a changing World: Challenges and Opportunities*, 10 – 13 June 2015, Istanbul, Turkey.
- C.6. Vasiliades, L., Sidiropoulos, P., Jabiras, J., Kokkinos, K., Spiliotopoulos, M., **Papaioannou, G.**, Fafoutis, C., Michailidou, K., Tziatzios, G., Loukas, A., & Mylopoulos, N. (2015). An integrated monitoring and management system for quantity and quality assessment of water resources in rural basins. *Proceedings of 9<sup>th</sup> World Congress of EWRA: Water resources management in a changing World: Challenges and Opportunities*, 10 – 13 June 2015, Istanbul, Turkey.
- C.7. Jabiras, J., Vasiliades, L., Sidiropoulos, P., **Papaioannou, G.**, Loukas, A., & Mylopoulos, N. (2015). Climate change impacts on hydrometeorological variables at Lake Karla watershed. *14th International Conference on Environmental Science and Technology CEST2015*, 3-5 September 2015, Rhodes, Greece.
- C.8. Alamanos, A., Fafoutis, C., **Papaioannou, G.**, & Mylopoulos, N. (2017). Extension of an integrated hydroeconomic model of Lake Karla watershed, under management, climate and pricing scenario analysis. *Sixth International Conference on Environmental Management, Engineering, Planning and Economics (CEMEPE) and SECOTOX Conference*, 25-30 Jun, 2017, Thessaloniki, Greece.
- C.9. **Papaioannou, G.**, Loukas, A., Vasiliades, L., & Aronica, G.T. (2017). Sensitivity analysis of a probabilistic flood inundation mapping framework for ungauged catchments. *Proceedings of 10th World Congress of EWRA: Panta Rhei*, 5 – 9 July 2017, Athens, Greece.
- C.10. Sidiropoulos, P., Tziatzios, G., Vasiliades, L., **Papaioanou, G.**, Mylopoulos, N. & Loukas, A. (2018). Modelling flow and nitrate transport in an over-exploited aquifer of rural basin using an integrated system: The case of Lake Karla watershed. *3rd EWaS International Conference on “Insights on the Water-Energy-Food*

*Nexus*”, 27-30 June 2018, Lefkada Island, Greece. (Republication: J. Proceedings, MDPI)

- C.11. Tziatzios, G., Sidiropoulos, P., Vasiliades, L., Tzabiras, J., **Papaioannou, G.**, Mylopoulos, N., & Loukas, A. (2018). Effects of climate change on groundwater nitrate modelling. *International Conference "Protection and Restoration of the Environment XIV"*, 03-06 July 2018, Thessaloniki, Greece.
- C.12. **Papaioannou, G.**, Loukas, A., & Vasiliades, L. (2018). Flood risk management methodology for Lakes and adjacent areas: The Lake Pamvotida Paradigm. *3<sup>rd</sup> International Electronic Conference on Water Sciences*, 15-30 November 2018. (Republication: J. Proceedings, MDPI)
- C.13. Papadopoulos, A., Varlas, G., **Papaioannou, G.**, Mentzafou, A., Terti, G., Markogianni, V., Panagopoulos, Y., Spyrou, C., Katsafados, P., Loukas, A., & Dimitriou, E. (2021). An integrated hydrometeorological-hydraulic modelling system for investigating flooding. *15<sup>th</sup> International Conference on Meteorology, Climatology and Atmospheric Physics "COMECAP 2021"*. 26 – 29 September 2021, Ioannina, Greece.
- C.14. Vardakas L., Dimitriou E., Karaouzas I., Koutsikos N., Smeti E., Laschou S., Kapakos Y., Kouraklis P., **Papaioannou G.**, Boglis A., Anastopoulos D., Dimitrakopoulos I & Kalogianni E. (2022). Methodological Framework And Implementation Of Conservation Actions For Two Threatened Cyprinids In An Intermittent River. *Marine and Inland Waters Research Symposium*, September 16th – 20th, 2022, Porto Heli, Argolida, Greece.
- C.15. Varlas, G., Stefanidis, K., **Papaioannou, G.**, Panagopoulos, Y., Pytharoulis, I., Katsafados, P., Papadopoulos, A., & Dimitriou, E. (2022). Investigating Precipitation Variabilities In Greece During 1950-2020 Using ERA5 Data. *Marine and Inland Waters Research Symposium*, September 16th – 20th, 2022, Porto Heli, Argolida, Greece.

#### 1.19.4. Referred Presentations (abstract and extended abstract review)

- D.1. **Papaioannou, G.**, & Loukas, A. (2010). Flood inundation mapping uncertainty introduced by topographic data accuracy, geometric configuration and modeling approach. *EGU General Assembly 2010*, 02-07 May 2010, Vienna, Austria, Geophysical Research Abstracts, Vol. 12, EGU2010-14805.
- D.2. Loukas, A., Aronica, G., Brigandi, G., Vasiliades, L. & **Papaioannou, G.** (2011). Probabilistic forecasting of antecedent soil moisture conditions as flash flood precursor variables, *EGU General Assembly 2011*, 3-8 April 2011, Vienna, Austria, Geophysical Research Abstracts, Vol. 13, EGU2011-12200.
- D.3. **Papaioannou, G.**, Loukas, A., Vasiliades, L., & Aronica, G.T. (2011). Flood prone areas mapping through GIS and Multi-Criteria Analysis. *EGU Leonardo Conference: Floods in 3D: Processes, Patterns, Predictions*, 23-25 November 2011, Bratislava, Slovakia.

- D.4. Loukas, A., Vasiliades, L., **Papaioannou, G.**, & Aronica, G.T. (2011). Estimation of flood frequency curves in poorly gauged Mediterranean watersheds using a derived distribution procedure. *EGU Leonardo Conference: Floods in 3D: Processes, Patterns, Predictions*, 23-25 November 2011, Bratislava, Slovakia.
- D.5. Brigandi, G., Aronica, G.T., Loukas, A., Vasiliades, L., & **Papaioannou, G.** (2011). Probabilistic forecasting of antecedent soil moisture condition as flash flood precursor variables. *EGU Leonardo Conference: Floods in 3D: Processes, Patterns, Predictions*, 23-25 November 2011, Bratislava, Slovakia.
- D.6. **Papaioannou, G.**, Loukas, A., & Vasiliades, L. (2013). An evaluation of clustering techniques in flood prone areas mapping using Multicriteria Analysis. *5<sup>th</sup> EGU Leonardo Conference*, 17-19 October 2013, Kos Island, Greece.
- D.7. **Papaioannou, G.**, Bacigal, T., Jeneiova, K., Kohnová, S., Szolgay, J., & Loukas, A. (2014). Analysis of suitability of copula families for joint modeling of flood peaks and volumes along the Danube River. *European Symposium on Flood Frequency Estimation and Implications for Risk Management*, FLOODFREQ COST ACTION ES0901, 6-7 March 2014, Potsdam, Germany.
- D.8. **Papaioannou, G.**, Aronica, G.T., Loukas, A., & Vasiliades, L. (2014). The impact of DEM accuracy and hydraulic modelling performance for flood inundation mapping. *European Symposium on Flood Frequency Estimation and Implications for Risk Management*, FLOODFREQ COST ACTION ES0901, 6-7 March 2014, Potsdam, Germany.
- D.9. **Papaioannou, G.**, Bacigal, T., Jeneiova, K., Kohnová, S., Szolgay, J., & Loukas, A. (2014). Bivariate analysis of flood peaks and volumes using copulas. An application to the Danube River. *EGU General Assembly 2014*, 27 April – 02 May 2014, Vienna, Austria, Geophysical Research Abstracts, Vol. 16, EGU2014-14056.
- D.10. **Papaioannou, G.**, Aronica, G.T., Loukas, A., Vasiliades, L., (2014). A sensitivity analysis using different spatial resolution terrain models and flood inundation models. *EGU General Assembly 2014*, 27 April – 02 May 2014, Vienna, Austria, Geophysical Research Abstracts, Vol. 16, EGU2014-14009.
- D.11. **Papaioannou, G.**, Loukas, A., Aronica, G.T., & Vasiliades, L., (2014). Sensitivity analysis of flooded areas for the combination of hydraulic modeling and DEM spatial resolution. *EGU Topical Meeting: Validation in flood risk modeling*, 9 – 10 December 2014, Delft, Netherland.
- D.12. Tzabiras, J., Spiliotopoulos, M., Kokkinos, K., Fafoutis, Ch., Sidiropoulos, P., Vasiliades, L., **Papaioannou, G.**, Loukas, A., & Mylopoulos, N. (2015). A GIS based watershed information system for water resources management and planning in semi-arid areas. *EGU General Assembly 2015*, 12-17 April 2015, Vienna, Austria, Geophysical Research Abstracts, Vol. 17, EGU2015-14150.

- D.13. Vasiliades, L., Sidiropoulos, P., Tzabiras, J., Kokkinos, K., Spiliotopoulos, M., **Papaioannou, G.**, Fafoutis, Ch., Michailidou, K., Tziatzios, G., Loukas, A., & Mylopoulos, N. (2015). Hydromentor: An integrated water resources monitoring and management system at modified semi-arid watersheds. *EGU General Assembly 2015*, 12-17 April 2015, Vienna, Austria, Geophysical Research Abstracts, Vol. 17, EGU2015- 14138.
- D.14. Kohnová, S., **Papaioannou, G.**, Bacigal, T., Jeneiova, K., Szolgay, J., & Loukas, A. (2016). Joint modelling of flood peaks and volumes along the Danube River. *EGU General Assembly 2016*, 17-22 April 2016, Vienna, Austria, Geophysical Research Abstracts, Vol. 18, EGU2016-12121.
- D.15. **Papaioannou, G.**, Loukas, A., Vasiliades, L., & Aronica, G.T. (2016). Evaluation of various modelling approaches in flood routing simulation and flood area mapping. *EGU General Assembly 2016*, 17-22 April 2016, Vienna, Austria, Geophysical Research Abstracts, Vol. 18, EGU2016-16208.
- D.16. Efstratiadis, A., Papalexiou, S-M., Markonis, Y., Koukouvinos, A., Vasiliades, L., **Papaioannou, G.**, & Loukas, A. (2016). Flood risk assessment at the regional scale: Computational challenges and the monster of uncertainty. *EGU General Assembly 2016*, 17-22 April 2016, Vienna, Austria, Geophysical Research Abstracts, Vol. 18, EGU2016-12218.
- D.17. **Papaioannou, G.**, Loukas, A., Vasiliades, L., & Aronica, G.T. (2016). Floodplain mapping uncertainty framework for ungauged streams. *EGU Plinius Topical Conferences: 15th Plinius Conference on Mediterranean Risks*, 8 – 11 June 2016, Taormina, Italy, Plinius Conference Abstracts, Vol. 15, Plinius15-28.
- D.18. Kohnová, S., **Papaioannou, G.**, Bacigal, T., Szolgay, J., Hlavcova, K., Loukas, A., & Vyleta, R. (2017). On the suitability of the copula types for the joint modelling of flood peaks and volumes along the Danube River. *EGU General Assembly 2017*, 23–28 April 2017, Vienna, Austria, Geophysical Research Abstracts, Vol. 19, EGU2017-7114.
- D.19. **Papaioannou, G.**, Vasiliades, L., Loukas, A., Efstratiadis, A., Papalexiou, S.-M., Markonis, Y., & Koukouvinos, A. (2017). A methodological approach for flood risk management in urban areas: The Volos city paradigm. *E-abstracts of 10<sup>th</sup> EWRA World Congress on Water Resources and Environment “Panta Rhei”*, 5-9 July 2017, Athens, Greece.
- D.20. Loukas A., **Papaioannou G.**, Sidiropoulos, P., Vasileiades, L., and Mylopoulos, N., (2018), “Flood risk design and management of Thessaly region: implementation of EU flood directive 2007/60/EU”, 2<sup>nd</sup> International Conference of the Regional Association of Thessaly Municipalities: Pinios River: Source of Life and Growth in Thessaly, 2-3 November 2018, Larisa, Greece (in Greek). (Extended abstract)
- D.21. Markogianni, V., **Papaioannou, G.**, Loukas, A., & Dimitriou, E. (2021). Semi-Automatic Extraction of Stream Bed Grain-Size Classes Based on UAS Derived Data. *AGU fall meeting 2021*, 13-17 December 2021, New Orleans LA, USA.

<https://agu2021fallmeeting-agu.ipostersessions.com/Default.aspx?s=8D-1E-62-AE-01-4A-9C-59-54-E0-2D-4C-39-66-E5-4B>

- D.22. Katsafados P., Varlas G., Papadopoulos A., Vervatis V., Spyrou C., Solomos S., **Papaioannou G.**, Papadopoulou E. & Makrygianni N. (2022). Coupling across the Spheres: the Chemical Hydrological Atmospheric Ocean wave System (CHAOS). *EMS Annual Meeting 2022*, 4-9 September 2022, Bonn, Germany. (**Extended abstract**)
- D.23. **Papaioannou, G.**, Markogianni, V., Loukas, A., & Elias Dimitriou (2022). Flood modelling and mapping based on a spatial distributed roughness coefficient estimation framework . *7<sup>th</sup> IAHR Europe Congress*, September 7<sup>th</sup> – 9<sup>th</sup>, 2022, Athens, Greece. (**Extended abstract**)
- D.24. Kaffas, K., **Papaioannou, G.**, Varlas, G., Al Sayah, MJ., Papadopoulos, A., Dimitriou, E., Katsafados, P., & Righetti, M. (2022). Preliminary Assessment of Soil Erosion and Sediment Yield During a Catastrophic Flash Flood Event. *7<sup>th</sup> IAHR Europe Congress*, September 7<sup>th</sup> – 9<sup>th</sup>, 2022, Athens, Greece. (**Extended abstract**)
- D.25. Alamanos A., and **Papaioannou G.** (2022). Developing a hydrological model for Grand River watershed, Ontario. *3<sup>rd</sup> IAHR Young Professionals Congress*, 29 November – 01 December 2022, online. (Accepted).

#### 1.19.5. Special Editions and Books

- E.1. Tzabiras, J., Loukas, A., Fafoutis, Ch., Spiliotopoulos, M., Sidiropoulos, P., Kokkinos, K., Vasiliades, L., **Papapioannou, G.** and Mylopoulos, N. (2016). “Development of an Integrated Information System for the Planning and Management of Water Resources in Agricultural Watersheds and Strategic Decision Making”. Honorary Collective Book for Aristotle University of Thessaloniki Professor Stavros Giannopoulos (in press). (in Greek)

#### 1.19.6. Non-Referred Presentations

- F.1. **Papaioannou, G.**, (2011). “Sensitivity analysis on flood inundation mapping introduced by different DEM and modeling approaches”, “Hydromedon” - Third meeting of PhD students, National Technical University of Athens, 11-12 July 2011, Athens, Greece (in Greek).
- F.2. **Papaioannou, G.**, (2015). “Sensitivity analysis on flood hazard mapping introduced by different hydrodynamic modelling approaches”, Scientific lectures of summer semester, Department of Civil Engineering, University of Thessaly, 29 March 2015, Volos, Greece (in Greek).
- F.3. **Papaioannou, G.**, (2022) “Module 2: Securing and managing the island’s freshwater resources - Field measurements”, Summer School Programme



“Sustainable Samothraki 2022”, 15-25 July 2022, Erasmus Blended Intensive Programmes (BIP).

### 1.19.7. Under preparation articles

- Alamanos, A., **Papaioannou, G.**, Varlas, G., Markogianni, V., Papadopoulos, A., Dimitriou, E. 2023. Revealing the impact of wildfires on flash floods using HEC-RAS rain on grid modelling: The case study of Kineta, Greece. Land [MDPI].
- Alamanos, A., **Papaioannou, G.**, Maris, F., Anti-erosion, bioengineering and river training works after wildfires, Elgar Encyclopedia.
- Alamanos, A., **Papaioannou, G.**, New technologies in flood studies, Elgar Encyclopedia.

## 1.20. CITATIONS IN REFERRED JOURNALS, BOOKS AND CONFERENCES

The publications of Dr. George Papaioannou have over 484 (h-index 9) and 719 (h-index 11) citations based on Scopus and Google Scholar databases (23 November 2022), respectively, in Referred Journals, Books and Conferences and Technical reports. The publication track list could be found in Google Scholar (Search in author = Papaioannou George, <https://scholar.google.gr/citations?user=fyEXhWgAAAAJ&hl=en>) in Scopus (search in author = Papaioannou, G. and then view citation overview).

Scopus Author ID: 57209756721

- (<https://www.scopus.com/authid/detail.uri?authorId=57209756721>)

ResearcherID: K-2683-2019

Publons Profile: <https://publons.com/researcher/1650706/george-papaioannou/>

ORCID: <https://orcid.org/0000-0002-7389-6640>