

**ΒΙΟΓΡΑΦΙΚΟ ΣΗΜΕΙΩΜΑ  
ΚΑΙ  
ΥΠΟΜΝΗΜΑ ΑΚΑΔΗΜΑΪΚΗΣ ΚΑΙ  
ΕΠΑΓΓΕΛΜΑΤΙΚΗΣ ΔΡΑΣΤΗΡΙΟΤΗΤΑΣ**

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Physique, Ingénierie, Terre, Environnement, Mécanique  
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Οκτώβριος 2015

**I.1. ΠΡΟΣΩΠΙΚΑ ΔΕΔΟΜΕΝΑ**

Όνομα:	Αθανάσιος Γ. Λουκάς
Ημερομηνία γέννησης:	4 Δεκεμβρίου 1964
Τόπος γέννησης:	Θεσσαλονίκη
Ταχυδρομική διεύθυνση οικίας:	Μητροπολίτου Γρηγορίου 75 38334 Βόλος
Ταχυδρομική διεύθυνση εργασίας:	Τμήμα Πολιτικών Μηχανικών Πανεπιστήμιο Θεσσαλίας Πεδίον Άρεως 38334 Βόλος
Email:	aloukas@civ.uth.gr
Τηλέφωνο εργασίας:	24210-74168
Fax εργασίας:	24210-74169

**I.2. ΕΚΠΑΙΔΕΥΣΗ****α) The University of British Columbia, 1991-1994**

Διδακτορικό Δίπλωμα (Ph.D.) στην Υδρολογία και στους Υδατικούς Πόρους  
 Ερευνητική Περιοχή: Τεχνική Υδρομετεωρολογία και Επιφανειακή Υδρολογία  
 Επιβλέπων Καθηγητής: Dr. Michael C. Quick, Καθηγητής  
 Τίτλος Διδακτορικής Διατριβής: Mountain Precipitation Analysis for the Estimation of Flood Runoff in Coastal British Columbia.

**β) The University of British Columbia, 1989-1991**

Μεταπτυχιακό Δίπλωμα (M.A.Sc.) στην Υδρολογία και στους Υδατικούς Πόρους  
 Ερευνητική Περιοχή: Επιφανειακή Υδρολογία  
 Επιβλέπων Καθηγητής: Dr. Michael C. Quick, Καθηγητής  
 Τίτλος Μεταπτυχιακής Διατριβής: Analysis of the Response and the Rainfall Distribution in a Mountainous Watershed.

**γ) Αριστοτέλειο Πανεπιστήμιο Θεσσαλονίκης, 1983-1988**

Δίπλωμα Αγρονόμου Τοπογράφου Μηχανικού  
 Ερευνητική Περιοχή: Ροές σε Ακόρεστα Πορώδη Μέσα  
 Επιβλέπων Καθηγητής: Δρ. Παναγιώτης Τολίκας, Αναπληρωτής Καθηγητής  
 Τίτλος Διπλωματικής Εργασίας: Απλοποιημένες Τεχνικές για την Επίλυση Προβλημάτων Οριζόντιας Διήθησης.

**I.3. ΒΡΑΒΕΙΑ ΚΑΙ ΥΠΟΤΡΟΦΙΕΣ****1) Μεταπτυχιακές Σπουδές**

- University of British Columbia Graduate Fellowship, 1989-1994
- Υποτροφία του Επιστημονικού Προγράμματος του Ν.Α.Τ.Ο., 1989-1991
- Υποτροφία του Ιδρύματος "Αλέξανδρος Σ. Ωνάσης", 1989-1990
- Earl R. Peterson Memorial Scholarship in Civil Engineering, 1991
- Υποτροφία του Επιστημονικού Προγράμματος του Ν.Α.Τ.Ο. , 1991-1994

**2) Προπτυχιακές Σπουδές**

- Υποτροφία του Ιδρύματος Κρατικών Υποτροφιών, 1984-1988
- Υποτροφία του Ιδρύματος Κ. Βέλλιου-Βαρώνου, 1984-1988
- Βραβείο της Εργατικής Εστίας, 1984-1988
- Βραβείο του Τεχνικού Επιμελητηρίου Ελλάδος, 1988

**3) Επαγγελματική Ακαδημαϊκή Περίοδος**

- Fulbright Foundation Research Scholar Scholarship, Colorado State University, Department of Civil and Environmental Engineering, 2013
- Joseph Fourier University, Laboratoire d'étude des Transferts en Hydrologie et Environnement (LTHE), Invited Researcher (Professor 1<sup>st</sup> class), 2013

#### **I. 4. ΔΙΔΑΚΤΙΚΗ ΚΑΙ ΕΡΕΥΝΗΤΙΚΗ ΕΜΠΕΙΡΙΑ**

**1) Καθηγητής, Τμήμα Πολιτικών Μηχανικών, Πανεπιστήμιο Θεσσαλίας, 2011 – σήμερα**

- Οργάνωση και διδασκαλία των προπτυχιακών μαθημάτων: Υδρολογία, Υδρολογική Προσομοίωση και Πρόγνωση, Ταμειυτήρες και Φράγματα, Εφαρμογές Προσομοίωσης σε Υδροσυστήματα (μεταπτυχιακό μάθημα), Ανάλυση Επικινδυνότητας και Λήψη Αποφάσεων στα Υδατικά Συστήματα (μεταπτυχιακό μάθημα), Πλημμύρες (μεταπτυχιακό μάθημα), Πρόγνωση Υδρομετεωρολογικών Κινδύνων (μεταπτυχιακό μάθημα).

**2) Επισκέπτης Καθηγητής, Τμήμα Αγρονόμων και Τοπογράφων Μηχανικών, Πανεπιστημίου Θεσσαλίας, 2015-σήμερα**

- Οργάνωση και διδασκαλία των προπτυχιακών μαθημάτων: Υδρολογία και Υδραυλική Ανοικτών Αγωγών

**3) Αναπληρωτής Καθηγητής, Τμήμα Πολιτικών Μηχανικών, Πανεπιστήμιο Θεσσαλίας, 2005 – 2011**

- Οργάνωση και διδασκαλία των προπτυχιακών μαθημάτων: Υδρολογία, Υδρολογία II, Ταμειυτήρες και Φράγματα, Εφαρμογές Προσομοίωσης σε Υδροσυστήματα (μεταπτυχιακό μάθημα), Πλημμύρες (μεταπτυχιακό μάθημα), Πρόγνωση Υδρομετεωρολογικών Κινδύνων (μεταπτυχιακό μάθημα).

**4) Συμβασιούχος Επίκουρος και Αναπληρωτής Καθηγητής (ΠΔ 407/80), Τμήμα Πολιτικών Μηχανικών, Πανεπιστήμιο Θεσσαλίας, 1997 - 2004**

- Οργάνωση και διδασκαλία των μαθημάτων: Γεωδαισία I, Γεωδαισία II και Μεγάλες Γεωδαιτικές Ασκήσεις, Ιστορία της Τεχνολογίας, Διευθετήσεις Ποταμών και Χειμάρρων, Υδρολογία, Υδρολογία II,

**5) Συμβασιούχος Αναπληρωτής Καθηγητής (ΠΔ 407/80), Τμήμα Γεωπονίας Φυτικής Παραγωγής και Αγροτικού Περιβάλλοντος, Πανεπιστήμιο Θεσσαλίας, 2004**

- Οργάνωση και διδασκαλία των μαθημάτων: Τοπογραφία

**6) Συμβασιούχος Επίκουρος Καθηγητής (ΠΔ 407/80), Τμήμα Γεωπονίας Ζωϊκής Παραγωγής και Υδάτινου Περιβάλλοντος, Πανεπιστήμιο Θεσσαλίας, 2003**

- Οργάνωση και διδασκαλία των μαθημάτων: Τοπογραφία-Χαρτογραφία, Αειφορική Διαχείριση Υδατικών Πόρων

**7) Διδάσκων, Πρόγραμμα Σπουδών Επιλογής «Διαχείριση Αγροτικού Περιβάλλοντος και Φυσικών Πόρων», Πανεπιστήμιο Θεσσαλίας, 2000 - 2003**

- Οργάνωση και διδασκαλία των μαθημάτων: Τοπογραφία-Χαρτογραφία, Διάθεση Υγρών Αποβλήτων και Προστασία Υδάτινου Περιβάλλοντος, Υδρολογία, Κλιματική Μεταβλητότητα και Φυσικοί Πόροι, Φυσικοί Περιβαλλοντικοί Κίνδυνοι, Διαχείριση Υδατικών Πόρων, Διάβρωση και Προστασία Χερσαίου Περιβάλλοντος – Φερτές Ύλες, Εφαρμογές Νέων Τεχνολογιών στο Σχεδιασμό του Αγροτικού Περιβάλλοντος

**8) Επιστημονικός Συνεργάτης, Τμήμα Πολιτικών Έργων Υποδομής, Τ.Ε.Ι. Λάρισας, 1997–2000**

- Οργάνωση και διδασκαλία του μαθήματος: Υδροδυναμικά Έργα – Φράγματα

**9) Εκπαιδευτής, 1ο Ινστιτούτο Επαγγελματικής Κατάρτισης Θεσσαλονίκης (Ι.Ε.Κ.), 1996- 1998**

- Οργάνωση, διδασκαλία και συγγραφή σημειώσεων για τα μαθήματα της ειδικότητας «Ειδικός Γεωγραφικών Συστημάτων Πληροφοριών»

**10) Συμβασιούχος Καθηγητής, Σχολή Υπαξιωματικών Διοικητικών Αεροπορίας, 1996- 1998**

- Οργάνωση και διδασκαλία των μαθημάτων: Τοπογραφία, Τοπογραφία-Χάρτες

**11) Μεταδιδακτορικός Ερευνητικός Συνεργάτης (Post Doctoral Research Associate), University of British Columbia, 1994 -1995**

**12) Βοηθός Διδασκαλίας/Διορθωτής, University of British Columbia, 1989-1995**

- Βοηθός διδασκαλίας στα εργαστήρια των μαθημάτων: Υδραυλική Ανοικτών και Κλειστών Αγωγών, Μηχανικής Ρευστών, Τοπογραφία

### **I. 5. ΕΠΙΒΛΕΨΗ ΔΙΔΑΚΤΟΡΙΚΩΝ ΚΑΙ ΜΕΤΑΠΤΥΧΙΑΚΩΝ ΔΙΑΤΡΙΒΩΝ ΚΑΙ ΔΙΠΛΩΜΑΤΙΚΩΝ ΕΡΓΑΣΙΩΝ**

Κύριος επιβλέπων καθηγητής έξι (6) Διδακτορικών Διατριβών και είκοσι (20) Μεταπτυχιακών Εργασιών Ειδίκευσης. Μέλος συμβουλευτικών επιτροπών επίβλεψης δεκάπεντε (15) Διδακτορικών Διατριβών και δέκα (10) Μεταπτυχιακών Εργασιών Ειδίκευσης. Μέλος πολλών εξεταστικών επιτροπών Διδακτορικών Διατριβών, Μεταπτυχιακών Εργασιών Ειδίκευσης και Διπλωματικών Εργασιών

Κύριος επιβλέπων καθηγητής 22 Διπλωματικών Εργασιών.

### **I. 6. ΑΚΑΔΗΜΑΪΚΗ ΔΙΟΙΚΗΤΙΚΗ ΕΜΠΕΙΡΙΑ**

1) Πρόεδρος Τμήματος Πολιτικών Μηχανικών, Πανεπιστήμιο Θεσσαλίας, 2008 – 2012

2) Διευθυντής (για την Ελλάδα) του κοινού Ελληνογαλλικού Προγράμματος Μεταπτυχιακών Σπουδών «Διαχείριση Υδρομετεωρολογικών Κινδύνων – HYDROHASARDS», 2010 – σήμερα

3) Υπεύθυνος (Διευθυντής) του Εργαστηρίου Υδρολογίας και Ανάλυσης Υδατικών Συστημάτων, 2008-σήμερα

4) Μέλος της Συγκλήτου του Πανεπιστημίου Θεσσαλίας, 2008-2012

5) Μέλος των επιτροπών του Πανεπιστημίου Θεσσαλίας, όπως Επιτροπή Στρατηγικού Σχεδιασμού και Ανάπτυξης, Επιτροπής Ευρωπαϊκών Προγραμμάτων και Διεθνών Σχέσεων (Erasmus), Δ.Σ. Εταιρίας Διαχείρισης Περιοσίας Πανεπιστημίου Θεσσαλίας Α.Ε., μεταξύ άλλων, 2005-σήμερα.

6) Μέλος επιτροπών του Τμήματος Πολιτικών Μηχανικών του Πανεπιστημίου Θεσσαλίας (Υπεύθυνος Τμήματος για το πρόγραμμα Erasmus, Ομάδα Εσωτερικής Αξιολόγησης Τμήματος (OMEA), μεταξύ άλλων), 2005-σήμερα.

### **I. 7. ΕΠΑΓΓΕΛΜΑΤΙΚΗ ΕΜΠΕΙΡΙΑ**

1) Διοικητικός και Οικονομικός Διευθυντής και Διαχειριστής του Προγράμματος Σπουδών Επιλογής «Διαχείριση Αγροτικού Περιβάλλοντος και Φυσικών Πόρων», Πανεπιστήμιο Θεσσαλίας, 1998 – 2003

2) Επαγγελματίας Σύμβουλος Μηχανικός, Θεσσαλονίκη, 1996 – 2005

- Επιστημονικός συνεργάτης – Σύμβουλος σε: α) δεκαπέντε (15) υδρολογικών και υδραυλικών μελετών (ταμιευτήρες-φράγματα, έργα ύδρευσης αποχέτευσης, διευθετήσεις ποταμών και χειμάρρων, κλπ), β) δεκατέσσερες (14) μελέτες περιβαλλοντικών επιπτώσεων, και γ) έξι (6) τοπογραφικές μελέτες.

### **I. 8. ΣΥΜΜΕΤΟΧΗ ΣΕ ΕΡΕΥΝΗΤΙΚΑ ΚΑΙ ΕΚΠΑΙΔΕΥΤΙΚΑ ΠΡΟΓΡΑΜΜΑΤΑ**

1) “Διερεύνηση Εναλλακτικών Σεναρίων Αρδευτικών Απολήψεων από τον Πηνεϊό Ποταμό για τον ΤΟΕΒ Πηνεϊού-Αντλιοστάσιο Β”, Περιφέρεια Θεσσαλίας, Συντονιστής: Κ. Ιακωβάκης, Επιστημονικός Υπεύθυνος για το Π.Θ.: Καθ. Α. Λουκάς, Προϋπολογισμός: 10,000 € (2014).

2) “MAtheMatical Modeling of *Microcystis aeruginosa* as a KEy-player in Lakes under REconstruction (LAKEREMAKE)”, Υπουργείο Παιδείας και Θρησκευμάτων – Γ.Γ.Ε.Τ. ΕΥΣΕΔ – ΕΤΑΚ, Δράση ΑΡΙΣΤΕΙΑ II, Coordinator: Επικ. Καθ. Χ. Λασπίδου, Προϋπολογισμός: 200,000 € (2014-2016) (<http://www.lakeremake.uth.gr/>).

- 3) “Σύγχρονες περιβαλλοντικές και τεχνολογικές εφαρμογές στην παρακολούθηση, διαχείριση και αποτίμηση υδάτινων συστημάτων”- Προγράμματα δια Βίου Μάθησης ΑΕΙ για Επικαιροποίηση Γνώσεων Αποφοίτων ΑΕΙ (ΠΕΓΑ), Υπουργείο Παιδείας δια Βίου Μάθησης και Θρησκευμάτων-Αριθμ. Πρότασης: 144\_20\_1.2\_2. Συντονιστής: Καθ. Α. Λουκάς, Προϋπολογισμός: 159,000 € (2013-2015) (<http://pega-water-resources.uth.gr/>).
- 4) “Assessment of EUROpean AGRiculture WATER use and trade under climate change (EURO-AGRIWAT)” – COST Action ES1106. National Representative (2012-2016) ([http://www.cost.eu/domains\\_actions/essem/Actions/ES1106?management](http://www.cost.eu/domains_actions/essem/Actions/ES1106?management)).
- 5) “Development of an Integrated Water Resources Environmental and Socioeconomic Modeling System – Application of the System to the Restored Lake Karla (DIWRESMSARLKT)”. Greek Ministry of Education. Program Archimedes III, Coordinator: Prof. N. Samaras, Budget: 100,000 € (2012-2015).
- 6) “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)”, General Secretariat for Research and Technology. National Action “Cooperation”, Coordinator: Prof. A. Loukas, Budget: 450,000 € (2011-2015) (<http://www.hydromentor.uth.gr/>).
- 7) “European procedures for flood frequency estimation (FloodFreq)” – COST Action ES0901. National Representative (2010-2013) (<http://www.cost-floodfreq.eu/>).
- 8) “Εκτίμηση Επιπτώσεων Κλιματικής Αλλαγής στα Υδρομετεωρολογικά Δεδομένα σε Θεσσαλία, Ήπειρο και Δυτική Στερεά Ελλάδα”, «Κατάρτιση σχεδίων διαχείρισης λεκανών απορροής των ποταμών των υδατικών διαμερισμάτων Θεσσαλίας, Ηπείρου και Δυτικής Στερεάς Ελλάδας σύμφωνα με τις προδιαγραφές της οδηγίας 2000/60/ΕΚ κατ’εφαρμογή του νόμου 3199/2003 και του ΠΔ 51/2007», Ειδική Γραμματεία Υδάτων, ΥΠΕΚΑ, Κοινοπραξία Γ. Καραβοκυρης και Συν/τες Σύμβουλοι Μηχ/κοι Ανώνυμη Εταιρία και Συνεργάτες. Επιστημονικός Υπεύθυνος: Αναπλ. Καθ. Ν. Μυλόπουλος. Προϋπολογισμός: 58,000 € (2011)
- 9) “Agricultural Innovations in Mediterranean Regions (NOVAGRIMED)” – Interreg IV MED programme. Scientific Responsible: Conseil Régional Provence-Alpes-Côte d’Azur Provence - Alpes - Côte d’Azur (France). Budget: 1,850,000 € (2009-2011).
- 10) “Sustainable Use of Irrigation Water in the Mediterranean Region (SIRRIMED)” – FP7-KBBE-2009-3 – Proposal Reference Number: FP7-245159. Scientific Responsible: Dr. Juan José Alarcón, Budget: 4,050,000 € (2010-2013).
- 11) “Reconnaissance Study of Land Subsidence in Karla Municipality”. Municipality of Karla. Scientific Responsible: Assoc. Prof. A. Loukas, Budget: 10,000 € (2010).
- 12) “An Exercise to assess research needs and policy choices in areas of drought (XERICHORE)” 7th Framework Program - FP7-ENV-2007-1 (ENV.2007.1.3.3.3.) Grant agreement no.: 211837. Scientific Responsible: Dr. Anil Markandya, Budget: 1,800,000 € (2008- 2010).
- 13) “Reconnaissance Study of Dam and Reservoir Development in the Position of Gavroneri Stomiou”. Municipality of Evrimenon. Scientific Responsible: Assoc. Prof. N. Mylopoulos, Budget: 12,000 € (2009).
- 14) “OpenMI-Life”. EC Life – Environment Program. Scientific Responsible: Dr. R. Moore, Budget: 4,000,000 € (2006-2009).
- 15) “The Water Diversion from Acheloos River in the Perspective of Integrated Water Resources Management of Thessaly”. Regional Municipality Union of Thessaly. Scientific Responsible and Project Lead Partner: Ass. Prof. N. Mylopoulos. Budget: 35,400 €. (2003-2005).
- 16) “Database Development of Surface Water and Groundwater Measurements and Evaluation of Reclamation Works in Thessaly”. Regional Development Fund of Thessaly. Scientific Responsible: Prof. Y. Mylopoulos. Budget: 120,000 €. (2003-2005).
- 17) “DEMONstration of Earth observation Technologies in Routine irrigation advisory services (DEMETER)”. 5<sup>th</sup> Framework, Energy, Environment and Sustainable Development, RTD Network Program. Scientific Responsible: Dr. Alfonso Calera Belmonte. Budget: 2,800,000 € (2002-2005).

- 18) “Program of Elective Studies – Management of Rural Environment and Natural Resources”. Greek Ministry of Education and Religious Affairs. Scientific Responsible: Prof. N.R. Dalezios. Budget: 1,000,000 €. (2002-2005).
- 19) “Network of Study and Research for Water Resources with Applications in Cyprus and Greece”. Greek General Secretariat of Research and Technology. Scientific Responsible for Greece: Ass. Prof. E. Sidiropoulos. Budget: 18,000 € . (2002-2003).
- 20) “Project for the Training of Elementary and High School Teachers in Environmental Education ” Greek Ministry of Education and Religious Affairs. Scientific Responsible: Prof. N.R. Dalezios. Budget: 300,000 €. (1999-2001).
- 21) “Program of Elective Studies – Management of Rural Environment and Natural Resources”. Greek Ministry of Education and Religious Affairs. Scientific Responsible: Prof. N.R. Dalezios. Budget: 900,000 €. (1998-2000).
- 22) “Adaptation of the UBC Watershed System for Water Quality Modelling and Use with Meteorological Forecast Models”. British Columbia Science Council. Scientific Responsible: Dr. J. David Cattanaach, B.C. Hydropower Authority. Budget: 240,000 CAD\$ (1995-1996).
- 23) “Hydrologic Simulation Model Development for the Sooke Lake Watershed” (Greater Victoria Water District). Scientific Responsible: Prof. M.C. Quick. Budget: 65,000 CAD\$ (1995).

## **I. 9. ΜΕΛΟΣ ΕΠΙΣΤΗΜΟΝΙΚΩΝ ΕΠΙΤΡΟΠΩΝ-ΕΚΔΟΤΙΚΩΝ ΕΠΙΤΡΟΠΩΝ ΚΑΙ ΟΡΓΑΝΙΣΜΩΝ**

### **I.9.1. Μέλος Εκδοτικών Επιτροπών Επιστημονικών Περιοδικών**

- Editor-in-Chief of *European Water*
- Associate Editor of *Water*
- Associate Editor-in-Chief of *Journal of Spatial Hydrology* (2006-2010)
- Guest Editor of *Natural Hazards and Earth System Sciences (NHES-EGU)* for the special issue “Advanced Methods for Flood Estimation in a Variable and Changing Environment”
- Guest Editor of *WATER (MDPI)* for the special issue “Flood Estimation and Analysis in a Variable and Changing Environment”
- Guest Editor of *Natural Hazards and Earth System Sciences (NHES-EGU)* for the special issue “Diagnosis, modelling and forecasting of meteorological and hydrological hazards produced by extreme weather and climate change”
- Guest Editor of *Hydrological Processes* for the special issue “S138 Climate Change, Land Cover Dynamics and Eco-Hydrology of the Nile River Basin”
- Guest Editor of *Natural Hazards and Earth System Sciences (NHES-EGU)* for the special issue “Extreme Events Induced by Weather and Climate Change: Evaluation, Forecasting and Proactive Planning”
- Guest Editor of *Natural Hazards and Earth System Sciences (NHES-EGU)* for the special issue “Assessment and Forecasting of Disaster Risk and Proactive Planning of Extreme Hydrometeorological Events”
- Guest Editor of *Natural Hazards and Earth System Sciences (NHES-EGU)* for the special issue “Advanced methods for flood estimation in a variable and changing environment”

### **I.9.2. Κριτής Ερευνητικών Προτάσεων**

- Κριτής του IPCC Special Report “Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation (SREX)” and Abstract for Policymakers (SPM) και IPCC Assessment Report – AR5
- Κριτής ερευνητικών προτάσεων στα γνωστικά πεδία *Water Resources Management and Management of Natural Hazards, Directorate General XII, Science, Research and Development.*
- Κριτής ερευνητικών προτάσεων στα γνωστικά πεδία Environment and Water Resources Ελληνικών και Κυπριακών προκηρύξεων

- Αξιολογητής και πιστοποιητής ερευνητικών έργων της Γενικής Γραμματείας Έρευνας και Τεχνολογίας

### **I.9.3. Μέλος Επιστημονικών Οργανισμών και Προγραμμάτων**

- Μέλος: Τεχνικό Επιμελητήριο Ελλάδας, Πανελλήνιος Σύλλογος Τοπογράφων Μηχανικών, International Association of Hydrological Science (IAHS), European Geophysical Union (EGU), Ελληνική Επιτροπή για τη Διαχείριση των Υδατικών Πόρων (ΕΕΔΥΠ) (Εκλεγμένο μέλος του Δ.Σ. 2005-σήμερα), European Water Resources Association (EWRA), Ελληνικό Δίκτυο Εργαστηρίων για την Υδρολογία και την Περιβαλλοντική Διαχείριση Υδατικών Πόρων “Υδρομέδων” (Γραμματέας 2008-σήμερα), Global Nest

- Εθνικός Εκπρόσωπος στο COST 719 – The Use of Geographic Information Systems in Climatology and Meteorology

- Εθνικός Εκπρόσωπος στο COST ES0901 – National Procedures for Flood Frequency Analysis (FloodFreq)

- Εθνικός Εκπρόσωπος στο COST ES1106 - Assessment of EUROpean AGRiculture WATER use and trade under climate change (EURO-AGRIWAT)

### **I.9.4. Κριτής άρθρων επιστημονικών περιοδικών**

- Τακτικός κριτής άρθρων των επιστημονικών περιοδικών: *Journal of Hydrology, Journal Physics and Chemistry of the Earth, Natural Hazards and Earth System Sciences, Hydrology and Earth System Sciences, Water Resources Management, Hydrological Processes, Journal of Theoretical and Applied Climatology, Journal of River Basin Management, Sensors, Forest and Agricultural Meteorology, Hydrology Research, Climate Change, Agricultural Water Management, Annals of the American Association of Geographers, Environmental Modelling & Software, Stochastic Environmental Research and Risk Assessment, Environmental Processes, Natural Hazards*

### **I.9.5. Μέλος οργανωτικών επιτροπών συνεδρίων**

- Οργανωτής και μέλος οργανωτικών επιτροπών εθνικών και διεθνών συνεδρίων

## **I. 10. ΕΡΕΥΝΗΤΙΚΑ ΕΝΔΙΑΦΕΡΟΝΤΑ**

Τα ερευνητικά ενδιαφέροντα και οι ερευνητικές δραστηριότητες του Δρ. Αθανασίου Γ. Λουκά περιλαμβάνουν τα παρακάτω αντικείμενα / θέματα. Η παράθεση των στοιχείων του καταλόγου είναι τυχαία και σε καμία περίπτωση ιεραρχικά ταξινομημένη.

- Υδρολογική προσομοίωση λεκανών απορροής με προσδιοριστικά (αδρομερή και κατανεμημένα μοντέλα) και στοχαστικά μοντέλα,
- Μεθοδολογίες εκτίμησης απορροής σε λεκάνες χωρίς μετρήσεις (ungauged watersheds),
- Μεθοδολογίες εκτίμησης πλημμυρικών απορροών και ξηρασιών,
- Ανάλυση αβεβαιότητας στην υδρολογία
- Εφαρμογές G.I.S. και τηλεπισκόπισης στην υδρολογία και στη διαχείριση υδατικών πόρων,
- Επιπτώσεις αλλαγών χρήσεων γης στους υδατικούς πόρους,
- Υδρολογία ορεινών και χιονοσκεπών λεκανών απορροής,
- Επιπτώσεις κλιματικής αλλαγής στους υδατικούς πόρους,
- Διαχείριση υδατικών πόρων,
- Ανάλυση χωρικής και χρονικής κατανομής υδρο-μετεωρολογικών παραμέτρων,
- Ανάλυση, σχεδιασμός και προσομοίωση της λειτουργίας υδροτεχνικών έργων,
- Ανάλυση και προσομοίωση ποιοτικών χαρακτηριστικών απορροής,
- Μελέτη, ανάλυση και προσομοίωση φυσικών περιβαλλοντικών κινδύνων και των επιπτώσεων τους στον αγροτικό χώρο (παγετός, χαλάζι, ξηρασία, πλημμύρες).

## II. 1. ΚΑΤΑΛΟΓΟΣ ΔΗΜΟΣΙΕΥΣΕΩΝ

### A. Διατριβές και Διπλωματικές Εργασίες

- A.1. **Λουκάς, Α.** (1988). “Απλουστευμένες Τεχνικές για την Επίλυση Προβλημάτων Οριζόντιας Διήθησης.” Διπλωματική Εργασία, Αριστοτέλειο Πανεπιστήμιο Θεσσαλονίκης, 131 σελ.
- A.2. **Loukas, A.** (1991). “*Analysis of the Response and the Rainfall Distribution in a Mountainous Watershed.*” M.A.Sc. Thesis, University of British Columbia, Canada, 159 pp.
- A.3. **Loukas, A.** (1994). “*Mountain Precipitation Analysis for the Estimation of Flood Runoff in Coastal British Columbia.*” Ph.D. Dissertation, University of British Columbia, Canada, 321 pp.

### B. Δημοσιεύσεις σε Διεθνή Επιστημονικά Περιοδικά μετά από Κρίση

- B.1. **Loukas, A.** and M.C. Quick (1993). “Hydrologic Behaviour of a Mountainous Watershed.” *Canadian Journal of Civil Engineering*, **20**(1), pp. 1-8.
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- B.3. **Loukas, A.** and M.C. Quick (1994). “Precipitation Distribution in Coastal British Columbia.” *Water Resources Bulletin*, **30**(4), pp. 705-727.
- B.4. **Loukas, A.** and M.C. Quick (1995). “Comparison of Six Extreme Flood Estimation Techniques for Ungaged Watersheds in Coastal British Columbia.” *Canadian Water Resources Journal*, **20**(1), pp. 17-30.
- B.5. **Loukas, A.** and M.C. Quick (1995). “Spatial and Temporal Distribution of Storm Precipitation in Southwestern British Columbia.” *Journal of Hydrology*, **174**, pp. 37-56.
- B.6. **Loukas, A.** and M.C. Quick (1995). “24-hour Design Storm for Coastal British Columbia.” *ASCE Journal of Hydraulic Engineering*, **121**(12), pp. 889-899.
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- B.9. **Loukas, A.** and M.C. Quick (1996). “The Effect of Climate Change on the Hydrologic Regime of Two Climatically Different Watersheds.” *ASCE Journal of Hydrologic Engineering*, **1**(2), pp. 77-87.
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- B.11. **Loukas, A.**, L. Vasiliades and N.R. Dalezios (2000). “Flood Producing Mechanisms Identification in Southern British Columbia.” *Journal of Hydrology*, **227**(1-4), pp. 218-235.
- B.12. **Loukas, A.** and N.R. Dalezios (2000). “Response Time of Forested Mountainous Watersheds in Humid Regions.” *Nordic Hydrology*, **31**(3), pp. 149-168.
- B.13. Dalezios, N.R., **A. Loukas**, L. Vasiliades and H. Liakopoulos (2000). “Severity-Duration-Frequency Analysis of Droughts and Wet Periods in Greece.” *IAHS Hydrological Sciences Journal*, **45**(5), pp. 751-770.
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- B. 22. Dalezios, N.R., **A. Loukas,** and D. Bampzelis, (2002). "Universal Kriging of Hail Impact Energy in Greece". *Physics and Chemistry of the Earth*, **27**(23-24), 1039-1043.
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- B. 24. Dalezios, N.R., **A. Loukas,** and D. Bampzelis, (2002). "The role of Agrometeorological and Agrohydrological Indices in the Phenology of Wheat in Central Greece". *Physics and Chemistry of the Earth*, **27**(23-24), 1019-1023.
- B. 25. Domenikiotis C., **A. Loukas,** and N.R. Dalezios, (2003). "The Use of NOAA/AVHRR Satellite Data for the Monitoring and Assessment of Forest Fires and Floods." *Natural Hazards and Earth System Sciences*, **3**(1), 1-14.
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- B. 31. **Loukas, A.,** L. Vasiliades and J. Tzabiras (2008). "Climate Change Effects on Drought Severity" *Advances in Geosciences*, **17**, 1-7.
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- B. 35 **A. Loukas** (2010). "Surface water quantity and quality assessment in Pinios River, Thessaly, Greece", *Desalination*, **250**, 266-273.
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- B. 37. Vasiliades, L., **A. Loukas** and G. Liberis (2011). “A Water Balance Derived Drought Index for Pinios River Basin, Greece.” *Water Resources Management Volume*, **25**(4), 1087-1101 (doi: 10.1007/s11269-010-9665-1).
- B. 38. Gialis, S.E., **A. Loukas** and C.S. Laspidou (2011). “Theoretical Perspectives and Empirical Facts on Water Sector Privatization: The Greek Case against European and Global Trends.” *Water Resources Management*, **25**(6), 1699-1719 (doi: 10.1007/s11269-010-9769-7).
- B. 39. Laspidou, C., I. Kakoulidis and **A. Loukas** (2011). “Ecosystem Simulation Modeling of Nitrogen Dynamics in the Restored Lake Karla in Greece.” *Desalination and Water Treatment*, **33**(1-3), 61-67 (doi: 10.5004/dwt.2011.2618).
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- B. 43. Fotakis, D., E. Sidiropoulos and **A. Loukas** (2014). “Integration of a Hydrological Model within a Geographical Information System: Application to a Forest Watershed”, *Water* **6**(3), 500-516 (doi:[10.3390/w6030500](https://doi.org/10.3390/w6030500)).
- B. 44. Sidiropoulos, P., N. Mylopoulos and **A. Loukas** (2015). “Stochastic Simulation and Management of an Over-exploited Aquifer using an Integrated Modeling System.” *Water Resources Management*, **29**(3), 929-943 (doi: 10.1007/s11269-014-0852-3).
- B. 45. Papaioannou, G., L. Vasiliades and **A. Loukas** (2015). “Multi-criteria Analysis Framework for Potential Flood Prone Areas Mapping.” *Water Resources Management*, **29**(2), 399-418 (doi: 10.1007/s11269-014-0817-6).
- B. 46. Vasiliades, L., P. Galiatsatou and **A. Loukas** (2015). “Nonstationary Frequency Analysis of Annual Maximum Rainfall using Climate Covariates”, *Water Resources Management*, **29**(2), 339-358.
- B. 47. Sunyer, M.A., Y. Hundecha, D. Lawrence, H. Madsen, P. Willems, M. Martinkova, K. Vormoor, G. Bürger, J. Kriaučiūnienė, **A. Loukas**, M. Osuch and I. Yücel (2015). “Inter-comparison of statistical downscaling methods for projection of extreme precipitation in Europe”, *Hydrological and Earth System Sciences*, **19**, 1827–1847.
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- B. 50. Hundecha, Y., M. A. Sunyer, D. Lawrence, H. Madsen, P. Willems, G. Bürger, J. Kriaučiūnienė, **A. Loukas**, L. Vasiliades, M. Martinkova, M. Osuch, B. von Christierson, K. Vormoor and I. Yücel (2015). “Inter-comparison of statistical downscaling methods for projection of extreme flow indices across Europe”, *Journal of Hydrology* (Under review).
- B. 51. Spiliotopoulos, M. and **A. Loukas** (2015). “Crop coefficient vs NDVI Relationships derived from in-situ observations for a daily estimation of water needs for Karla watershed, Greece”, *European Journal of Remote Sensing* (Submitted).
- B. 52. Tzabiras, J., **A. Loukas** and L. Vasiliades (2015). “A hybrid downscaling approach for the estimation of climate change effects on droughts. Case study: Thessaly, Central Greece”, *Open Geosciences* (Submitted).
- B. 53. Papaioannou, G., **A. Loukas** and L. Vasiliades (2015). “Riverine Spatial Resolution and Modelling Sensitivity in Flood Inundation Simulation and Mapping”, *Natural Hazards* (Submitted).

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### Γ. Δημοσιεύσεις σε Πρακτικά Διεθνών και Εθνικών Συνεδρίων μετά από Κρίση του Κειμένου

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- C.2. **Loukas, A.** and M.C. Quick (1993). “Distribution and Variability of Annual and Monthly Precipitation in two Mountainous Watersheds in British Columbia.” *Proceedings of the CSCE Eleventh Canadian Hydrotechnical Conference*, Fredericton, New Brunswick, June 8-11, 1993, pp. 139-148.
- C.3. **Loukas, A.** and M.C. Quick (1993). “Storm Precipitation in Southwestern British Columbia.” *Proceedings of the ASCE International Symposium on Engineering Hydrology*, San Francisco, July 25-30, 1993, pp. 13-18.
- C.4. **Loukas, A.** and M.C. Quick (1994). “Estimation of Flood Frequency Using the Method of Derived Distributions.” *Proceedings of the Annual “Hydrology Days” AGU Conference*, Fort Collins, April 5-9, 1994, pp. 269-280.
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- C. 20. **Loukas, A.**, L. Vasiliades and N.R. Dalezios (2002). "Hydrological Modeling of Flood Response Due to Climate Change". *6<sup>th</sup> International Conference of Protection and Restoration of the Environment*, Skiathos, July 1-5 2002, pp. 1165-1172.
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- C. 23. **Loukas, A.**, L. Vasiliades, M. Spiliotopoulos, D. Bampzelis, C. Domenikiotis and N.R. Dalezios (2002). "An Assessment of Regional Droughts in Greece using two Meteorological Drought Indices". *6<sup>th</sup> Hellenic Conference in Meteorology, Climatology and Atmospheric Physics*, Ioannina, Greece, September 25-28, 2002, pp. 708-716.
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## E. Άρθρα σε Ειδικές Εκδόσεις και Βιβλία

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E.5. Βασιλειάδης Λ., Α. Λιακόπουλος, **A. Λουκάς** και Ν. Μυλόπουλος (2015). “Στοχαστική αναπαράγωγή υδρομετεωρολογικών μεταβλητών για υδρολογικές εφαρμογές”, Συλλογικός τόμος προς τιμήν του Καθηγητή ΑΠΘ, Σταύρου Γιαννόπουλου, υπό έκδοση.

## **ΣΤ. Διδακτικές Σημειώσεις**

### **Πανεπιστημιακές Σημειώσεις**

F.1. **Λουκάς, Α.** και Χ. Δομενικιώτης “Εισαγωγή στα Γεωγραφικά Συστήματα Πληροφοριών”, διδακτικές σημειώσεις για την διδασκαλία του αντίστοιχου μαθήματος στο Τμήμα Πολιτικών Μηχανικών, Πανεπιστήμιο Θεσσαλίας, 120 σελίδες, 1999.

F.2. **Λουκάς, Α.** “Τοπογραφία – Χαρτογραφία”, διδακτικές σημειώσεις για την διδασκαλία του αντίστοιχου μαθήματος στο Π.Σ.Ε. Διαχείριση Αγροτικού Περιβάλλοντος και Φυσικών Πόρων, Πανεπιστήμιο Θεσσαλίας, 150 σελίδες, 2000.

F.3. **Λουκάς, Α.** “Διάθεση Υγρών Αποβλήτων και Προστασία Υδάτινου Περιβάλλοντος – Διάθεση υγρών αποβλήτων στον υπόγειο υδροφόρο”, συμπληρωματικές διδακτικές σημειώσεις για την διδασκαλία του αντίστοιχου μαθήματος στο Π.Σ.Ε. Διαχείριση Αγροτικού Περιβάλλοντος και Φυσικών Πόρων, Πανεπιστήμιο Θεσσαλίας, 42 σελίδες, 2002.

F.4. **Λουκάς, Α.** “Ποιότητα Νερού σε Ταμειυτήρες”, συμπληρωματικές διδακτικές σημειώσεις για την διδασκαλία του μαθήματος «Ταμειυτήρες-Φράγματα» στο Τμήμα Πολιτικών Μηχανικών, Πανεπιστήμιο Θεσσαλίας, 150 σελίδες, 2007.

F.5. **Λουκάς, Α.** και Σ. Γκιάλης. “Εισαγωγή στα Γεωγραφικά Συστήματα Πληροφοριών: Βασικές Έννοιες, Δεδομένα, Σχεδιασμός και Διεθνής Εμπειρία”, διδακτικές σημειώσεις για την διδασκαλία του μαθήματος “Εισαγωγή στο CAD και GIS” στο Τμήμα Πολιτικών Μηχανικών, Πανεπιστήμιο Θεσσαλίας, 148 σελίδες, 2007 (αναθεωρήθηκαν 2010).

### **Σημειώσεις Ινστιτούτου Επαγγελματικής Κατάρτισης**

F.6. **Λουκάς, Α.** “Αυτοματοποιημένη και Θεματική Χαρτογραφία”, διδακτικές σημειώσεις για την διδασκαλία της θεωρίας και των ασκήσεων του αντίστοιχου μαθήματος στο 1ο Ι.Ε.Κ. Θεσσαλονίκης, 150 σελίδες, 1996.

F.7. **Λουκάς, Α.** “Ηλεκτρονική Τυπογραφία”, διδακτικές σημειώσεις για την διδασκαλία του αντίστοιχου μαθήματος στο 1ο Ι.Ε.Κ. Θεσσαλονίκης, 111 σελίδες, 1996.

F.8. **Λουκάς, Α.** “Χρήση Ηλεκτρονικών Υπολογιστών”, διδακτικές σημειώσεις για την διδασκαλία του αντίστοιχου μαθήματος στο 1ο Ι.Ε.Κ. Θεσσαλονίκης, 86 σελίδες, 1996.

F.9. **Λουκάς, Α.** “Γεωγραφικά Συστήματα Πληροφοριών”, διδακτικές σημειώσεις για την διδασκαλία του αντίστοιχου μαθήματος στο 1ο Ι.Ε.Κ. Θεσσαλονίκης, 113 σελίδες, 1997.

F.10. **Λουκάς, Α.** “Πολεοδομία-Χωροταξία”, διδακτικές σημειώσεις για την διδασκαλία του αντίστοιχου μαθήματος στο 1ο Ι.Ε.Κ. Θεσσαλονίκης, 144 σελίδες, 1997.

F.11. **Λουκάς, Α.** “Γεωγραφία”, διδακτικές σημειώσεις για την διδασκαλία του αντίστοιχου μαθήματος στο 1ο Ι.Ε.Κ. Θεσσαλονίκης, 153 σελίδες, 1997.



F.12. **Λουκάς, Α.** “Κτηματολόγιο”, διδακτικές σημειώσεις για την διδασκαλία του αντίστοιχου μαθήματος στο 1ο Ι.Ε.Κ. Θεσσαλονίκης, 71 σελίδες, 1997.

## **II. 2. ΒΙΒΛΙΟΓΡΑΦΙΚΕΣ ΑΝΑΦΟΡΕΣ**

Περισσότερες από 700 αναφορές (610 ανεξάρτητες αναφορές) όπως αναφέρονται στη βάση δεδομένων *Scopus* με h-index=17 (h-index=16, L-index=40). Περισσότερες από 1340 αναφορές στη βάση δεδομένων *Google Scholar* (h-index =22, i-10-index=36).