



Europass Curriculum Vitae

Personal information

First name(s) / Surname(s) **Andreas Langousis**

Address(es)

Telephone(s)

Mobile:

Fax(es)

E-mail

Nationality

Date of birth

Gender

Education and training

Dates February 2005 – December 2008

Title of qualification awarded Doctor of Science (Sc.D.) in Civil and Environmental Engineering

Principal subjects/occupational skills covered Expertise: Development of Stochastic Models for Probabilistic Assessment, Hydrologic Risk Analysis, Engineering Design and Prediction
Thesis title: Extreme Rainfall Intensities and Long-term Rainfall Risk from Tropical Cyclones
GPA: 5.0/5.0

Name and type of organisation providing education and training Massachusetts Institute of Technology (MIT)
Department of Civil and Environmental Engineering
77 Massachusetts ave., Cambridge, MA, 02139, U.S.A.

Level in national or international classification International Classification in Engineering: 1st

Dates September 2003 – February 2005

Title of qualification awarded Master of Science (M.Sc.) in Civil and Environmental Engineering

Principal subjects/occupational skills covered Expertise: Development of Stochastic Models for Probabilistic Assessment, Hydrologic Risk Analysis, Engineering Design and Prediction
Thesis title: The Areal Reduction Factor: A Multifractal Analysis
GPA: 5.0/5.0

Name and type of organisation providing education and training Massachusetts Institute of Technology (MIT)
Department of Civil and Environmental Engineering
77 Massachusetts ave., Cambridge, MA, 02139, U.S.A.

Level in national or international classification International Classification in Engineering: 1st

Dates September 1999 – July 2003

Title of qualification awarded Diploma in Civil Engineering (5-year degree)


Principal subjects/occupational skills covered Expertise: Water Resources, Maritime and Hydraulic Engineering
Thesis title: Development of Cyclostationary Stochastic Hydrological Models Preserving Short-term Memory and Long-term Persistence
GPA: 9.66/10 (Record high in the Department of Civil Engineering of N.T.U.A.)

Name and type of organisation providing education and training National Technical University of Athens (N.T.U.A.)
School of Civil Engineering
Heroon Polytechniou 9, Athens, 15780, Greece

Level in national or international classification National Classification: 1st
International Classification: 106th

Work experience

- Dates** December 2019 – present
- Occupation or position held** Associate Professor in the area of Engineering Hydrology, Hydraulics and Hydrologic Risk Assessment
- Main activities and responsibilities**
- Research in the area of Engineering Hydrology, Hydraulics and Hydrologic Risk Assessment
 - Teaching: 2 undergraduate and 2 graduate courses per year
 - Advising undergraduate and graduate students
 - Administrative activities
- Name and address of employer** Department of Civil Engineering, University of Patras, University Campus Rio, Patras, 26504, Greece
- Type of business or sector** Academia
- Dates** October 2017 – present
- Occupation or position held** Adjunct Professor in the thematic area "Design of Civil Infrastructure and Environmental Protection"
- Main activities and responsibilities**
- Teaching 1 graduate (2-semester) course per year
 - Advising graduate students
- Name and address of employer** School of Science and Technology, Hellenic Open University, Patras, Greece.
- Type of business or sector** Academia
- Dates** September 2003 – present
- Occupation or position held** Professional Civil and Environmental Engineer (Reg.# 95931)
- Main activities and responsibilities** Consulting in Civil and Environmental Engineering Projects
- Name and address of employer** Self Employed, 80 Spartis st., Piræus, 18515, Greece
- Type of business or sector** Private Sector
- Dates** December 2018 – December 2019
- Occupation or position held** Tenured Assistant Professor in the area of Engineering Hydrology, Hydraulics and Hydrologic Risk Assessment
- Main activities and responsibilities**
- Research in the area of Engineering Hydrology, Hydraulics and Hydrologic Risk Assessment
 - Teaching: 2 undergraduate and 2 graduate courses per year
 - Advising undergraduate and graduate students
 - Administrative activities
- Name and address of employer** Department of Civil Engineering, University of Patras, University Campus Rio, Patras, 26504, Greece
- Type of business or sector** Academia
- Dates** September 2017 – May 2020
- Occupation or position held** Professeur Associé (Associated Professor) honorary status at INRS Université de Recherche in Quebec, Canada.
- Main activities and responsibilities**
- Research in the area of Stochastic Hydrology and Hydroclimatic Risk
 - Advising 1 PhD Candidate
- Name and address of employer** INRS Université d'avant-garde, Institut National de la recherche scientifique Centre – Eau Terre Environnement, 490 rue de la Couronne Québec (Québec) G1K 9A9 Canada
- Type of business or sector** Academia
- Dates** March 2015 – December 2018
- Occupation or position held** Assistant Professor in the area of Engineering Hydrology, Hydraulics and Hydrologic Risk Assessment
- Main activities and responsibilities**
- Research in the area of Engineering Hydrology, Hydraulics and Hydrologic Risk Assessment
 - Teaching: 2 undergraduate and 2 graduate courses per year
 - Advising undergraduate and graduate students
 - Administrative activities
- Name and address of employer** Department of Civil Engineering, University of Patras, University Campus Rio, Patras, 26504, Greece



Type of business or sector	Academia
Dates	February 2014 – March 2015
Occupation or position held	Senior Lecturer in the area of Engineering Hydrology, Hydraulics and Hydrologic Risk Assessment
Main activities and responsibilities	<ul style="list-style-type: none"> • Research in the area of Engineering Hydrology, Hydraulics and Hydrologic Risk Assessment • Teaching: 2 undergraduate and 2 graduate courses per year • Advising undergraduate and graduate students • Administrative activities
Name and address of employer	Department of Civil Engineering, University of Patras, University Campus Rio, Patras, 26504, Greece
Type of business or sector	Academia
Dates	February 2013 – September 2013
Occupation or position held	Adjunct Professor for the compulsory undergraduate course: "Water Distribution, Sewage and Rainwater Drainage Networks" (4th year of undergraduate studies)
Main activities and responsibilities	Preparing and teaching weekly lectures, formulating and grading problem sets and quizzes, preparing application examples and auxiliary material, managing the course schedule and keeping a distinctive eye on students' academic performance.
Name and address of employer	Department of Civil Engineering, University of Patras, University Campus Rio, Patras, 26504, Greece
Type of business or sector	Academia
Dates	April 2011 – February 2014
Occupation or position held	Postdoctoral Research Associate (Stochastic Modeling for Hydrologic Risk Assessment, Environmental Design and Prediction)
Main activities and responsibilities	Project: " <i>Rainfall Extremes and Hydrologic Impact Assessment in a Changing Climate</i> ", Funding Authority: Grant No. PE10(102), General Secretariat of Research and Technology (Greece), Principal Investigator (PI): Dr. Andreas Langousis.
Name and address of employer	Department of Civil Engineering, University of Patras, University Campus Rio, Patras, 26504, Greece
Type of business or sector	Academia
Dates	January 2012 – January 2013
Occupation or position held	Visiting Researcher (Stochastic Modeling for Hydrologic Risk Assessment, Environmental Design and Prediction)
Main activities and responsibilities	Project: " <i>CLIMB, Climate Induced Changes on the Hydrology of Mediterranean Basins: Reducing Uncertainty and Quantifying Risk through an Integrated Monitoring and Modeling System</i> ", Funding Authority: European Union (FP7), Principal Investigator (PI): Professor Roberto Deidda.
Name and address of employer	Dipartimento di Ingegneria Civile, Ambientale e Architettura, Università degli Studi di Cagliari, Italy
Type of business or sector	Academia
Dates	February 2010 – September 2010
Occupation or position held	Adjunct Professor for the compulsory undergraduate course: "Numerical Methods in Environmental Engineering" (3rd year of undergraduate studies)
Main activities and responsibilities	Preparing and teaching weekly lectures, formulating and grading problem sets and quizzes, preparing application examples and auxiliary material, managing the course schedule and keeping a distinctive eye on students' academic performance.
Name and address of employer	School of Environmental Engineering, Technical University of Crete, Chania, 73100, Greece
Type of business or sector	Academia
Dates	December 2008 – July 2009
Occupation or position held	Postdoctoral Research Associate
Main activities and responsibilities	Research in the area of Stochastic Modelling of Hydrologic Processes
Name and address of employer	Massachusetts Institute of Technology (MIT) Department of Civil and Environmental Engineering 77 Massachusetts ave., Cambridge, MA, 02139, U.S.A.
Type of business or sector	Academia
Dates	September 2003 – December 2008



Occupation or position held Research and Teaching Assistant

Main activities and responsibilities

- Research in the area of Stochastic Modelling of Hydrologic Processes
- Teaching: Preparing and teaching weekly recitation sessions, formulating and grading weekly problem sets and quizzes, preparing application examples and auxiliary material and keeping a distinctive eye on students' academic performance.

Name and address of employer Massachusetts Institute of Technology (MIT)
 Department of Civil and Environmental Engineering
 77 Massachusetts ave., Cambridge, Mass, 02139, U.S.A.

Type of business or sector Academia

Personal skills and competences

Mother tongue(s) Greek

Other language(s) English, French

Self-assessment <i>European level (*)</i>	Understanding		Speaking		Writing	
	Listening	Reading	Spoken interaction	Spoken production		
English	C 2 Proficient user	C 2 Proficient user	C 2 Proficient user	C 2 Proficient user	C 2 Proficient user	
French	B 2 Independent user	B 2 Independent user	B 1 Independent user	B 1 Independent user	B 1 Independent user	

(*) *Common European Framework of Reference for Languages*

Social skills and competences

- Team spirit: Multiple ongoing collaborations in Europe, USA, Canada, Asia and Mexico, and participation in more than 20 International Research Projects.
- Excellent written and verbal communication skills: - More than 40 peer-reviewed articles, International Scientific Journals, conference proceedings, and invited book chapters. - More than 50 presentations in international conferences. - 17 invited lectures and talks. See Annex II.
- Excellent ability to adapt and work in multinational environments.

Organisational skills and competences

- Leadership: - Elected Head of the Geotechnical and Hydraulic Engineering Sector, Department of Civil Engineering, University of Patras (July 2020). - Chair of the Precipitation and Climate scientific committee of the European Geosciences Union (EGU) (April 2018 - present). - Associate Editor in 4 prestigious Scientific Journals: WRR, SERRA, JoH, HSJ. - Managing Guest Editor in JoH (2015 – 2017), among other. See Section "Other skills and competences" and Annex I.
- Organizational skills: - Active member of the organizing and scientific committees of 23 international conferences and assemblies. - Participation in more than 20 International Research Projects, among other. See Annexes I and III.
- Good experience in project management: Participation in 20 Research Projects (4 as Principal Investigator (PI) and 1 as co-PI).

Computer skills and competences

- Proficient in Languages of Technical Programming: Fortran, VBA
- Proficient in Languages of Technical Computing: MatLab, Mathematica
- Proficient in Microsoft Office tools: Word, Excel, PowerPoint, Visio
- Expert in Hydraulic Simulation Models: EPANet, HEC-RAS
- Expert in Computer Aided Design: Autocad
- Expert in Graphic Design Applications: Photoshop, CorelDRAW
- Distance Learning: Certified in distance learning methods, tools and platforms.



Other skills and competences Published Work – Student Supervision - Bibliometrics – Research Projects (as of 19 July, 2020):

- Dissertations: 3
- Research Articles in Peer-Reviewed Scientific Journals: 36
- Peer-Reviewed Articles in Conference Proceedings: 4
- Peer-Reviewed Invited Book Chapters: 3
- Books: 1
- Conference Presentations: 52
- Lecture Notes: 2
- Popular Science: 6
- Technical Reports: 4
- Participation to Research Projects: 20 (4 as PI, 1 as co-PI)
- Invited Talks and Lectures: 17
- h-index (Google-Scholar): 20
- Citations (Google-Scholar): 1045
- Supervision of Diploma Theses in Civil Engineering: 21
- Supervision of Postgraduate Theses: 9
- Supervision of Doctoral Theses: 2
- Participation to Doctoral Committees: 12
- Participation to Tenure, Promotion and Distinguished Chair Committees: 3

Distinctions/Fellowships/Awards:

- (2020 –) Head of the Geotechnical and Hydraulic Engineering Sector, Department of Civil Engineering, University of Patras (Elected July 2020)
- (2018 –) Chair of the Precipitation and Climate Sub-Division of EGU.
- (2018) Certificate of Outstanding Contribution in Reviewing, Stochastic Environmental Research and Risk Assessment (SERRA)
- (2017) Nomination of the status of Associate Professor at INRS Université de Recherche in Quebec, Canada.
- (2017) Certificate of Outstanding Contribution in Reviewing, Journal of Hydrology (JoH)
- (2017) Article receiving Editors' Highlight in Water Resources Research (WRR)
- (2015-2017) 2-year Research Fellowship by Alexander S. Onassis Public Benefit Foundation
- (2012-2015) 3-year Postdoctoral Fellowship by the General Secretariat of Research & Technology (Greece)
- (2004-2009) 5-year Graduate Fellowship by Alexander S. Onassis Public Benefit Foundation
- (2003-2004) Schoettler Fellowship (Massachusetts Institute of Technology, M.I.T.)
- (2007) Best paper award at the 1st International Summit on Hurricanes and Climate Change
- (1999-2008) 27 Academic Awards in Civil and Environmental Engineering
- (1998-2003) State Scholarships Foundation (Greece)
- (1998) Participation at the XXIX International Physics Olympiad

Editorial Boards:

- Associate Editor: Water Resources Research (WRR), (2013- present).
- Associate Editor: Stochastic Environmental Research and Risk Assessment (SERRA), (2013- present).
- Associate Editor: Journal of Hydrology (JoH), (2016- present).
- Associate Editor: Journal of Hydrological Sciences (JHS), (2016- present).
- Managing Guest Editor: Journal of Hydrology (JoH), Special Issue: "Precipitation measurement and modeling: uncertainty, variability, observations, ensemble simulation and downscaling" (2015 – 2017).
- Guest Associate Editor: Hydrology and Earth System Sciences (HESS), Special Issue: Precipitation uncertainty and variability: observations, ensemble simulation and downscaling (2012-2013).

Peer Review Referee Work (more than 400 articles have been reviewed for):

Water Resources Research, Journal of Hydrology, Hydrological Sciences Journal, Advances in Water Resources, Journal of Atmospheric Research, Urban Water Journal, International Journal of Forecasting, Advances in Geosciences, International Journal of Climatology, Hydrological Processes, Hydrol. and Earth Syst. Sciences (HESS), Natural Hazards and Earth Systems Sciences (NHES), Stochastic Environmental Research and Risk Assessment (SERRA) Water Resources Management, Hydrology, Journal of Applied Meteorology and Climatology, International Journal of Modern Physics B, Annals of Applied Statistics CATENA, Journal of Atmospheric Sciences

Scientific and Professional Committees:

- Head of the Geotechnical and Hydraulic Engineering Sector, Department of Civil Engineering, University of Patras (Elected July 2020).
- Chair of the Precipitation and Climate Sub-Division of the European Geosciences Union (EGU), (2018-present).
- Participation to Tenure, Promotion and Distinguished Chair Committees world-wide (2016 – present).
- Participation to Committees of Funding Agencies world-wide (2016 – present).
- Member of the examination committee of the Technical Chamber of Greece (TCG), for the conferment of professional rights to Civil Engineers (2014-present).
- Member of the scientific committee of the Precipitation and Climate Sub-Division of the European Geosciences Union (EGU), (2008- present).



Professional Bodies and Community Involvement:

- Board of Directors, Treasurer, Alexander S. Onassis Scholar's Association (2011-2013).
- Board of Directors, American Society of Civil Engineers (ASCE), Hellenic International Group (2010-2012).
- Student Mentor: Massachusetts Institute of Technology (MIT) International Mentorship Program (2016-present).
- Educational Councilor: Massachusetts Institute of Technology (MIT) (2018-present).

Professional Memberships:

Technical Chamber of Greece (T.C.G.)
European Geosciences Union (E.G.U.)
American Geophysical Union (A.G.U.)
American Society of Civil Engineers (A.S.C.E.)
International Association of Hydrological Sciences (I.A.H.S.)
International Commission on Statistical Hydrology (ICSH-IAHS)

Additional information | References: Upon request

Annexes | Annex I: Background information for Dr. Andreas Langousis
Annex II: List of Publications – Invited Talks – Conference presentations – Courses Taught
Annex III: Organization of Conferences and Conference Sessions

Annex I: Background Information for Dr. Andreas Langousis

Dr. Andreas Langousis is a Professional Civil Engineer [National Technical University of Athens, Greece, NTUA, 2003; GPA 9.66/10 (to-date record high in the Department of Civil Engineering of NTUA)], with Master of Science (MSc 2005; GPA 5.0/5.0) and Doctor of Science (ScD 2009; GPA 5.0/5.0) degrees from the Department of Civil and Environmental Engineering of the Massachusetts Institute of Technology (MIT, USA). He has served as Professor of several undergraduate and graduate courses in Civil Engineering related to probability theory and statistics, random field theory, stochastic processes, catastrophe risk, hydraulic structures, urban hydraulic works, rural and urban hydrology, environmental data analysis, and numerical analysis, at different Institutions in USA and Europe. Currently, he holds an Associate Professor position in the area of Engineering Hydrology, Hydraulics and Hydrologic Risk Assessment at the Department of Civil Engineering of the University of Patras (Greece), an Adjunct Professor position at the School of Science and Technology of the Hellenic Open University (Thematic area: "Design of Civil Infrastructure and Environmental Protection"), and serves as consultant to the Technical Chamber of Greece (TCG), and several leading engineering, risk modeling firms and agencies worldwide. In September 2017 he was nominated the "Professeur Associé" honorary status at INRS Université de Recherche in Quebec (Canada), since April 2018 he serves as the Chair of the Precipitation and Climate Scientific Committee of the European Geosciences Union (EGU), and in July 2020 he was elected Head of the Geotechnical and Hydraulic Engineering Sector, of the Department of Civil Engineering at the University of Patras.

His research to date has resulted in multiple fellowships, academic awards, and distinctions, including the Schoettler Fellowship of MIT for academic accomplishments, a 5-year scholarship from the Alexander S. Onassis Public Benefit Foundation, a best paper award at the 1st International Summit on Hurricanes and Climate Change, a 3-year Postdoctoral Fellowship from the General Secretariat of Research and Technology (Greece), a 2-year Research Fellowship from the Alexander S. Onassis Public Benefit Foundation, while one of his innovative research articles published in Water Resources Research (WRR, 2017) received the Editors' Highlight. He has participated in 20 research projects (4 as Principal Investigator, PI, and 1 as co-PI), co-authored 36 peer-reviewed research articles in international scientific Journals, 4 peer-reviewed research articles in conference proceedings, more than 50 presentations at international conferences, 3 peer-reviewed invited book chapters, 4 newspaper articles (popular science), and served as an active member of the organizing and scientific committees of 23 international conferences. In addition, he has given 17 invited lectures and talks, and currently serves as Associate Editor in WRR (Water Resources Research, IF: 4.70), HSJ (Hydrological Sciences Journal, IF: 2.37), JoH (Journal of Hydrology, IF: 4.04), and SERRA (Stochastic Environmental Research and Risk Assessment, IF: 2.72), and as Reviewer in 20 international scientific Journals. For the period Jun. 2012 - Dec. 2013, he served as Guest Associate Editor in HESS (Hydrology and Earth System Sciences, IF: 5.06), and for the period Jun. 2015- Jun. 2017 he served as Managing Guest Editor in JoH.

He is an active member of the Technical Chamber of Greece (TCG), the American Society of Civil Engineers (ASCE), the American Geophysical Union (AGU), the European Geosciences Union (EGU), the International Association of Hydrological Sciences (IAHS), and the International Commission on Statistical Hydrology (ICSH-IAHS). Since 2008, Andreas Langousis serves as an active member of the scientific committee of the Precipitation and Climate Sub-Division of EGU, and since April 2018 he serves as its Chair. During the period 2010-2012, he was an active member of the Board of Directors of the Hellenic Chapter of ASCE, for the period 2011-2013 he served as Treasurer of the Alexander S. Onassis Scholars' Association, since March 2014 he serves as a member of the examination committee of the Technical Chamber of Greece (TCG) for the conferment of professional rights to Civil Engineers and, since May 2018, he serves as a member of the Educational Council of the Massachusetts Institute of Technology (MIT, USA) for incoming students.

Andreas Langousis' area of expertise is the development of stochastic models and methods for the probabilistic description of natural and engineered systems, for risk assessment, prediction, design and control. His current research interests include (but are not limited to): hydrologic/hydroclimatic variability and climate change impact assessment, scale invariant phenomena, fractals and multifractals, hydroclimatic and



environmental risk quantification, catastrophe risk and management of claims, health risk modeling, statistical downscaling and forecasting, storm-based flood risk estimation and mapping, probabilistic estimation of water losses in water distribution networks (WDNs), burst detection and localization, statistical estimation of water demand/consumption, optimal sizing of pressure management areas, development of smart solutions for water loss reduction, backflow propagation in sewerage networks, as well as reliability analysis and risk management and design of man-made and engineered systems.

Annex II: List of Publications – Invited Talks – Conference presentations – Courses Taught

Journal Articles:

- Perra, E., F. Viola, R. Deidda, D. Caracciolo, C. Paniconi and A. Langousis (2020) Hydrologic impacts of surface elevation and spatial resolution in statistical correction approaches: The case study of Flumendosa basin, Italy, *J. Hydrol. Eng. ASCE*, **25**(9), [https://doi.org/10.1061/\(ASCE\)HE.1943-5584.0001969](https://doi.org/10.1061/(ASCE)HE.1943-5584.0001969) (active link)
- Emmanouil, S., A. Langousis, E.I. Nikolopoulos, and E.N. Anagnostou (2020) Quantitative assessment of annual maxima, peaks-over-threshold and multifractal parametric approaches in estimating intensity-duration-frequency curves from short rainfall records, *J. Hydrol.*, <https://doi.org/10.1016/j.jhydrol.2020.125151> (active link).
- Tyrallis, H., G. Papacharalampous, and A. Langousis (2020) Super ensemble learning for daily streamflow forecasting: large-scale demonstration and comparison with multiple machine learning algorithms, *Neural Comput & Applic*, <https://doi.org/10.1007/s00521-020-05172-3> (active link).
- Langousis, A., and A.A. Carsteanu (2020) Undersampling in action and at scale: Application to the COVID-19 pandemic, *Stoch. Environ. Res. Risk Assess.*, <https://doi.org/10.1007/s00477-020-01821-0> (active link)
- Perdios, A. and A. Langousis (2020) Revisiting the Statistical Scaling of Annual Discharge Maxima at Daily Resolution with Respect to the Basin Size in the Light of Rainfall Climatology, *Water*, **12**(2), 610; <https://doi.org/10.3390/w12020610> (active link).
- Carsteanu, A.A., and A. Langousis (2020) Break of temporal symmetry in a stationary Markovian setting: evidencing an arrow of time, and parameterizing linear dependencies using fractional low-order joint moments, *Stoch. Environ. Res. Risk Assess.*, **34**, 1-6, <https://doi.org/10.1007/s00477-019-01749-0> (active link).
- Papacharalampous, G., H. Tyrallis, A. Langousis, A.W. Jayawardena, B. Sivakumar, N. Mamassis, A. Montanari, and D. Koutsoyiannis (2019) Probabilistic hydrological post-processing at scale: Why and how to apply machine-learning quantile regression algorithms, *Water*, **11**(10), 2126, <https://doi.org/10.3390/w11102126>, (active link).
- Tyrallis, H., G. Papacharalampous, A. Burnetas and A. Langousis (2019) Hydrological post-processing using stacked generalization of quantile regression algorithms: Large-scale application over CONUS, *J. Hydrol.*, **577**, doi:10.1016/j.jhydrol.2019.123957 (active link).
- Tyrallis, H., G. Papacharalampous and A. Langousis (2019) A Brief Review of Random Forests for Water Scientists and Practitioners and Their Recent History in Water Resources, *Water*, **11**(5), 910, doi:10.3390/w11050910, (active link).
- Fei, X., R. Xiao, G. Christakos, A. Langousis, Z. Ren, Y. Tian and X. Lv (2019) Comprehensive assessment and source apportionment of heavy metals in Shanghai agricultural soils with different fertility levels, *Ecological Indicators*, **106**, 105508, <https://doi.org/10.1016/j.ecolind.2019.105508>, (active link).
- He, J., G. Christakos, J. Wu, P. Jankowski, A. Langousis, Y. Wang, W. Yin and W. Zhang (2019) Probabilistic Logic Analysis of the Highly Heterogeneous Spatiotemporal HFRS Incidence Distribution in Heilongjiang Province (China) During 2005-2013, *PLoS Negl. Trop. Dis.*, **13**(1), e0007091, <https://doi.org/10.1371/journal.pntd.0007091> (active link).
- Tyrallis, H. and A. Langousis (2019) Estimation of intensity–duration–frequency curves using max-stable processes, *Stoch. Environ. Res. Risk Assess.*, **33**(1), 239-252, <https://doi.org/10.1007/s00477-018-1577-2> (active link).
- Langousis, A., V. Kaleris, A. Kokosi and G. Mamounakis (2018) Markov based transition probability geostatistics in groundwater applications: assumptions and limitations, *Stoch. Environ. Res. Risk Assess.*, **32**(7), 2129-2146, doi: <https://doi.org/10.1007/s00477-017-1504-y> (active link).
- Langousis, A., R. Deidda, A. Carsteanu, C. Onof, P. Burlando, R. Uijlenhoet and A. Bárdossy (2018) Precipitation measurement and modelling: uncertainty, variability, observations, ensemble simulation and downscaling, *J. Hydrol.*, **556**, 824-26, <https://doi.org/10.1016/j.jhydrol.2017.09.016> (active link).
- Emmanouil, S. and A. Langousis (2017) UPStream: Automated Hydraulic Design of Pressurized Water Distribution Networks, *SoftwareX*, **6**, 248-254, <https://doi.org/10.1016/j.softx.2017.09.001> (active link).
- Mamalakis, A., A. Langousis, R. Deidda and M. Marrocu (2017) A parametric approach for simultaneous bias correction and high-resolution downscaling of climate model rainfall, *Water Resour. Res.*, **53**, WRCR22499, doi: 10.1002/2016WR019578 (active link) (WRR Editors' Highlight).
- Kaleris, V. and A. Langousis (2017) Comparison of two rainfall-runoff models: Effects of conceptualization, model calibration and parameter variability, *Hydrological Sciences Journal*, **62**(5), 729-748, doi: 10.1080/02626667.2016.1250899 (active link).
- Langousis, A., A. Mamalakis, M. Puliga and R. Deidda (2016) Threshold detection for the generalized Pareto distribution: Review of representative methods and application to the NOAA NCDC daily rainfall database, *Water Resour. Res.*, **52**, doi:10.1002/2015WR018502 (active link).
- Langousis, A., A. Mamalakis, R. Deidda and M. Marrocu (2016) Assessing the relative effectiveness of statistical downscaling and distribution mapping in reproducing rainfall statistics based on climate model results, *Water Resour. Res.*, **52**, doi:10.1002/2015WR017556 (active link).
- Langousis, A. and V. Kaleris (2014) Statistical framework to simulate daily rainfall series conditional on upper-air predictor variables, *Water Resour. Res.*, **50**(5), 3907-3932, doi: 10.1002/2013WR014936 (active link)
- Deidda, R., M. Marrocu, G. Caroletti, G. Pusceddu, A. Langousis, V. Lucarini, M. Puliga, and A. Speranza (2013) Regional climate models' performance in representing precipitation and temperature over selected Mediterranean areas, *Hydrol. Earth Syst. Sci.*, **17**(12), 5041-5059, doi:10.5194/hess-17-5041-2013 (active link).
- Angulo, J.M., H.-L. Yu, A. Langousis, A. Kolovos, J-F Wang, D. Madrid and G. Christakos (2013) Spatiotemporal infectious disease modeling: A BME-SIR approach, *PLoS ONE* **8**(9), e72168. doi:10.1371/journal.pone.0072168 (active link).



- Langousis, A. and V. Kaleris (2013) Theoretical framework to estimate spatial rainfall averages conditional on river discharges and point rainfall measurements from a single location: an application to western Greece, *Hydrol. Earth Syst. Sci.*, **17**, 1241-1263, doi:10.5194/hess-17-1241-2013. [\(active link\)](#)
- Langousis, A., A.A. Carsteanu and R. Deidda (2013) A Simple Approximation to Multifractal Rainfall Maxima using a Generalized Extreme Value Distribution Model, *Stoch. Environ. Res. Risk Assess.*, doi: 10.1007/s00477-013-0687-0. [\(active link\)](#)
- Angulo, J.M., H.-L. Yu, A. Langousis, D. Madrid and G. Christakos (2012) Modeling of Space-time Infectious Disease Spread under Conditions of Uncertainty, *International Journal of Geographical Information Science*, **26**(10), 1751-1772, doi:10.1080/13658816.2011.648642, [\(active link\)](#).
- Veneziano, D., A. Langousis and C. Lepore (2009) New Asymptotic and Pre-Asymptotic Results on Rainfall Maxima from Multifractal Theory, *Wat. Resour. Res.*, **45**, doi:10.1029/2009WR008257. [\(active link\)](#)
- Langousis, A. and D. Veneziano (2009) Long-term Rainfall Risk from Tropical Cyclones in Coastal Areas, *Wat. Resour. Res.*, **45**, doi:10.1029/2008WR007624. [\(active link\)](#)
- Langousis, A. and D. Veneziano (2009) Theoretical Model of Rainfall in Tropical Cyclones for the Assessment of Long-term Risk, *J. Geophys. Res.*, **114**, doi:10.1029/2008JD010080. [\(active link\)](#)
- Langousis, A., D. Veneziano, P. Furcolo, and C. Lepore (2009) Multifractal Rainfall Extremes: Theoretical Analysis and Practical Estimation, *Chaos Solitons and Fractals*, **39**, 1182-1194, doi:10.1016/j.chaos.2007.06.004. [\(active link\)](#)
- Koutsoyiannis, D., C. Makropoulos, A. Langousis, S. Baki, A. Efstratiadis, A. Christofides, G. Karavokiros and N. Mamassis (2009) Climate, Hydrology, Energy, Water: Recognizing Uncertainty and Seeking Sustainability, *Hydrol. Earth Syst. Sci.*, **13**, 247-257. [\(active link\)](#)
- Langousis, A. and D. Veneziano (2007) Intensity-Duration-Frequency Curves from Scaling Representations of Rainfall, *Wat. Resour. Res.*, **43**, doi: 10.1029/2006WR005245. [\(active link\)](#)
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- Langousis, A. and D. Koutsoyiannis (2006) A Stochastic Methodology for Generation of Seasonal Time Series Reproducing Over-year Scaling Behavior, *J. Hydrol.*, **322** (1-4), 138-154. [\(active link\)](#)
- Veneziano, D. and A. Langousis (2005) The Maximum of Multifractal Cascades: Exact Distribution and Approximations, *Fractals*, **13**(4), 311-324. [\(active link\)](#)
- Veneziano, D. and A. Langousis (2005) The Areal Reduction Factor: a Multifractal Analysis, *Wat. Resour. Res.*, **41**, doi:10.1029/2004WR003765. [\(active link\)](#)

Conference Proceedings:

- Langousis, A., E.I. Nikolopoulos and E.N. Anagnostou (2018) Using approximations from multifractal theory to estimate IDF curves at ungauged locations, In: *Rainfall monitoring, modelling and forecasting in urban environments*, Conference Proceedings of the 11th International Workshop on Precipitation in Urban Areas (UrbanRain18), Pontresina, Switzerland, 5-7 Dec. 2018, Eds: Peter Molnar and Nadav Peleg, Institute of Environmental Engineering, ETH Zurich, Switzerland, DOI: 10.3929/ethz-b-000347485 (ETH E-collection, 2019).
- Mamalakis, A., A. Langousis and R. Deidda (2016) Threshold Detection for the Generalized Pareto (GP) Distribution: Critical Review and Hydrologic Application of Representative Methods, in: Castellari, A. et al. (2016) *Atti del XXXV Convegno Nazionale di Idraulica e Costruzioni Idrauliche*. Bologna: DICAM - Università di Bologna, p. 1499. ISBN 9788898010400. DOI 10.6092/unibo/amsacta/5400, p.423-426.
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- Langousis, A. and V. Kaleris (2012) A Statistical Approach to Estimate Spatial Rainfall Averages Using Point Rainfall Measurements from a Single Location and Runoff Data, 2nd Common Conference H.H.U. – H.C.W.M. on Integrated Water Resources Management for Sustainable Development, University of Patras, Patras, Greece, October 2012.

Dissertations:

- Langousis, A. (2008) *Extreme Rainfall Intensities and Long-term Rainfall Risk from Tropical Cyclones*, Sc.D. Thesis, Department of Civil and Environmental Engineering, MIT, Cambridge, MA, U.S.A. [\(active link\)](#)
- Langousis, A. (2005) *The Areal Reduction Factor a Multifractal Analysis*, MSc Thesis, 117 pages, Department of Civil and Env. Eng., MIT, Cambridge, MA, U.S.A. [\(active link\)](#)
- Langousis, A. (2003) *Development of Cyclostationary Stochastic Hydrological Models Preserving Short-term Memory and Long-term Persistence*, Diploma thesis, 327 pages, Department of Water Resources, Hydraulic and Maritime Engineering - National Technical University of Athens, Greece. [\(active link\)](#)

Books:

- Langousis A. and N. Fourniotis (2020) *Elements of Engineering Design of Water Distribution and Sewerage Networks*, 750 pages, Gotsis publications, Greece, ISBN: 978-960-9427-89-0 (in Greek).

Books (Chapters in):

- Koutsoyiannis, D. and A. Langousis (2011) Precipitation, In: *Treaties on Water Sciences: Hydrology*, Vol. 2, Edts: P. Wilderer (in chief) and S. Uhlenbrook, Academic Press, Oxford, pp. 27–78. [\(active link\)](#)

- Veneziano D. and A. Langousis (2010) Scaling and Fractals in Hydrology, In: *Advances in Data-based Approaches for Hydrologic Modeling and Forecasting*, Edited by: B. Sivakumar and R. Berndtsson, World Scientific, 145p. ([active link](#))
- Langousis, A., D. Veneziano, and S. Chen (2008) Boundary Layer Model for Moving Tropical Cyclones, In: *Hurricanes and Climate Change*, Edts. J. Elsner and T. Jagger, Springer, NY, doi: 10.1007/978-0-387-09410-6, pp. 265-286. ([active link](#))

Conference Presentations:

- Perdios, A. and A. Langousis (2020) Revisiting the statistical scaling of peak annual discharges with respect to the basin size in the light of rainfall climatology, European Geosciences Union General Assembly, Vienna, Austria, May 2020.
- Carsteanu, A.A. and A. Langousis (2020) Revealing a temporal symmetry/asymmetry dichotomy in a Markovian setting, and a parameterization based on fractional low-order joint moments, European Geosciences Union General Assembly, Vienna, Austria, May 2020.
- Ruggiu, D., F. Viola and A. Langousis (2020) A non-parametric procedure to assess the accuracy of the normality assumption for annual rainfall totals, based on the marginal statistics of daily rainfall: An application to NOAA-NCDC rainfall database, European Geosciences Union General Assembly, Vienna, Austria, May 2020.
- Huang, T., H-L Yu, E.I. Nikolopoulos, A. Langousis, J. Zhu, S. Dunn, and M. Yasunobu (2020) Framework Development for Disaster Risk Dynamics and Resilience Analytics in Complex Socio-Technical Systems, European Geosciences Union General Assembly, Vienna, Austria, May 2020.
- Kourakos, V., T. Iliopoulou, P. Dimitriadis, D. Koutsyiannis, A. Langousis and V. Kaleris (2020) Investigation of marginal distribution and dependence structure of simulated streamflow by a rainfall-runoff model, European Geosciences Union General Assembly, Vienna, Austria, May 2020.
- Perra, E., F. Viola, R. Deidda, D. Caracciolo, C. Paniconi and A. Langousis (2019) Impacts of surface elevation and spatial resolution in statistical correction approaches on the hydrologic response of a Mediterranean catchment, Giornate Dell'Idrologia Della SII 2019, Italian Hydrological Society, 16-18 September 2019, Bologna, Italy.
- Emmanouil, S., E.I. Nikolopoulos, A. Langousis and E.N. Anagnostou (2019) Statistical downscaling of Global Reanalysis Precipitation Products: A comparison of parametric and non-parametric approaches over CONUS, European Geosciences Union General Assembly, Vienna, Austria, April 2019.
- Perra, E., F. Viola, R. Deidda, D. Caracciolo, A. Langousis and C. Paniconi (2019) Investigating the effect of different downscaling techniques on the simulated hydrologic cycle of a Mediterranean catchment, European Geosciences Union General Assembly, Vienna, Austria, April 2019.
- Tyrallis, H., G. Papacharalampous, A. Burnetas and A. Langousis (2019) Stacking of probabilistic predictions for improving hydrological forecasts, European Geosciences Union General Assembly, Vienna, Austria, April 2019.
- Papacharalampous, G., H. Tyrallis, A. Langousis, A.W. Jayawardena, B. Sivakumar, N. Mamassis, A. Montanari and D. Koutsyiannis (2019) Large-scale comparison of machine learning regression algorithms for probabilistic hydrological modelling via post-processing of point predictions, European Geosciences Union General Assembly, Vienna, Austria, April 2019.
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- Langousis, A., V. Xevgeni and V. Kaleris (2018) Confidence interval estimation of hydraulic heads at unobserved locations using stationary stochastic models and geologic interpretations, European Geosciences Union General Assembly, Vienna, Austria, April 2018.
- Tyrallis, H. and A. Langousis (2018) Modelling of rainfall maxima at different durations using max-stable processes, European Geosciences Union General Assembly, Vienna, Austria, April 2018.
- Mamalakis, A., A. Langousis, R. Deidda and M. Marrocu (2017) Parametric bias correction and high-resolution downscaling of climate model rainfall, IAHS Scientific Assembly 2017, Port Elizabeth, South Africa, July 2017.
- Langousis, A., V. Kaleris, V. Xevgeni and F. Magkou (2017) Confidence interval estimation of the absolute error in hydraulic head estimation based on a simple stochastic model and geologic interpretations, IAHS Scientific Assembly 2017, Port Elizabeth, South Africa, July 2017.
- Mamalakis, A., A. Langousis, R. Deidda and M. Marrocu (2017) A parametric approach for simultaneous bias correction and high-resolution downscaling of climate model rainfall for practical applications, European Geosciences Union General Assembly, Vienna, Austria, April 2017.
- Langousis, A., V. Kaleris, V. Xevgeni and F. Magkou (2017) Hydraulic head estimation at unobserved locations: Approximating the distribution of the absolute error based on geologic interpretations, European Geosciences Union General Assembly, Vienna, Austria, April 2017.
- Mamalakis, A., A. Langousis and R. Deidda (2016) Critical Review and Hydrologic Application of Threshold Detection Methods for the Generalized Pareto (GP) Distribution, European Geosciences Union General Assembly, Vienna, Austria, April 2016.
- Langousis, A., V. Kaleris, A. Kokosi and G. Mamounakis (2016) Towards Determining the Optimal Density of Groundwater Observation Networks under Uncertainty, European Geosciences Union General Assembly, Vienna, Austria, April 2016.
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- Mamalakis, A., A. Langousis and R. Deidda (2016) Threshold Detection for the Generalized Pareto (GP) Distribution: Critical Review and Hydrologic Application of Representative Methods, XXXV Convegno Nazionale di Idraulica e Costruzioni Idrauliche (IDRA16), Bologna, Italy, September 2016, (<http://www.idra16.it/>).



- Deidda, R., M. Hellies and A. Langousis (2015) Regional versus geostatistical approaches for the estimation of extreme daily precipitation, 26th IUGG International Assembly, Prague, Czech Republic, June-July 2015.
- Deidda, R., A. Mamalakis and A. Langousis (2015) Comparison of Threshold Detection Methods for the Generalized Pareto Distribution (GPD): Application to the NOAA-NCDC Daily Rainfall Dataset, European Geosciences Union General Assembly, Vienna, Austria, April 2015.
- Langousis, A., A. Mamalakis, R. Deidda and M. Marrocu (2015) Rainfall Downscaling Conditional on Upper-air Atmospheric Predictors: Improved Assessment of Rainfall Statistics in a Changing Climate, European Geosciences Union General Assembly, Vienna, Austria, April 2015.
- Deidda, R., M. Hellies and A. Langousis (2015) Comparison of Regional and Geostatistical Approaches for the Estimation of Extreme Daily Precipitation, Giornate dell'Idrologia della Società Idrologica Italiana Arcavacata di Rende (Cosenza), November 2014.
- Langousis, A., R. Deidda, M. Marrocu and V. Kaleris (2014) Rainfall Downscaling Conditional on Upper-air Variables: Assessing Rainfall Statistics in a Changing Climate, European Geosciences Union General Assembly, Vienna, Austria, April-May 2014.
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- Langousis, A. and V. Kaleris (2013) Modeling Daily Rainfall Occurrence and Amount Conditional on Atmospheric Predictors, Facets of Uncertainty: 5th EGU Leonardo Conference, Hydrofractals 2013, and IAHS Statistical Hydrology (STAHY) Workshop 2013 (<http://kos2013.org>), Kos Island, Greece, 17-19 October 2013.
- Carsteanu, A., A. Langousis and R. Deidda (2013) The Distribution of Interarrival Times and Runlengths in Multifractal Rainfall, Facets of Uncertainty: 5th EGU Leonardo Conference, Hydrofractals 2013, and IAHS Statistical Hydrology (STAHY) Workshop 2013 (<http://kos2013.org>), Kos Island, Greece, 17-19 October 2013.
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- Deidda, R., M. Marrocu, G. Pusceddu, A. Langousis, G. Mascaro and G. Caroletti (2013) Downscaling of RCM outputs for representative catchments in the Mediterranean region, for the 1951-2100 time-frame, European Geosciences Union General Assembly, Vienna, Austria, April 2013.
- Langousis, A. and V. Kaleris (2012) A Statistical Approach to Resolve Incompatibilities Between Measured Runoff Data and Daily Estimates of Spatially Averaged Rainfall, European Geosciences Union General Assembly, Vienna, Austria, April 2012.
- Langousis, A., R. Deidda and A. Carsteanu (2010) A Simple Approximation to Multifractal Rainfall Maxima using a Generalized Extreme Value Distribution Model, 10th International Precipitation Conference (IPC-10), Coimbra, Portugal, June 2010.
- Deidda, R., A. Langousis and G. Mascaro (2010) Intercomparison of Regionalization Approaches for Extreme Rainfall Modeling, 10th International Precipitation Conference (IPC-10), Coimbra, Portugal, June 2010.
- Veneziano, D., A. Langousis and C. Lepore (2009) Annual Rainfall Maxima: Theoretical Estimation of the GEV Shape Parameter k Using Multifractal Models, *Eos Trans. AGU*, 90(52), American Geophysical Union, San Francisco, U.S.A., December 2009.
- Veneziano, D., A. Langousis and C. Lepore (2009) Annual Rainfall Maxima: Large-Deviation Alternative to Extreme-Value and Extreme-Excess Methods, *Geophysical Research Abstracts*, Vol. 11, European Geosciences Union General Assembly, Vienna, Austria, April 2009.
- Lepore, C., D. Veneziano and A. Langousis (2009) Annual Rainfall Maxima: Practical Estimation Based on Large-Deviation Results, *Geophysical Research Abstracts*, Vol. 11, European Geosciences Union General Assembly, Vienna, Austria, April 2009. • Langousis, A. and D. Veneziano (2009) Extreme Rainfall Intensities and Long-term Rainfall Risk from Tropical Cyclones, *Geophysical Research Abstracts*, Vol. 11, European Geosciences Union General Assembly, Vienna, Austria, April 2009.
- Langousis, A. and D. Veneziano (2008) Rainfall Hazard from Tropical Cyclones, *Geophysical Research Abstracts*, Vol. 10, European Geosciences Union General Assembly, Vienna, Austria, April 2008.
- Lepore, C., D. Veneziano and A. Langousis (2008) Lognormal Upper Tail of Rainfall Intensity and POT Values: Implications on the IDF Curves, *Geophysical Research Abstracts*, Vol. 10, European Geosciences Union General Assembly, Vienna, Austria, April 2008.
- Veneziano, D., C. Lepore, M. I. P. de Lima, A. Langousis and J.L.M.P. de Lima (2008) Comparison of IDF Estimation Methods at Selected Locations of Mainland Portugal, *Geophysical Research Abstracts*, Vol. 10, European Geosciences Union General Assembly, Vienna, Austria, April 2008.
- Lepore, C., M. I. P. de Lima, D. Veneziano, A. Langousis and J.L.M.P. de Lima (2008) Statistical Characterization of Extreme Rainfall Climate along the Future High-speed Rail Track in Portugal, *Geophysical Research Abstracts*, Vol. 10, European Geosciences Union General Assembly, Vienna, Austria, April 2008.
- Veneziano, D., C. Lepore, A. Langousis and P. Furcolo (2007) Comparison of IDF Estimation Methods, 9th International Precipitation Conference, Université Paris Est/Ecole Nationale des Ponts et Chaussées, France, November 12-14, 2007.
- Langousis, A., D. Veneziano, and S. Chen (2007) Theoretical Estimation of the Mean Rainfall Field in Tropical Cyclones: Axi-symmetric Component and Asymmetry Due to Motion, 1st International Summit on Hurricanes and Climate Change, Crete, Hellas, June 2007.
- Veneziano, D., C. Lepore, A. Langousis and P. Furcolo (2007) Scaling, Partial-scaling and Classical Methods of IDF Curve Estimation, *Geophysical Research Abstracts*, Vol. 9, European Geosciences Union General Assembly, Vienna, Austria, April 2007.
- Langousis, A., D. Veneziano, C. Lepore and P. Furcolo (2007) Simple IDF Estimation under Multifractality, *Geophysical Research Abstracts*, Vol. 9, European Geosciences Union General Assembly, Vienna, Austria, April 2007.
- Langousis, A. and D. Veneziano (2006) A Simple Theoretical Model for the Mean Rainfall Field of Tropical Cyclones, *Eos Trans. AGU*, 87(52), American Geophysical Union, San Francisco, U.S.A., December 2006.
- Veneziano, D. and A. Langousis (2006) Multifractality and the Estimation of Extreme Rainfall, *Geophysical Research Abstracts*, Vol. 8, European Geosciences Union General Assembly, Vienna, Austria, March 2006.
- Veneziano, D. and A. Langousis (2005) The Maximum of Multifractal Cascades: Exact Distribution and Approximations, *Geophysical Research Abstracts*, Vol. 7, European Geosciences Union General Assembly, Vienna, Austria, April 2005.

- Veneziano, D. and A. Langousis (2004) The Rainfall Areal Reduction Factor: A Multifractal Analysis, *Geophysical Research Abstracts*, Vol. 6, European Geosciences Union General Assembly, Nice, France, April 2004.
- Langousis, A. and D. Koutsoyiannis (2003) A Stochastic Methodology for Generation of Seasonal Time-series Reproducing Over-year Scaling Behavior, *Hydrofractals '03*, An international conference on fractals in hydrosciences, Monte Verita, Ascona, Switzerland, August 2003, ETH Zurich, MIT, Université Pierre et Marie.

Educational Material / Lecture Notes:

- Langousis, A. (2018) *Risk and Reliability Analysis for Infrastructures*, Department of Civil Engineering, University of Patras, Greece, 146 pages (in Greek).
- Langousis, A. (2017) *Water Distribution, Sewage and Rainwater Drainage Networks*, Department of Civil Engineering, University of Patras, Greece, 144 pages (in Greek).

Newspaper Articles (popular science):

- Langousis, A. (2012) Letter to G. Asmoulen, *in.gr*, August 08, 2012 (in Greek). ([active link](#))
- Langousis, A. (2009) Hazards from the Last Economic Crisis, *AXIA*, May 09, 2009 (in Greek). ([active link](#))
- Langousis, A. (2008) Development and our Faulty Choices, *TA NEA*, July 15, 2008 (in Greek). ([active link](#))
- Langousis, A. (2007) Society and Environment under Development, *TA NEA*, July 31, 2007 (in Greek). ([active link](#))

Technical Reports:

- Kaleris, V., A. Langousis and A. Ziogas (2013) Investigation of the Surface and Sub-surface Hydrology of Glafkos Catchment in Greece, Final report of the project UFZ-02/2009, RA-3205/09.
- Kaleris, V. and A. Langousis (2012) Comparison of the rainfall-runoff models ENNS and MIKE SHE in simulating runoff in Galfkos Catchment, 2nd annual report of the project UFZ-02/2009, RA-3205/09.
- Langousis, A. (2006) *Cloud Microphysical Processes: Theory and Bulk Parameterizations in Numerical Weather Prediction (NWP) Models*, Internal report, Department of Civil and Environmental Engineering, MIT.
- Langousis, A. and D. Koutsoyiannis (2003) *Mathematical Derivations for Seasonal Models Reproducing Over-year Scaling Behavior*, Internal report, Department of Water Resources, Hydraulic and Maritime Engineering - National Technical University of Athens, Greece (<http://www.itia.ntua.gr/getfile/599/2/2003StochMethodsSeasonalScaleApp.pdf>).

Research and Community Outreach:

- Brehm, D. (2009) Assessing Rainfall Risk from Tropical Cyclones, *On Balance*, Dep. of Civil and Env. Eng., MIT, ([active link](#))
- Chrisostomidou, V. (2017) Scholarships as a Foundation for Life, *KATHIMERINI*, March 04, 2017 (in Greek) ([active link](#)).

Invited Talks and Lectures:

- Langousis, A. (2019) Hydroclimatic variability and extreme hydrometeorological events: Prevention, Adaptation, Mitigation, *Invited Talk*, 18th Scientific Symposium, Crisis, Hazards, Disasters in the era of climate change, Foundation of Cephalonia & Ithaka (IKI), Argostoli, Cephalonia, Greece, 31 Aug.- 01 Sep. 2019.
- Langousis, A. (2019) Using approximations from multifractal theory to estimate IDF curves at ungauged locations, *Invited Talk*, Department of Civil and Environmental Engineering, University of California Irvine (UCI), Irvine, CA, USA, 23- 30 Jun. 2019.
- Langousis, A. (2019) Probabilistic Modeling of Natural and Engineered Systems, *Invited Talk*, 3rd Hellenic National Conference of Civil Engineering Students, University of Patras, 16 March 2019, Patras, Greece.
- Langousis, A. (2018) Modeling Hydroclimatic Risk, *Invited Lecture*, Department of Civil and Environmental Engineering, University of Connecticut, Storrs, CT, USA, 7- 14 Jul. 2018.
- Langousis, A. (2017) Uncertainty in Civil Engineering, *Invited Talk*, 1st Hellenic National Conference of Civil Engineering Students, Athens Chamber of Commerce and Industry (ACCI), March 11, 2017, Athens, Greece.
- Langousis, A. (2015) Modeling Daily Rainfall Conditional on Large-scale Atmospheric Forcing: Assessing Rainfall Statistics Based on Climate Model Results, *Invited Talk*, 10th International Workshop on Precipitation in Urban Areas (UrbanRain15), Pontresina, Switzerland, 1- 5 Dec. 2015, DOI: 10.3929/ethz-a-010549004 (ETH E-collection).
- Langousis, A. (2015) Modeling Daily Rainfall Occurrence and Amount Conditional on Atmospheric Predictors, *Invited Lecture*, École Polytechnique Fédérale de Lausanne (EPFL), Switzerland, 28 Sep. - 02 Oct. 2015.
- Langousis, A. (2015) Modeling Daily Rainfall Occurrence and Amount Conditional on Atmospheric Predictors, *Invited Lecture*, Dipartimento di Ingegneria Civile, Ambientale e Architettura, University of Cagliari, Cagliari, Italy, 04-08 May 2015.
- Langousis, A. and V. Kaleris (2013) Data Analysis in Glafkos Catchment, Helmholtz Centre for Environmental Research (UFZ), Leipzig, Germany, 11-14 February 2013.
- Langousis, A. (2010) Stochastic Modeling and Estimation of Extreme Rainfalls, Department of Civil Engineering, University of Patras, Patras, Greece, June 2010.
- Langousis, A. (2010) Simple Methods for Extreme Rainfall Estimation, Workshop on: "Integrated Design for Flood Protection: A Challenge for the Future", Association of Civil Engineers of Greece, Athens, Greece, April 2010.
- Langousis, A. (2010) Assessing Rainfall Risk from Tropical Cyclones, Department of Environmental Engineering, Technical University of Crete, Chania, Greece, January 2010.
- Langousis, A. (2009) Extreme Rainfall Intensities and Long-term Rainfall Risk from Tropical Cyclones, Department of Civil and Environmental Engineering, University of Cyprus, Nicosia, Cyprus, November 2009.



- Langousis, A. (2009) Extreme Rainfall Intensities and Long-term Rainfall Risk from Tropical Cyclones, Risk Management Solutions, London, U.K., June 2009.
- Langousis, A. (2009) Assessing Rainfall Risk from Tropical Cyclones, Department of Civil Engineering, University of Patras, Patras, Greece, June 2009.
- Langousis, A. (2009) Assessing Rainfall Risk from Tropical Cyclones, AIR Worldwide, Boston, MA, U.S.A., May 2009.
- Langousis, A. (2009) Assessing Rainfall Risk from Tropical Cyclones, Travelers Insurance, Connecticut, U.S.A., April 2009.

Courses Taught:

- *Risk and Reliability Analysis for Infrastructures*: Compulsory course in the postgraduate program "Hydraulic & Environmental Engineering for Sustainable Infrastructures" of the Department of Civil Engineering at the University of Patras, Greece (2018-present).
- *Water Resources Management*: Elective course in the postgraduate program "Hydraulic & Environmental Engineering for Sustainable Infrastructures" of the Department of Civil Engineering at the University of Patras, Greece (2018-present).
- *Hydraulic Structures*: Elective undergraduate course (5th and final year of undergraduate studies) in the Department of Civil Engineering at the University of Patras, Greece (2014-present)
- *Water Distribution, Sewage and Rainwater Drainage Networks*: Compulsory undergraduate course (4th year of undergraduate studies) in the Department of Civil Engineering at the University of Patras, Greece (2013-present)
- *Design of Civil Infrastructure and Environmental Protection*: Graduate course in the program "Design of Civil Infrastructure" of the School of Science and Technology at the Hellenic Open University, Greece (Sep. 2017- Sep. 2018)
- *Stochastic Methods for Hydrologic Simulations*: Graduate course in the program "Water Resources and Environment" of the Department of Civil Engineering at the University of Patras, Greece (2014-2018)
- *Environmental Data Analysis*: Graduate course in the program "Water Resources and Environment" of the Department of Civil Engineering at the University of Patras, Greece (2014-2018)
- *Numerical Methods in Environmental Engineering*: Undergraduate course in the Department of Environmental Engineering at the Technical University of Crete, Chania, Greece (2009 - 2010).
- *Probability and Statistics in Engineering*: Graduate course in the Department of Civil and Environmental Engineering at the Massachusetts Institute of Technology, MIT, USA (2006-2008).
- *Uncertainty in Engineering*: Undergraduate course in the Department of Civil and Environmental Engineering at the Massachusetts Institute of Technology, MIT, USA (2005-2007).

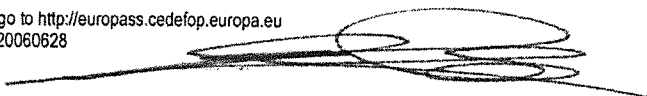
Annex III: Organization of Conferences and Conference Sessions

Organization of Conferences and Conference Sessions:

- Assemblies/Conferences: 23 (EGU, JSM, IAHS, IAMG, HYDROFRACTALS, LEONARDO etc.)
 - Session Convenerships: 9
 - Session Co-Convenerships: 35
 - Participation to Conference Scientific Committees: 48
 - Participation to Conference Organizing Committees : 4
- Chair of the Scientific Committee and Co-Convener: Water, Climate, Food and Health (HS7.3/CL2/ERE7/NH10), European Geosciences Union, Vienna, Austria, 2020.
 - Chair of the Scientific Committee and Co-Convener: Precipitation Modelling: uncertainty, variability, assimilation, ensemble simulation and downscaling (HS7.2/AS1/CL2/NH1/NP3), European Geosciences Union, Vienna, Austria, 2020.
 - Chair of the Scientific Committee and Co-Convener: Water, Climate, Food and Health (HS7.3/CL4.41/ERE8.7/NH1.21/NP9.5), European Geosciences Union, Vienna, Austria, 2019.
 - Chair of the Scientific Committee and Co-Convener: Precipitation Modelling: uncertainty, variability, assimilation, ensemble simulation and downscaling (HS7.2/AS1.33/CL2.09/NH1.22/NP5.7), European Geosciences Union, Vienna, Austria, 2019.
 - Member of the Scientific and Organizing Committees: Hydrofractals 2018, Ovidius University of Constanta, Constanta, Romania, 21-23 June 2018 (<http://revista-constructii.univ-ovidius.ro/conferinte/index.php/hydrofractals-18>).
 - Member of the Scientific Committee and Convener: Precipitation Modelling: uncertainty, variability, assimilation, ensemble simulation and downscaling (HS7.2/AS1.17/CL2.06/NH1.17/NP5.4), European Geosciences Union, Vienna, Austria, 2018.
 - Member of the Scientific Committee and Co-Convener: Precipitation measurement: techniques, processes and hydrological applications at the catchment scale (HS7.1/AS1.18/NP3.3), European Geosciences Union, Vienna, Austria, 2018.
 - Member of the Scientific Committee and Co-Convener: Hydroclimatic and hydrometeorologic stochastics: Extremes, scales, probabilities (HS7.7/NH1.18), European Geosciences Union, Vienna, Austria, 2018.
 - Member of the Scientific Committee and Co-Convener: Water, climate, food and health (HS7.3/CL2.19/ERE2.5/NH1.16/NP9.1), European Geosciences Union, Vienna, Austria, 2018.
 - Member of the Scientific Committee and Convener: Precipitation: from Measurement to Modeling and Application in Catchment Hydrology (HS7.1/AS1.11/NH1.15/NP10.11), European Geosciences Union, Vienna, Austria, 2017.
 - Member of the Scientific Committee and Co-Convener: Precipitation Uncertainty and Variability: Observations, Ensemble Simulation and Downscaling (HS7.2/AS1.9/CL2.15/NH1.14/NP10.1), European Geosciences Union, Vienna, Austria, 2017.
 - Member of the Scientific Committee and Co-Convener: Water, Climate and Health (HS7.3), European Geosciences Union, Vienna, Austria, 2017.



- Member of the Scientific Committee and Co-Convenor: Hydroclimatic and hydrometeorologic stochastic: Extremes, scales, probabilities (HS7.7/NH1.17), European Geosciences Union, Vienna, Austria, 2017.
- Member of the Scientific Committee and Co-Convenor: Stochastic hydrology: simulation and disaggregation models (Session 24), IAHS Scientific Assembly 2017, Port Elizabeth, South Africa, 2017.
- Member of the Scientific Committee and Convenor: Precipitation: from Measurement to Modeling and Application in Catchment Hydrology (HS7.1), European Geosciences Union, Vienna, Austria, 2016.
- Member of the Scientific Committee and Co-Convenor: Precipitation Uncertainty and Variability: Observations, Ensemble Simulation and Downscaling (HS7.2), European Geosciences Union, Vienna, Austria, 2016.
- Member of the Scientific Committee and Co-Convenor: Water, Climate and Health (HS7.3), European Geosciences Union, Vienna, Austria, 2016.
- Member of the Scientific Committee and Co-Convenor: Precipitation Variability: Spatio-temporal Scales and Hydrometeorologic Extremes (HS7.9/AS1.30/CL2.21/NH1.12/NP3.8), European Geosciences Union, Vienna, Austria, 2016.
- Member of the Scientific Committee: International Conference on Natural Hazards and Infrastructure (ICONHIC), Chania, Crete Island, Greece, 28-30 June 2016, <http://iconhic2016.com/>.
- Member of the Scientific Committee and Co-Convenor: Multi-Sourced Data Modelling In Conditions of Uncertainty, Spatial Statistics: Emerging Patterns, Avignon, France, 09-12 June, 2015.
- Member of the Scientific Committee and Convenor: Precipitation: from Measurement to Modelling and Application in Catchment Hydrology (HS7.1/AS1.11/NH1.7/NP9.4), European Geosciences Union, Vienna, Austria, 2015.
- Member of the Scientific Committee and Co-Convenor: Precipitation Uncertainty and Variability: Observations, Ensemble Simulation and Downscaling (HS7.2/AS1.12/CL2.10/NH1.5/NP3.7), European Geosciences Union, Vienna, Austria, 2015.
- Member of the Scientific Committee and Co-Convenor: Water, Climate and Health (HS7.3/CL2.9/NP9.3), European Geosciences Union, Vienna, Austria, 2015.
- Member of the Scientific Committee and Co-Convenor: Extremes in hydrometeorology: Scales, intensities, probabilities (HS7.7/NP3.8), European Geosciences Union, Vienna, Austria, 2015.
- Member of the Scientific Committee and Convenor: Precipitation: from Measurement to Modelling and Application in Catchment Hydrology (HS7.1/AS1.9/NH1.12/NP3.9), European Geosciences Union, Vienna, Austria, 2014.
- Member of the Scientific Committee and Co-Convenor: Precipitation Uncertainty and Variability: Observations, Ensemble Simulation and Downscaling (HS7.2/AS1.10/CL3.7/NH1.13/NP3.10), European Geosciences Union, Vienna, Austria, 2014.
- Member of the Scientific Committee and Co-Convenor: Scaling and extremes in hydrology (HS7.7/NH1.14/NP3.7), European Geosciences Union, Vienna, Austria, 2014.
- Member of the Scientific Committee and Co-Convenor: Water, Climate and Health (HS7.3/CL3.6/NP1.4), European Geosciences Union, Vienna, Austria, 2014.
- Member of the Scientific Committee and Co-Convenor: 16th IAMG Conference - Geostatistical and Geospatial Approaches for the Characterization of Natural Resources in the Environment: Challenges, Processes and Strategies, New Delhi, India, 2014.
- Member of the Scientific and Organizing Committees: Facets of Uncertainty: 5th EGU Leonardo Conference, Hydrofractals 2013, and IAHS Statistical Hydrology (STAHY) Workshop 2013 (joint event), Kos Island, Greece, 17–19 October 2013 (<http://kos2013.org>).
- Member of the Scientific Committee and Co-Convenor: International Perspectives in Advanced Methodologies for Spatiotemporal Information Processing (289), Joint Statistical Meetings (JSM), Montreal, Quebec, Canada, 2013.
- Member of the Scientific Committee and Convenor: Precipitation: from Measurement to Modelling and Application in Catchment Hydrology (HS7.1/AS1.5), European Geosciences Union, Vienna, Austria, 2013.
- Member of the Scientific Committee and Co-Convenor: Precipitation Uncertainty and Variability: Observations, Ensemble Simulation and Downscaling (HS7.2/AS1.6/CL5.13/NP3.8), European Geosciences Union, Vienna, Austria, 2013.
- Member of the Scientific Committee and Co-Convenor: Geophysical Extremes: Scaling Representations and their Applications (NP3.2), European Geosciences Union, Vienna, Austria, 2013.
- Member of the Scientific Committee and Co-Convenor: Water, Climate and Health (HS7.3/CL2.12/NP1.6), European Geosciences Union, Vienna, Austria, 2013.
- Member of the Scientific Committee and Co-Convenor: 2nd Common Conference H.H.U. – H.C.W.M. on Integrated Water Resources Management for Sustainable Development, University of Patras, Patras, Greece, October 2012.
- Member of the Scientific Committee and Co-Convenor: Predictive Methodologies and Analysis of Spatiotemporal Data in Environmental Research (207789), Joint Statistical Meetings (JSM), San Diego, USA, 2012.
- Member of the Scientific Committee and Convenor: Climate, Water and Health (HS7.3/CL2.9/NP1.3), European Geosciences Union, Vienna, Austria, 2012.
- Member of the Scientific Committee and Co-Convenor: Precipitation: from Measurement to Modelling and Application in Catchment Hydrology (HS7.1), European Geosciences Union, Vienna, Austria, 2012.
- Member of the Scientific Committee and Co-Convenor: Precipitation Uncertainty and Variability: Observations, Ensemble Simulation and Downscaling (HS7.2/AS1.19/CL5.15/NH1.11/NP3.6), European Geosciences Union, Vienna, Austria, 2012.
- Member of the Scientific Committee and Co-Convenor: Geophysical Extremes: Scaling Representations and their Applications (NP3.2), European Geosciences Union, Vienna, Austria, 2012.
- Member of the Scientific Committee and Co-Convenor: Methodological Research and Uncertainty Study in the Environment, Spatio-Temporal Analysis (206510), Joint Statistical Meetings (JSM), Miami, USA, 2011
- Member of the Scientific Committee and Convenor: Climate, Water and Health (HS7.3/CL3.7/NP1.4), European Geosciences Union, Vienna, Austria, 2011.
- Member of the Scientific Committee and Co-Convenor: Nonlinearity, Scaling and Complexity in the Atmosphere, Ocean and the Climate System (NP3.1), European Geosciences Union, Vienna, Austria, 2011



- Member of the Scientific Committee and Co-Convenor: Precipitation: from Measurement to Modelling and Application in Catchment Hydrology (HS7.1/AS4.8/NH1.10/NP3.9), European Geosciences Union, Vienna, Austria, 2011.
- Member of the Scientific Committee and Convenor: Geophysical Extremes: Scaling Representations and their Applications (NP3.4), European Geosciences Union, Vienna, Austria, 2010.
- Member of the Scientific Committee and Co-Convenor: Ensemble Representations of Uncertainty in Precipitation Observation, Analysis and Forecasting (HS5.2/AS1.21/NH1.14), European Geosciences Union, Vienna, Austria, 2010.
- Member of the Scientific Committee and Co-Convenor: Geophysical Extremes: Scaling Representations and their Applications (NP3.4), European Geosciences Union, Vienna, Austria, 2009.
- Member of the Scientific Committee and Co-Convenor: Geophysical Extremes: Scaling versus Nonstationarity (IS40 -NP3.04/HS1.8/NH10.5), European Geosciences Union, Vienna, Austria, 2008.

Submitted by
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