

# Efthymios I. Nikolopoulos, Ph.D

Civil and Environmental Engineering  
University of Connecticut  
261 Glenbrook Road Unit 3037  
Storrs, CT, 06269, USA  
Tel: (+1) 860-617-9908  
Email: efthymios.nikolopoulos@uconn.edu

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## Education

- Sep 2006 – May 2010*    **Doctor of Philosophy**  
University of Connecticut, Department of Civil and Environmental Engineering  
Storrs, CT, USA
- Aug 2002 – Aug 2004*    **Master of Science**  
University of Iowa, Department of Civil and Environmental Engineering  
Iowa City, IA, USA
- Sep 1997 – July 2002*    **Engineering Diploma**  
Technical University of Crete, Department of Environmental Engineering  
Chania, Greece

## Professional Appointments

- Aug 2016 – present*    **Assistant Research Professor**  
Dept. of Civil and Environmental Engineering, University of Connecticut  
Storrs, CT, USA
- Feb 2015 – Aug. 2016*    **Senior Research Scientist**  
Dept. of Physics, University of Athens  
Athens, Greece
- Feb 2015 – Aug. 2016*    **Researcher - Contractor**  
Innovative Technologies Center S.A,  
Athens, Greece
- Feb 2013 – Jan 2015*    **Marie Curie Postdoctoral Fellow**  
University of Padova, Department of Land, Environment, Agriculture and  
Forestry TESAF  
Legnaro (PD), Italy
- Jan 2012 – Jan 2013*    **Postdoctoral Researcher**  
University of Padova, Department of Land, Environment, Agriculture and

Forestry TESAF  
Legnaro (PD), Italy

*Jan 2011 – Dec 2011*    **Researcher - Contractor**  
National Observatory of Athens  
Athens, Greece

*Jan 2008 – Dec 2010*    **Researcher - Contractor**  
Marie Curie Excellence Team at Hellenic Centre for Marine Research  
Anávyssos, Greece

*Sep 2006 – May 2010*    **Graduate Research Assistant**  
University of Connecticut, Department of Civil and Environmental Engineering  
Storrs, USA

*Aug 2002 – Aug 2004*    **Graduate Research Assistant**  
University of Iowa, Department of Civil and Environmental Engineering  
Iowa City, IA, USA

## Academic Honors & Awards

*Jan 2013*                    Marie Curie Intra-European Fellowship

*Dec 2010*                    Outstanding Thesis Award, School of Engineering, Univ. of Connecticut

*Jan 2008*                    Marie Curie Excellence Team Fellowship

*Sep 2007*                    NASA Earth System Science Graduate Fellowship

*Sep 2007*                    Advanced Graduate Student Award, Env. Eng. Program, Univ. of Connecticut

## Grants obtained as principal investigator (PI)

<i>Title</i>	<i>Funding Source</i>	<i>Period</i>	<i>Total Budget</i>
Understanding the Use of Satellite Rainfall in Flood Prediction for Complex Terrain Basins	NASA	2007–2010	\$84,000
Hydrometeorological Controls and Warning Procedures for Shallow Landslides in an Alpine Region.	EU-FP7-Marie Curie Actions	2013 - 2015	€193,726

## Editorship, Editorial Boards, Journal Reviewing Activities

<i>Reviewer for</i>	Journal of Hydrology, Advances in Water Resources Atmospheric Research Stochastic Env. Res. & Risk Assessment Journal of Hydrologic Engineering Annales Geophysicae Hydrologic Sciences Journal Natural Hazards and Earth System Sciences Natural Hazards Advances in Meteorology Arabian Journal for Science and Engineering Frontiers of Earth Science Bulletin of Electrical Engineering and Informatics
<i>Editorial board</i>	Advances in Meteorology

## Teaching & Advising

<i>Instructor</i>	Ocean Meteorology – Hydrology, Graduate course, Dept. of Physics, University of Athens, Spring 2015/2016
<i>Associate Advisor or Research Mentor</i>	Yiwen Mei (PhD), Dept. of Civil & Env. Eng., University of Connecticut, expected date of completion Sep. 2016  Nikos Bartsotas (PhD), Dept. of Physics, University of Athens, expected date of completion Dec. 2016  William Amponsah (PhD), Dept of Land, Environment, Agriculture and Forestry, University of Padova, expected date of completion Dec. 2016  Elisa Destro (PhD), Dept of Land, Environment, Agriculture and Forestry, University of Padova, expected date of completion Dec. 2017
<i>Graduate assistant</i>	<i>teaching</i> Undergraduate course in “Engineering Hydrology”, Dept. of Civil & Env. Eng., University of Connecticut, Fall 2006
<i>Other</i>	Instructor during a 4month (Apr-Jul 2015) training (in hydrology, hydrometeorology and remote sensing) of 2 PhD candidates (Dejene Sahlu & Haileyesus Belay) from the Ethiopian Institute of Water Resources, Addis Ababa University, Ethiopia.

## Service

### *Memberships*

Marie Curie Alumni Association  
American Geophysical Union  
European Geophysical Union  
Technical Chamber of Greece

### *Reviewing activities for agencies*

UK National Environment Research Council

### *Other Professional Service*

Judge for the AGU Outstanding Student Paper Award (OSPA), AGU Fall Meeting 2013, San Francisco, CA.

Chair of “Flash Flood” session, 8<sup>th</sup> HyMeX workshop, 2014, Valletta, Malta.

Chair of “Flash Flood” session, 9<sup>th</sup> HyMeX workshop, 2015, Mykonos, Greece.

## Publications

### Refereed Journals (\* denotes that lead author is a student I mentor/co-advise)

1. \*Bartsotas N., E.I. **Nikolopoulos**, E.N. Anagnostou, G. Kallos (2016). Moving towards sub-km modeling grid spacings: Impacts on atmospheric and hydrological simulations of extreme flash-flood inducing storms. *Journal of Hydrometeorology* (conditionally accepted).
2. \*Sahlu D., E.I. **Nikolopoulos**, S.A. Moges, E.N. Anagnostou and D. Hailu (2016). First evaluation of the integrated multi-satellite retrieval for GPM (IMERG) over the upper Blue Nile Basin, *Journal of Hydrometeorology*, (accepted). doi: <http://dx.doi.org/10.1175/JHM-D-15-0230.1>
3. Shen, X., H.J. Vergera, E.I. **Nikolopoulos**, E. N. Anagnostou, Y. Hong, Z. hao and K. Zhang (2016). GDBC: A Tool for Generating Global-Scale Distributed Basin Morphometry. *Environmental Modelling & Software*, 83, 212-223. doi: <http://dx.doi.org/10.1016/j.envsoft.2016.05.012>.
4. \*Mei, Y., E.I. **Nikolopoulos**, E.N. Anagnostou, D. Zoccatelli and M. Borga (2016). Error analysis of satellite precipitation-driven modeling of flood events in complex alpine terrain, *Remote Sensing* 8 (4), 293, doi: 10.3390/rs8040293.
5. Yagmur Derin, Emmanouil Anagnostou, Alexis Berne, Marco Borga, Brice Boudevillain, Wouter Buytaert, Che-Hao Chang, Guy Delrieu, Yang Hong, Yung Chia Hsu, Waldo Lavado-Casimiro, Bastian Manz, Semu Moges, Efthymios I. **Nikolopoulos**, Dejene Sahlu, Franco Salerno, Juan-Pablo Rodríguez-Sánchez, Humberto J. Vergara and Koray K. Yilmaz (2016). Multi-regional satellite precipitation products evaluation over complex terrain, *Journal of Hydrometeorology* (in press). doi: <http://dx.doi.org/10.1175/JHM-D-15-0197.1>
6. \*Mei, Y., E.I. **Nikolopoulos**, E.N. Anagnostou, and M. Borga (2016). Evaluating satellite precipitation error propagation in runoff simulations of mountainous basins, *Journal of Hydrometeorology* (in press). doi: <http://dx.doi.org/10.1175/JHM-D-15-0081.1>
7. Marra, F., E.I. **Nikolopoulos**, J.-D. Creutin, and M. Borga (2015). Space-time organization of debris flows-triggering rainfall and its effect on the identification of the rainfall threshold relationship, *Journal of Hydrology*, (in press). doi:10.1016/j.jhydrol.2015.10.010
8. **Nikolopoulos**, E.I., N.S. Bartsotas, E.N. Anagnostou, and G. Kallos (2015) Using high-resolution numerical weather forecasts to improve remotely sensed rainfall estimates: the case of the 2013 Colorado flash flood. *Journal of Hydrometeorology* 16 (4): 1742–51. doi:10.1175/JHM-D-14-0207.1.
9. **Nikolopoulos**, E.I., M. Borga, J.D. Creutin, and F. Marra (2015). Estimation of debris flow triggering rainfall: influence of rain gauge density and interpolation methods, *Geomorphology*, 243, 40-50. doi:10.1016/j.geomorph.2015.04.028.
10. **Nikolopoulos**, E.I., M. Borga, F. Marra, S. Crema, and L. Marchi (2015). Debris flows in the eastern Italian Alps: seasonality and atmospheric circulation patterns. *Natural Hazards and Earth System Science* 15 (3). Copernicus Publications: 647–56.
11. Zoccatelli, D., M. Borga, G.B. Chirico and E.I. **Nikolopoulos** (2015). The relative role of hillslope and river network routing in the hydrologic response to spatially variable rainfall fields, *Journal of Hydrology*, 531(2), 349-359. doi:10.1016/j.jhydrol.2015.08.014.

12. **Nikolopoulos**, E.I., S. Crema, L. Marchi, F. Marra, F. Guzzetti, and M. Borga (2014). Impact of uncertainty in rainfall estimation on the identification of rainfall thresholds for debris flow occurrence, *Geomorphology*, 221, 286–297.
13. **Nikolopoulos**, E.I., M. Borga, D. Zoccatelli, and E.N. Anagnostou (2014). Catchment-scale storm velocity: quantification, scale dependence and effect on flood response, *Hydrological Sciences Journal*, 59(7), 1363–1376.
14. Marra, F., E.I. **Nikolopoulos**, J.D. Creutin, and M. Borga (2014). Radar rainfall estimation for the identification of debris-flow occurrence thresholds, *Journal of Hydrology*, 519, Part B(0), 1607–1619.
15. \*Mei, Y., E.N. Anagnostou, D. Stampoulis, E.I. **Nikolopoulos**, M. Borga, and H.J. Vegara (2014). Rainfall organization control on the flood response of mild-slope basins, *Journal of Hydrology*, 510, 565–577.
16. \*Mei, Y., E.N. Anagnostou, E.I. **Nikolopoulos**, and M. Borga (2014). Error analysis of satellite precipitation products in mountainous basins, *Journal of Hydrometeorology*, 15(5), 1778–1793.
17. **Nikolopoulos**, E.I., E.N. Anagnostou, and M. Borga (2013). Using high-resolution satellite rainfall products to simulate a major flash flood event in Northern Italy, *Journal of Hydrometeorology*, 14(1), 171–185.
18. Stampoulis, D., E.N. Anagnostou, and E.I. **Nikolopoulos** (2013). Assessment of high-resolution satellite-based rainfall estimates over the Mediterranean during heavy precipitation events, *Journal of Hydrometeorology*, 14(5), 1500–1514.
19. Zampieri, M., E. Serpetzoglou, E.N. Anagnostou, E.I. **Nikolopoulos**, and A. Papadopoulos (2012). Improving the representation of river–groundwater interactions in land surface modeling at the regional scale: Observational evidence and parameterization applied in the Community Land Model, *Journal of Hydrology*, 420, 72–86.
20. **Nikolopoulos**, E.I., E.N. Anagnostou, M. Borga, E.R. Vivoni, and A. Papadopoulos (2011). Sensitivity of a mountain basin flash flood to initial wetness condition and rainfall variability, *Journal of Hydrology*, 402(3-4), 165–178.
21. Chronis, T., V. Papadopoulos, and E.I. **Nikolopoulos** (2011). QuickSCAT observations of extreme wind events over the Mediterranean and Black Seas during 2000–2008, *International Journal of Climatology*, 31(14), 2068–2077.
22. **Nikolopoulos**, E.I., E.N. Anagnostou, F. Hossain, M. Gebremichael, and M. Borga (2010). Understanding the scale relationships of uncertainty propagation of satellite rainfall through a distributed hydrologic model, *Journal of Hydrometeorology*, 11(2), 520–532.
23. Anagnostou, E.N., V. Maggioni, E.I. **Nikolopoulos**, T. Meskele, F. Hossain, and A. Papadopoulos (2010). Benchmarking high-resolution global satellite rainfall products to radar and rain-gauge rainfall estimates, *IEEE Transactions on Geoscience and Remote Sensing*, 48(4), 1667–1683.
24. Serpetzoglou, E., E.N. Anagnostou, A. Papadopoulos, E.I. **Nikolopoulos**, and V. Maggioni (2010). Error propagation of remote sensing rainfall estimates in soil moisture prediction from a land surface model, *Journal of Hydrometeorology*, 11(3), 705–720.
25. Anagnostou, M.N., J.A. Nystuen, E.N. Anagnostou, E.I. **Nikolopoulos**, and E. Amitai (2008). Evaluation of underwater rainfall measurements during the Ionian sea rainfall experiment, *IEEE Transactions on Geoscience and Remote Sensing*, 46(10), 2936–2946.

26. **Nikolopoulos**, E.I., A. Kruger, W.F. Krajewski, C.R. Williams, and K.S. Gage (2008). Comparative rainfall data analysis from two vertically pointing radars, an optical disdrometer, and a rain gauge, *Nonlinear Processes in Geophysics*, 15(6), 987–997.
27. Krajewski, W.F., A. Kruger, C. Caracciolo, P. Golé, L. Barthes, J.-D. Creutin, J.-Y. Delahaye, E.I. **Nikolopoulos**, F. Ogden, and J.-P. Vinson (2006). DEVEX-disdrometer evaluation experiment: Basic results and implications for hydrologic studies, *Advances in Water Resources*, 29(2), 311-325.
28. Psillakis, E., A. Ntelekos, D. Mantzavinou, E. **Nikolopoulos**, and N. Kalogerakis (2003). Solid-phase microextraction to monitor the sonochemical degradation of polycyclic aromatic hydrocarbons in water, *Journal of Environmental Monitoring*, 5(1), 135-140.

## Submitted, Under Preparation or Revision

1. \*Destro E., F. Marra, E.I. **Nikolopoulos**, D. Zoccatelli and M. Borga (2016). Spatial estimation of debris flows-triggering rainfall and its dependence on rainfall severity, *Journal of Hydrology*, (in review).
2. \*Amponsah, W., E.I. **Nikolopoulos**, L. Marchi, E. Destro, F. Marra, D. Zoccatelli and M. Borga (2016). Coupled prediction of flash flood response and debris flow occurrence: analysis based on extreme alpine flood event, *Journal of Hydrology*, (under revision).
3. Anagnostou M.N., E. I. **Nikolopoulos**, J. Kalogiros, E. N. Anagnostou, F. Marra, E. Mair G. Bertoldi, U. Tappeiner and M. Borga (2016). Hydrological evaluation of X-band polarimetric radar rainfall estimation in a mountainous basin, *Journal of Hydrology*, (under revision).
4. Maggioni V., E.I. **Nikolopoulos**, E.N. Anagnostou and M. Borga (2015). Investigating satellite precipitation uncertainties over a mountainous area in the eastern Italian Alps, *Journal of Hydrometeorology* (under preparation)

## Book Chapters

1. **Nikolopoulos**, E.I., F. Marra and M. Borga (2015), Uncertainty in estimation of debris flow triggering rainfall: Evaluation and impact on identification of threshold relationships. *Natural Hazard Uncertainty Assessment: Modeling and Decision Support*, AGU monograph (in press).
2. **Nikolopoulos**, E.I., E.N. Anagnostou and F. Hossain (2010), Error Propagation of Satellite-Rainfall in Flood Prediction Applications over Complex Terrain: A Case Study in Northeastern Italy. *Satellite Rainfall Applications for Surface Hydrology*, Springer Science+Business Media B.V.
3. Hossain, F., L. Tang, E. N. Anagnostou, and E. I. **Nikolopoulos** (2010), A Practical Guide to a Space-Time Stochastic Error Model for Simulation of High Resolution Satellite Rainfall Data, *Satellite Rainfall Applications for Surface Hydrology*, Springer Science+Business Media B.V.

## Thesis

1. Nikolopoulos E.I., (2010), Flash floods: Understanding the Runoff Generation Processes and the Use of Satellite-Rainfall in Hydrologic Simulations. PhD dissertation. University of Connecticut, Storrs, CT, USA.
2. Nikolopoulos E.I., (2004), Analysis of High Resolution Data of Vertical Structure of Rainfall. MSc thesis. The University of Iowa, Iowa City, IA, USA.

3. Nikolopoulos E.I., (2002), On the Biological Treatment of Landfill Leachate. Eng. Diploma thesis. Technical University of Crete, Chania, Crete, Greece.

## Conference Proceedings

1. Anagnostou, M.N., E.I. **Nikolopoulos**, J. Kalogiros, E.N. Anagnostou, F. Marra, M. Borga, E. Mair, G. Bertoldi, & U. Tappeiner (2014). Evaluating the potential of X-band polarimetric radar observations in mountainous hydrology. In 8th European Conference on Radar in Meteorology and Hydrology.
2. Zocatelli, D., M. Borga, E. I. **Nikolopoulos**, and E. N. Anagnostou (2012), Quantifying catchment-scale storm motion and its effects on flood response, IAHS-AISH publication, 520–525.
3. **Nikolopoulos**, E. I., E. N. Anagnostou, and C. S. Pathak (2007), Improving the Consistency of Basin-Average Radar and Rain Gauge Rainfall Datasets in Central and South Florida. In Restoring Our Natural Habitat - Proceedings of the 2007 World Environmental and Water Resources Congress, pp. 1–7, ASCE.
4. Kruger, A., W. F. Krajewski, E. **Nikolopoulos**, C. Williams, and K. Gage (2004), A comprehensive data analysis from two vertically pointing radars. In Sixth International Symposium on Hydrological Applications of Weather Radar, Melbourne, Australia.

## Presentations in Conferences (10 most recent out of 40+)

1. **Nikolopoulos**, E. I., Polcher, J., Anagnostou, E.N., Eisner, S., Fink G. & Kallos, G. (2016). Precipitation uncertainty propagation in hydrologic simulations: evaluation over the Iberian Peninsula. In EGU General Assembly Conference Abstracts (Vol. 18, EGU2016-14667), Vienna, Austria.
2. Maggioni, V., **Nikolopoulos**, E.I., Marra, F., Destro, E. & Borga M. (2016). Satellite-rainfall estimation for identification of rainfall thresholds used for landslide/debris flow prediction. In EGU General Assembly Conference Abstracts (Vol. 18, EGU2016-15006), Vienna, Austria.
3. \*Mei, Y., **Nikolopoulos**, E.I., Anagnostou, E.N., Zocatelli, D. & Borga, M. (2016). Characteristics and dependencies of error in satellite-based flood event simulations. In EGU General Assembly Conference Abstracts (Vol. 18, EGU2016-15654), Vienna, Austria.
4. \*Destro E., Marra, F., **Nikolopoulos**, E.I., Zocatelli, D., Creutin, J.D. & Borga, M. (2016). Spatial estimation of debris-flows and its dependence on rainfall severity. In EGU General Assembly Conference Abstracts (Vol. 18, EGU2016-14984), Vienna, Austria.
5. **Nikolopoulos**, E.I., Bartsotas, N., Anagnostou, E.N., & Kallos, G. (2015). Using a high-resolution numerical weather prediction model to improve satellite-based hydrologic simulations over mountainous regions. In Earth Observation for Water Cycle Science 2015, Frascati, Italy.
6. **Nikolopoulos**, E. I., Borga, M., Destro, E., & Marchi, L. (2015). Predicting debris flow occurrence in Eastern Italian Alps based on hydrological and geomorphological modeling. In EGU General Assembly Conference Abstracts (Vol. 17, EGU2015-8736), Vienna, Austria.
7. **Nikolopoulos**, E. I., Bartsotas, N.S., Borga, M., & Kallos, G. (2015). Evaluating the use of high-resolution numerical weather forecast for debris flow prediction. In EGU General Assembly Conference Abstracts (Vol. 17, EGU2015-8902), Vienna, Austria.



8. Anagnostou, E.N. and **Nikolopoulos**, E.I. (2015). Assessing the use of satellite rainfall estimates for flood design/warning applications in mountainous basins. In EGU General Assembly Conference Abstracts (Vol. 17, EGU2015-9089), Vienna, Austria.
9. \*Bartsotas, N., **Nikolopoulos**, E.I., Anagnostou, E., & Kallos, G. (2015). The use of high-resolution atmospheric simulations over mountainous terrain for deriving error correction functions of satellite precipitation products. In EGU General Assembly Conference Abstracts (Vol. 17, EGU2015-3754.), Vienna, Austria.
10. **Nikolopoulos**, E.I., Mei, Y., Anagnostou, E.N., Bartsotas, N., Borga, M., & Kallos, G. (2014). Satellite-based hydrology: Evaluation over mountainous basins and advancements based on high-res NWP models. 8th International HyMeX workshop, Valetta, Malta.