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Department of Earth and Environmental Science  
University of Pennsylvania  
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## **Education**

Doctor of Philosophy, 1987. Dept. of Geography and Environmental Engineering, Johns Hopkins University, Baltimore Maryland. Dissertation: "Sediment Budgets and Delivery in Suburban Watersheds".

Master of Arts, 1982. Dept. of Earth & Environmental Science, Wesleyan University, Middletown Connecticut. Thesis: "Patterns of Bedload Transport in the Connecticut River Estuary".

Bachelors of Arts, 1977. Dept. of Geology, San Francisco State University, San Francisco California. Senior Thesis: "A Fortran Program for Calculating CIPW Normative Minerals".

## **Professional Experience**

Department of Earth & Environmental Science, University of Pennsylvania, Philadelphia  
Appointed Full Professor July 2002, Department Chair July 2003-present, Undergraduate Chair 2006-present, Dean's Award for Mentorship of Undergraduate Research 2007

International Institute of Tropical Forestry, USDA Forest Service, Rio Piedras, PR  
Research Hydrologist & Principal Scientist of Bisley Experimental Watersheds, GS-12 Term position 1987-1989, GS-13 Research Scientist 1989-95, Assistant Director, 1992-3. Ecosystem Group Leader GS-14, 1994-2000, GS-15, 2000-2002, Adjunct Scientist 2002-present.

Luquillo Critical Zone Observatory: 2009-2014, Principal Investigator and Executive Management Team Leader

Luquillo Long-Term Ecological Research Project, 1988-present. Co-PI and Executive Management Team Member 1988-present.

Adjunct Professor. Department of Biology, University of Puerto Rico. 1991-present, Graduate Program in Environmental Science 2007-present.

Consulting or Advising Hydrologist and Geomorphologist (selected)

USDA Forest Service Research, Watershed Hydrology Technical Review, 2007

Organization of Tropical Studies Environmental Flow Program, 2007

U.S. Agency for International Development, Panama Canal Monitoring project review 1998, Dominican Republic Watershed Restoration project review 2000

Century Engineering Inc., Towson, Maryland, 1985-1987; Urban and storm water hydrology.

Foster Parents Plan Inc. 1983. Rural community water development, Colombia S.A.

Church World Services Dominican Republic, 1978-1979. Community water development.

U.S. Peace Corps, Volunteer, 1977-1979. Hydrologist, National Institute of Potable Water and Sewage, Dominican Republic. Program consultant for U.S. Peace Corps/USAID, in Malawi, Central Africa, 1982, Jamaica 1983

## **Recent Professional Activities** (since 2000)

Franklin Institute Award Committee of Arts and Science, Earth Science Cluster Vice Chair.  
2003-present

UNESCO Activities. US-HELP Committee Member. 2004-present, Luquillo HELP Co-PI  
2002-Present, HELP-FRIEND-PUB Technical Liaison Group Member 2005 UNESCO  
Regional Office for Science and Technology in Latin America. Regional Expert for  
Caribbean Basin AMIGO/Friend Project in Regional Hydrology, 1999-present

Department of Environment and Natural Resources, Commonwealth of Puerto Rico,  
Environmental Flow Advisory Board 2007-present.

Board of Directors Consortium of Universities for the Advancement of Hydrologic Sciences, Inc.  
(CUAHSI). 2004-2008

### **Educational Advisory and Outreach Activities**

Advisor, Academic Committee Member, and Departmental Chair overseeing Professional  
Masters Programs in Earth and Environmental Sciences, University of Pennsylvania  
Content Advisor; History Channel Mega Disaster Series, BBC British Broadcasting  
Company, Raging Planet Series,

El Verde NSF-REU-Program Mentor; 2002-present. University of Puerto Rico El Verde  
Field Station NSF advisory and review team, 2008

La Selva Biological Field Station Advisory Committee, Organization of Tropical Studies,  
Costa Rica, 1999-2004, Advisory Committee Chair 2001-2004, Review Team 2007  
Advisor, Dean of Natural Science Advisory Board on graduate program in Environmental  
Science, University of Puerto Rico, Rio Piedras 2001-2002.

Advisor to Commonwealth Government of Puerto Rico and U.S. Federal Government Agencies  
Departmental Advisory Committee on Environmental Flows, Department of Environment  
and Natural Resources. 2007-present

Puerto Rico Water Plan 2000-present. Advisor and Reviewer on Environmental Flows  
and Hydrology

Governors Technical Review Committee, North Coast Super-Aqueduct Project, 1994  
Puerto Rico Water Resource Committee, 1995-1997

U.S. Army Corps of Engineers: Rio Mameyes Management Committee.

U.S. Fish and Wildlife Service: Advisor on in-stream flow requirements.

U.S. Federal Emergency Management Agency: Two hurricane assessment teams.

U.S. EPA San Juan Bay Estuary Program: Technical advisor.

Environmental Law Clinic, University of Puerto Rico and the Inter-American University.  
Expert advisor on hydrological issues and expert witness in 3 litigations, 1997- 2002

## **Graduate Advisor**

Principal advisor or co-advisor to Doctoral students from the University of Pennsylvania (3  
principal, 9+ co-advisor), Virji University of Amsterdam (4), University of Puerto Rico (2),  
SUNY-ESF (3), Texas Tech University (1), University of Arizona (1), University of Colorado  
(1), University of Florida (2), SUNY-Stoney Brook (1), Yale University (1). Principal Post-  
Doctoral advisor to 5 individuals since 2000, co-advisor to more than 10. Advisor or co-advisor  
on over 25 Masters Thesis from various institutions. Outside committee member on over  
additional 25 Doctoral or Masters Students in the past 20 years;

## Peer Reviewed Journal Publications

Scatena F.N., Gupta A., 2011. Streams of the Montane Humid Tropics. Treatise on Geomorphology. Elsevier Academic Press, San Diego Ca. Vol 9. in press

Bruijnzeel L.A., Mulligan M., Scatena F.N., 2010 Hydrometeorology of tropical montane cloud forests: emerging patterns. Hydrological Processes Wileyonlinelibrary.com DOI: 10.1002/hyp.7974

Brantley S.L., Megonigal J.P., Scatena F.N. et al 2010. Twelve testable hypotheses on the Geobiology of weathering. Geobiology. DOI: 10.1111/j.1472-4669.2010.00264.x

Hein C., Pike A.S., Blanco J.F., Covich A.P., Scatena F.N., Hawkins C.P., Crowl T., 2010. Effects of coupled natural and anthropogenic factors on the community structure of diadromous fish and shrimp species in tropical island streams. Freshwater Biology. doi:10.1111/j.1365-2427.2010.02537.x

Mead, J.V., Scatena, F.N., Birdsey, R., Pan, Y., Wall, R., 2010 (in press). Developing SWIM: A Stream-lined Watershed Integration Model for prioritizing stream restoration and conservation. Proceedings of the 13<sup>th</sup> World Lake Conference “Rehabilitate the lake ecosystem: global challenges and the Chinese innovations”, Wuhan, China, November 1–5, 2009

Heartsill Scalley, Scatena F.N., Lugo A.E., Moya S., Estrada C., 2010. Changes in the Structure, Composition and Nutrients during Hurricane-Induced Succession in a Subtropical Wet Forest. Biotropica, 10.1111/j.1744-7429.2009.00609.x

A.S. Pike, F.N. Scatena, 2010. Riparian indicators of flow frequency in a tropical montane stream network. Journal of Hydrology 382:72-87

A.S. Pike, F.N. Scatena, E.E. Wohl. 2010 Lithological and fluvial controls on the geomorphology of tropical montane stream channels in Puerto Rico. . Earth Surface Processes and Landforms. DOI: 10.1002/esp.1978

Lenart M.T., Falk D.A., Scatena F.N., Osterkamp W.R., 2010. Estimating soil turnover from tree uprooting during hurricanes in Puerto Rico. Forest Ecology and Management 259:1076-1084 doi:10.1016/j.foreco.2009.12.014

Vance-Chalcraft H.D., Willig M.R., Cox S.B., Lugo A.E., Scatena F.N., 2009. Relationship Between Aboveground Biomass and Multiple Measures of Biodiversity in a Subtropical Forest of Puerto Rico. Biotropica 1-10:10.1111/j.1744-7429.2009.00600.x

Johnson K.D., Scatena F.N., Johnson A.H., Pan Y., 2009. Controls on Soil organic matter content within a northern hardwood forest. Geoderma 148:346-356

Arn The Y. Silver W.L., Scatena F.N., 2009. A decade of belowground reorganization following multiple disturbances in a subtropical wet forest. Plant and Soil DOI 10.1007/s11104-009-9926-z

Scatena F.N., Ortiz-Zayas J.R., Blanco-Libreros. 2008 Helping HELP With Limited resources: The Luquillo Experience. Water South Africa Special HELP in Southern Hemisphere Edition. ISSN 0378-4738 = Water SA Vol. 34 No. 4 (Special HELP edition), ISSN 1816-7950 = Water SA (on-line)

Scatena F.N., Varrin R.D., 2008. Fluvial Processes in Geomorphology and Environmental Management: The 2006 Benjamin Franklin Medal in Earth and Environmental Science awarded to Luna B. Leopold and M. Gordon Wolman. Journal of the Franklin Institute (2008), doi:10.1016/j.jfranklin.2008.04.005

Crook K.E., Scatena F.N., Pringle C.M., 2007. Water Withdrawn from the Luquillo Experimental Forest, 2004. USDA Forest Service General Technical Report IITF-GTR-34

Heartsill-Scalley T., Scatena F.N., Estrada C., McDowell W.H., Lugo A.E., 2007. Disturbance and long-term patterns of rainfall and throughfall nutrient fluxes in a subtropical forest in Puerto Rico. Journal of Hydrology, 33:472-485

Wei Wu, Hall C.A.S., Scatena F.N., 2007 Modeling the impact of land use change on the stream flows at the meso-scale watershed level in North-Eastern Puerto Rico. Hydrological Processes V21 DOI: 10.1002/hyp.6515

Eugster W., Burkard R., Holwerda F., Scatena F.N., Bruijnzeel L.A., 2006. Characteristics of fog and fogwater fluxes in a Puerto Rican elfin cloud forest. Agricultural and Forest Meteorology 139:288-306

Wei Wu, Hall C.A.S., Scatena F.N., Quackenbush L.J., 2006. Spatial modeling of evapotranspiration in the Luquillo Experimental Forest of Puerto Rico using Remotely-sensed data. Journal of Hydrology 328:733-752

Holwerda F., Burkard R., Eugster W., Scatena F.N., Meesters A.G., Bruijnzeel L.A., 2006 Estimating fog deposition at a Puerto Rican elfin cloud forest site: comparison of the water budget and eddy covariance methods. Hydrological processes 20:2669-2692

Holwerda F., Scatena F.N., Bruijnzeel L.A., 2006. Throughfall in a Puerto Rican lower montane rainforest: A comparison of sampling strategies Journal of Hydrology. 327: 592-602

Blanco J.F., Scatena F.N., 2006. Hierarchical contribution of river-connectivity, water chemistry, hydraulics, and substrate to the distribution of diadromous snails in Puerto Rican Streams. J.N. Am. Benthol. Soc. 2006. 25(1):82-98

Brown K.A., Scatena F.N., Gurevitch J., 2006. Effects of an invasive tree on community structure and diversity in a tropical forest in Puerto Rico. Forest Ecology and Management 226:145-152

Beard K.H., Vogt K.A., Vogt D.J., Scatena F.N., Covich A.P., Sigurdardottir R., Siccama T.C., Crowl, T.A., 2005. Structural and Functional Responses of a Subtropical Forest to 10 years of Hurricanes and Droughts. Ecological Monographs 75(3):345-361

- Ortiz-Zayas J.R., Lewis W.M., Saunders J.F., McCutchan J.H., Scatena F.N., 2005 Metabolism of a tropical rainforest stream. *J.N. American Benthological Society* 24(4):769-783
- Blanco J.F., Scatena F.N., 2005. Floods, Habitat Hydraulics and Upstream Migration of *Neritina virginea* (Gastropoda:Neritodae) in Northeastern Puerto Rico). *Caribbean Journal of Science*, Vol. 41, No. 1:55-74
- Ortiz-Zayas J.R., Scatena F.N., 2004 Integrated Water Resources Management in the Luquillo Mountains, Puerto Rico: An Evolving Process. *International Journal of Water Resources Development* Vol. 20 No. 3, 387-398 September 2004
- Scatena F.N. 2004. A survey of methods for setting minimum instream flows standards in the Caribbean Basin. *River Research and Applications* Vol 20: 127-135
- Schellekens J., Scatena F.N., Bruijnzeel L.A., van Dijk A.I. J.M., Groen M.M.A., van Hoogezand R.J.P., 2004. Stormflow generation in a small rain-forest catchment in the Luquillo Experimental Forest, Puerto Rico. *Hydrological Processes* 18. 505-530
- Ruan H.H., Zou X.M., Scatena F.N., Zimmerman J.K., 2004. Asynchronous fluctuation of soil microbial biomass and plant litterfall in a tropical wet forest. *Plant and Soil* 260: 147-154
- Scatena F. N., 2003. A Preliminary Estimate of the Natural and Social Value of Los Tres Picachos. *Acta Cientifica* 17(1-3):59-61
- Santos-Román D.M., Warner G.S., Scatena F.N. 2003, Multivariate Analysis of Water Quality and Physical Characteristics of Selected Watersheds in Puerto Rico. *Journal of the American Water Resources Association* 39(4): 829-839
- Beard K. H., Eschtruth A.K., Vogt K.A., Scatena F.N. 2003. The effects of the frog *Eleutherodactylus coqui* on invertebrates and ecosystem processes at two scales in the Luquillo Experimental Forest, Puerto Rico. *Journal of Tropical Ecology* 19:607-617.
- Planos Gutiérrez E.O., Scatena F.N. 2003. Intense Precipitations in Cuba. *IMPACT. Journal of the American Water Works Association*. September Issue 2003
- March J.G., Benstead J.P., Pringle C.M., Scatena F.N., 2003. Damming tropical islands streams: Problems, Solutions, and Alternatives. *Bioscience* November 2003/Vol. 53 No. 11:1069-1071
- Covich A.P., Crowl T.A., Scatena F.N., 2003. Effects of extreme low flows on freshwater shrimps in a perennial tropical stream. *Freshwater Biology* V48: 1199-1206
- Ostertag R., Scatena F.N., Silver W.L., 2003. Forest Floor Decomposition following hurricane litter inputs in several Puerto Rican Forests. *Ecosystems* 6:261-273
- Blundell A.G., Scatena F.N., Wentsel R., Sommers W., 2003. Ecorisk Assessment Using Indicators of Sustainability: Invasive Species in the Caribbean National Forest of Puerto Rico. *Journal of Forestry* Vol 101, Number 1:14-19

- Wang H. Hall C.A.S., Scatena F.N., Fetcher N., Wei Wu, 2002. Modeling the spatial and temporal variability in climate and primary productivity across the Luquillo Mountains, Puerto Rico. *Forest Ecology and Management* 6118: 1026
- Vogt K.A., Beard K.H., Hammann S., O'Hara Palmiotto J., Vogt D.J., Scatena F.N., Hecht B.P., 2002. Indigenous Knowledge Informing Management of Tropical Forests: The link between Rhythms in Plant Secondary Chemistry and Lunar Cycles. *Ambio* Vol. 31 No. 6 Sept. 2002
- Cox S.B., Willig M.R. Scatena F.N., 2002, Variation in nutrient characteristics of surface soils from the Luquillo Experimental Forest of Puerto Rico-A multivariate perspective. *Plant and Soil* vol. 247, No. 2:189-198
- Rivera-Ramirez H.D., Warner G.S., Scatena F.N., 2002. Prediction of Master Recession Curves and Baseflow Recessions in the Luquillo Mountains of Puerto Rico. *Journal of the American Water Resources Association*, Vol. 38, No. 3:693-704
- Frizano J., Johnson A.H., Vann D.R., Scatena F.N., 2002. Soil phosphorus fractionation during forest development on landslides scars in the Luquillo Mountains, Puerto Rico. *Biotropica*. Vol. 34 #1: 17-26
- Scatena F.N., 2001. Ecological rhythms and the management of humid tropical forests: Examples from the Caribbean National Forest, Puerto Rico. *Forest Ecology and Management* 5528:1-12
- Lugo A.E., Silver W.L., Brown S., Scatena F.N., Ewel J.J., 2001. Managed Ecosystems Deserve Greater Attention. *Bulletin of the Ecological Society of America*, Vol. 82, No 1:91-93
- Schellekens J., Bruijnzeel L.A., Scatena F.N., Bink N.J., Holwerda F., 2000. Evaporation from a tropical rain forest, Luquillo Experimental Forest, eastern Puerto Rico. *Water Resources Research* Vol. 36, No. 8:2183-2196
- Richardson B.A., Richardson M.J., Scatena F.N., McDowell W.H., 2000. Effects of nutrient availability and other elevational changes on bromeliad populations and their invertebrate communities in a humid tropical forest in Puerto Rico. *Journal of Tropical Ecology* Vol. 16:167-188
- Covich A.P., Crowl T.A., Scatena F.N., 2000. Linking habitat stability to floods and droughts: effects on shrimp in montane streams, Puerto Rico. *Verhandlungen Internationale Vereinigung fur Theoretische und Angewandte Limnologie* Vol. 27: 2430-2434
- Crowl T.A., Bouwes N., Townsend M.J., Covich A.P., Scatena F.N., 2000. Estimating the potential role of freshwater shrimp on an aquatic insect assemblage in a tropical headwater stream: A bioenergetic approach. *Verhandlungen Internationale Vereinigung fur Theoretische und Angewandte Limnologie* Vol. 27: 2403-2407
- Schaffer D.A., McDowell W.H., Scatena F.N., Asbury C.E., 2000. Effects of Hurricane Disturbance on Stream Water Concentrations and Fluxes in Eight Tropical Watersheds of the Luquillo Experimental Forest, Puerto Rico. *Journal of Tropical Ecology* Vol. 16:189-207

- O'Connor P.J., Covich A.P., Scatena F.N., Loope L.L. 2000. Non-indigenous bamboo along headwater streams of the Luquillo Mountain, Puerto Rico: leaf fall, aquatic leaf decay and patterns of invasion. *Journal of Tropical Ecology*, Vol. 16:499-516
- Odum H.T., Doherty S.J., Scatena F.N., Kharecha P., 2000. Emergy Evaluation of Reforestation Alternatives in Puerto Rico. *Forest Science*. Vol 46, No. 4:521-530
- Kent R., Odum H.T., Scatena F.N. 2000. Eutrophic overgrowth in the self-organization of tropical wetlands illustrated with a study of swine wastes in rainforest plots. *Ecological Engineering* Vol. 16:255-269
- Benstead P.J., March J.G., Pringle C.M., Scatena F.N., 1999. Effects of a Low-Head Dam and Water Abstraction on Migratory Tropical Stream Biota. *Ecological Applications* Vol. 9(2):656-668
- Schellekens J., Scatena F.N., Bruijnzeel L.A., 1999 Modeling rainfall interception by a lowland tropical rain forest in northeastern Puerto Rico. *Journal of Hydrology*. Vol. 225:168-184
- Waide R.B., Zimmerman J.K., Scatena F.N., 1998. Controls of Primary Productivity: Lessons from the Luquillo Mountains in Puerto Rico. *Ecology* Vol. 79(1):31-37.
- Schellekens J., Bruijnzeel L.A., Wickel A.J., Scatena F.N., Silver W.L., 1998. Interception of horizontal precipitation by elfin cloud forest in the Luquillo Mountains, Eastern Puerto Rico. *First International Conference on Fog and Fog Collection*, eds. Schenenauer and H.A. Bridgeman, pp.29-32, Vancouver, Canada
- Scatena F.N. 1998. Climate change and the Luquillo Experimental Forest of Puerto Rico: Assessing the impacts of various climate change scenarios. *American Water Resources Association TPS-98-2*: 193-198
- Covich A.P., Crowl T.A., Johnson S.L., Scatena F.N. 1998. Effects of drought on pool morphology and benthic macroinvertebrates in headwater streams of the Luquillo Experimental Forest, Puerto Rico. *American Water Resources Association TPS-98-2*: 91-96
- Olander L.P., Scatena F.N., Silver W.L., 1998. Impacts of disturbance initiated by road construction in a subtropical cloud forest in the Luquillo Experimental Forest, Puerto Rico. *Forest Ecology and Management* Vol. 109:33-49
- March J.G., Benstead J.P., Pringle C.M., Scatena F.N., 1998. Migratory drift of larval shrimp in two tropical streams, Puerto Rico. *Freshwater Biology* Vol. 40:261-274
- Lopez del Mar T., Aide T.M., Scatena F.N., 1998. The effect of land use on soil erosion in the Guadiana watershed in Puerto Rico. *Caribbean Journal of Science* Vol. 34, No. 3-4:298-307
- Walker R.T., Homma A.K.O, Scatena F.N., de Conto A.J., Rodriquez-Pedrazza C.D., Ferreira C.A.P., de Oliveira P.M., Carvalho R. A., 1997. Land Cover Evolution of Small Farms: The Trans-Amazonian Highway. *Revista Economia Sociologia Rural* ISSN 0103-2003 Vol. 35 No. 2: 115-126

Silver W.L., Scatena F.N., Johnson A.H., Siccama T.G., Watt F., 1996. At what temporal scales does disturbance affect belowground nutrient pools? *Biotropica* Vol 28, #4a: 441-458

Vogt K.A., Vogt D.J., Boon P., Covich A., Scatena F.N., Asbjornsen H., O'Hara J.L., Perez J., Siccama T.G., Bloomfield J., Ranciato J.F., 1996. Litter Dynamics along Stream, Riparian and Upslope Areas Following Hurricane Hugo, Luquillo Experimental Forest, Puerto Rico. *Biotropica* Vol. 28, #4a:458-470

Scatena F.N., Walker R.T., Homma A.K.O., 1996. Farm-level landuse dynamics in the piedmont landscape of the Brazilian Amazon: A case study from Santarem, Para, Brazil. *Ecological Economics* V 18: 29-40

García-Martino A.R., Scatena F.N., Warner G.S., Civico D.L., 1996. Statistical Low Flow Estimation using GIS Analysis in Humid Montane Regions in Puerto Rico. *Bulletin of the American Water Works Association*, Vol. 32 #6:1-13

García-Martino A.R., Warner G.S., Scatena F.N., Civico D.L., 1996. Rainfall and elevation relationships in the Luquillo Mountains of Puerto Rico. *Caribbean Journal of Science* Vol. 32, No.4, 413-424

García-Martino A.R., Warner G.S., Scatena F.N., Civico D.L., 1996. GIS prediction of rainfall and runoff volumes in eastern Puerto Rico. Pages 417-426 in Hallam C.A., J.M. Salisbury, Lanfear K.J., Battaglin W.A., editors. *American Water Resources Association*, Herndon, VA TPS-96-3

Scatena F.N., Moya S., Estrada C., China J.D., 1996. The First Five Years in the Reorganization of Aboveground Biomass and Nutrient Use Following Hurricane Hugo in the Bisley Experimental Watersheds, Luquillo Experimental Forest, Puerto Rico. *Biotropica* Vol 28, #4a: 424-440

Lugo A.E., Scatena F.N. 1996. Background and Catastrophic Mortality in Tropical Moist, Wet, and Rain Forests. *Biotropica* Vol. 28, #4a: 585-599

Scatena F.N., Lugo A.E. 1995. Geomorphology, disturbance, and the soil and vegetation of two subtropical wet steepland watersheds of Puerto Rico. *Geomorphology*, 13:199-213

Scatena F.N., 1995. Relative scales of time and effectiveness of watershed processes in a tropical Montane Rain Forest of Puerto Rico. In *Natural and Anthropogenic Influences in Fluvial Geomorphology*. American Geophysical Union Geophysical Monograph 89:103-111

Silver W.L., Scatena F.N., Johnson A.H., Siccama T.G., Sanchez M.J., 1994. Nutrient availability in a montane wet tropical forest in Puerto Rico: spatial patterns and methodological considerations. *Plant and Soil* 164:129-145

Garcia-Montiel, D., Scatena, F.N., 1994. The effect of human activity on the structure and composition of a tropical forest in Puerto Rico. *Forest Ecology and Management*: 63:57-78

Homma A.K.O., Walker R.T., Scatena F.N. 1994. Reducao dos Desmatamentos Na Amazonia: Political Agricol ou Ambiental. Terceiris Conferencia International de Integracao de sistemas. ICSI94:1-18. Sao Paulo, Brazil

Ahmad, R., Scatena F.N., Gupta A., 1993. Morphology and sedimentation in Caribbean montane streams: examples from Jamaica and Puerto Rico. *Sedimentary Geology* 85:157-169

Lugo A.E., Scatena F.N., 1992. Epiphytes and Climate Change Research: A Proposal. *Selbenia* 13:123-130

Basnet K., Scatena F.N., Lugo A.E., and Likens G.E., 1992. Ecological consequence of root grafting in Tabonuco (*Dacryodes excelsa*) trees in the Luquillo Experimental Forest, Puerto Rico. *Biotropica* 25:28-35

Scatena F.N., Silver W.L., Siccama T. G., Johnson A.G., Sanchez M.J., 1992. Biomass and Chemical content of the Bisley Watersheds, Luquillo Experimental Forest, Puerto Rico. *Biotropica* 25:15-27

Basnet K., Likens G.E., Scatena F.N., Lugo A.E., 1991. Hurricane Hugo: Damage to a tropical rain forest in Puerto Rico. *Journal of Tropical Ecology* 8:47-55.

Lodge D.J., Scatena F.N., Asbury C.E., Sanchez M.J. 1991. Fine litter and related nutrient inputs resulting from Hurricane Hugo in Tabonuco and Dwarf Forests of Puerto Rico. *Biotropica* Vol. 23, Number 4: 336-342

Scatena F.N., Larsen, M.C. 1991. Physical Aspects of Hurricane Hugo in Puerto Rico. *Biotropica* 23, 4a:317-323

Ackerman J.D., Walker L.R., Scatena F.N., Wunderle J. 1991. Ecological Effects of Hurricanes. *Bull. Ecological Soc. Amer.* 72:178-189

Scatena F.N. 1990 Culvert Flow in Small Drainages in Montane Tropical Forests: Observations from the Luquillo Experimental Forest of Puerto Rico. In *Tropical Hydrology and Caribbean Water Resources*, American Water Resources Association Technical Publication TPS-90-2 pp 237-246

Scatena F.N. 1990. Selection of Riparian Buffer Zones in Humid Tropical Steeplands. In R.R. Ziemer, C.L. O'Loughlin, L.S. Hamilton, editors. *Research Needs and Applications to Reduce Erosion and Sedimentation in Tropical Steeplands: IAHS-AISH Pub. No. 192: 328-337*

Scatena F.N. 1990. Watershed Scale Rainfall Interception on Two Forested Watersheds in the Luquillo Mountains of Puerto Rico. *Journal of Hydrology* 113:89-102

Scatena F.N., 1987. Recent Sediment Accumulation in a Urban Tidal Embayment, Anacosta Maryland. *Coastal Sediments 1987. American Society of Civil Engineers Coastal Sediments 1987:100-120*

Brush L.M., Scatena F.N., 1987. River Flood Routing by Nonlinear Muskingum Method, Discussion by Lucien M. Brush. M. ASCE, F.N. Scatena Journal of the Hydraulics Division, American Soc. Civil Engineers 1987: 1086-1090

Coleman D.J. and Scatena F.N. 1986. Identification and evaluation of watershed sediment sources, Drainage Basin Sediment Delivery, International Association of Hydrological Sciences Publication 159: 3-18

## **Books, Chapters, Monographs**

Phillips C.B., Scatena F.N., Flashiness Indices for urban and rural streams in Puerto Rico, AWRA 2010 Summer Specialty Conference, San Juan Puerto Rico; 5 pages.

Scatena F.N., Blanco J.B., Beard K., Waide R., Lugo A.E., Brokaw N., Silver W., Haines B., Zimmerman J., in press January 2011. The Luquillo Disturbance Regime. Chapter 4 in A Caribbean Forest Tapestry: A Multidimensional Nature of Disturbance and Response. Luquillo LTER Synthesis Book, Cambridge University Press

Bruijnzeel L.A., Scatena F.N., Hamilton L. 2010. Editors Tropical Montane Cloud Forests: Science for Conservation and Management. Cambridge University Press. ISBN 978-0-521-76035-5.

Scatena F.N., Bruijnzeel L.A., Bupp P., Das S., 2010. Chapter 1. Setting the stage. In Bruijnzeel L.A., Scatena F.N., Hamilton L. 2010. Editors Tropical Montane Cloud Forests: Science for Conservation and Management. Cambridge University Press. ISBN 978-0-521-76035-5.

Roman L., Scatena F.N., Bruijnzeel L.A., 2010 Global and local variations in tropical montane cloud forest soils. Chapter 6 in Bruijnzeel L.A., Scatena F.N., Hamilton L. 2010. Editors Tropical Montane Cloud Forests: Science for Conservation and Management. Cambridge University Press. ISBN 978-0-521-76035-5.

Holwerda F., Bruijnzeel L.A., Scatena F.N., 2010 Comparison of passive fog gages for determining fog duration and fog interception by a Puerto Rican elfin cloud forest. Chapter 29 in Bruijnzeel L.A., Scatena F.N., Hamilton L. 2010. Editors Tropical Montane Cloud Forests: Science for Conservation and Management. Cambridge University Press. ISBN 978-0-521-76035-5.

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