

MATTEO DETTO

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Dept. of Ecology and Evolutionary Biology
Princeton University
Princeton, New Jersey, USA
Telephone: +1 609-2582798
Email : Mdetto@princeton.edu

http://www.stri.si.edu/english/scientific_staff/staff_scientist/scientist.php?id=74

Appointments *Princeton University*

2016- Associate Researcher at Dept. of Ecology and Evolutionary Biology

Smithsonian Tropical Research Institute

2012-2016 Associate Staff Scientist

2010-2012, Postdoctoral Research Fellow

University of California, Berkeley

2007-2010 Postdoctoral Research Fellow, in the Biometeorology Lab of Dennis Baldocchi, Dept. of Environmental Science, Policy and Management

Education *Polytechnic of Milan University, Italy and Duke University, NC, USA*

2006. Ph.D., Hydraulic Engineering and Hydrology

Dissertation title: *Land-atmosphere interactions in a heterogeneous and water limited Mediterranean ecosystem*. Tutors: R. Rosso, M. Mancini, N. Montaldo, J. Albertson and G. Katul.

Polytechnic of Milan University, Italy

2002. BS(Laurea), Environmental Engineering

Thesis title: *Infiltration and run-off modelling at local and watershed scales*.

Funding

2016-. "Next Generation Ecosystem Experiment (NGEE) Tropics." Department Of Energy, Office of Biological and Environmental Research (BER). Collaborator with PI: J. Chamber.

2016-2017. Desarrollo de tecnología para biocontrol de la roya del café, una enfermedad de importancia global afectada por el cambio climático. Fomento a I+D para el Desarrollo Sostenible (IDDS 2015) de la SENACYT. Co-PI with PI: Luis C. Mejía. \$150,000.

2015-2016. "Using Automated Dendrometer Bands to Link Tree Stem Size Changes to Ecosystem-Atmosphere Exchange at CTFS-ForestGEO Sites." Co-PI with PI: K. J. Anderson-Teixeira). Smithsonian Grand Challenging Awards. \$75,000.

2015-2016. "Measurements of Trace Gases in the Panama Isthmus." Co-PI with PI: G. Gonzalez. Smithsonian Institution Grand Challenges Award. \$15,000.

2015-2016. "By land, sea, and air: General estimation methods and conservation applications of 3D utilization distributions." Co-PI with PI: J. Calabrese. Smithsonian Institution Competitive Grants Program for Science. \$100,000.

2014-2016. "Collaborative Research: The Biology of Lightning in Tropical Forest." Co-PI with PI: S. Yanoviak. National Science Foundation. \$200,000.

2014-2016. "Measuring the seasonal rhythms of leafing, flowering, and fruiting in tropical landscapes using unmanned aerial vehicles and computer vision." Co-PI with PI: H. Muller Landau. Smithsonian Competitive Grants Program for Science. \$100,000.

2013-2014. "Temperature responses of leaf dark respiration and their implications for tropical forest carbon balance" Collaborator with PI: K. Kitajima. National Science Foundation. \$444,698.

Publications *Journal articles and book chapter (49, h-index 27, citations 1800, see <https://scholar.google.com> for updated information)*

50. Youngryel Ryu, Chongya Jiang, **Matteo Detto** and Hydeki Kobayashi. BESS-Rad: Global products of shortwave radiation, photosynthetically active radiation, and diffuse photosynthetically active radiation at 5 km resolution derived from MODIS. [dx.doi.org/10.1016/j.rse.2017.09.021](https://doi.org/10.1016/j.rse.2017.09.021)
49. Miller E., J. Dandois, **M. Detto**, J.S. Hall. 2017. Drones as a Tool for Monoculture Plantation Assessment in the Steepland Tropics. *Forests*. 8(5), 168; doi:10.3390/f8050168
48. Clark A., **M. Detto**, H.C. Muller-Landau, S.A. Schnitzer and S.J. Wright. 2017. Functional traits of tropical trees and lianas influence spatial aggregation at multiple scales. *Journal of Ecology* 10.1111/1365-2745.12804
47. Danielle S. Christiansona, C. Varadharajana, B. Christofferson, **M. Detto**, B. A. Faybishenko, K. J. Jardine, R. Negron-Juarez, B. O. Gimenez, G. Z. Pastorello, T. Powell, J. Warren, B. Wolfe, J. Chambers, L. M. Kueppers, N. G. McDowell, D. Agarwal. A Metadata Reporting Framework for Standardization and Synthesis of Ecohydrological Field Observations for Ecosystem Model Parameterization and Benchmarking. *In press*.
46. Rubio Vanessa and **Matteo Detto**. Temporal and spatial variability of soil respiration in a seasonal tropical forest. *Ecology and Evolution*. DOI: 10.1002/ece3.3267
45. Yang H., **M. Detto**, S. Liub, C. Hsieh, X. Wang, R. Chen, H. Chen, C. Peng, X. Jiang, Y. Li, H. Xu, D. Chen, T. Luo, Z. Zhou, M. Lin, H. Yao. 2017. Effects of typhoon induced canopy gaps on nitrous oxide fluxes in a tropical montane rainforest in Hainan Island, China. *Ecological Engineering*. 105, 325-334.
44. Stephen P. Yanoviak, Evan M. Gora, Jeffrey M. Burchfield, Phillip M. Bitzer and **Matteo Detto**. 2017. Quantification and identification of lightning damage in tropical forests. *Ecology and Evolution*. 10.3390/rs9020182g
43. Brady S. Hardiman, Christopher M. Gough, John Butnor, Gil Bohrer, **M. Detto**, Peter S. Curtis. 2017. Coupling root and canopy structure using ground-based Remote Sensing. *Remote Sens*. 9(2), 182; doi:10.3390/rs9020182.
42. Herrmann V., S. M. McMahon, **M. Detto**, J. D. Lutz, S. J. Davies, K. J. Anderson-Teixeira. 2016. Tree circumference dynamics over short time scales using automated dendrometer bands in four forests. *PloSOne*. DOI: 10.1371/journal.pone.0169020

41. **M. Detto** and H.C. Muller-Landau. 2016. Stabilization of species coexistence in spatial models through the aggregation/segregation effect generated by local dispersal and nonspecific local interactions. *Theoretical Population Biology*. DOI: 10.1016/j.tpb.2016.08.008
40. S. Joseph Wright, O. Calderón, A. Hernández, **M. Detto** and P. A. Jansen. 2016. Interspecific associations in seed arrival and the spatial distributions of forest trees. *Ecology* 10.1002/ecy.1519
39. Helbig M., Wischnewski K., Kljun N., Chasmer L., Quinton W.L., **Detto M.**, Sonnentag O. 2016. Regional cooling effect of permafrost thaw-induced boreal forest loss in the sporadic permafrost zone. *Global Change Biology*. DOI: 10.1111/gcb.13348.
38. Anderson, F.E., B., Bergamaschi, L. Windham-Myers, C. Sturtevant, J. Drexler, S. Knox, J. Hatala, D. Baldocchi, J. Verfaillie, **M. Detto**, R. L. Snyder, L. Hastings, R. Fujii. 2016. Variation of energy and carbon fluxes from a restored temperate freshwater wetland and implications for carbon market verification protocols. *J. Geophysical Research*. DOI: 10.1002/2015JG003083.
37. Baldocchi D., S. Knox, I. Dronova, J. Verfaillie, P. Oikawa, C. Sturtevant, J. Hatala Matthes, and **M. Detto**. 2016. The Impact of Expanding Flooded Land Area on the Annual Evaporation of Rice. *Agriculture and Forest Meteorology*, 223(15):181-193. DOI: 10.1016
36. **Detto M.** and H.C. Muller-Landau. 2016. Rates of formation and dissipation of clumping reveal lagged responses in tropical tree populations. *Ecology*, 97(5):1170–1181.
35. Han X., **M. Detto**, S. Fang, Y. Li, R. Zang and S. Liu. 2015. Habitat hotspots of common and rare tropical species along climatic and edaphic gradients. *Journal of Ecology*, 103(5), 1325–1333, doi: 10.1111/1365-2745.12442.
34. **Detto, M.**, G. Asner, H. C. Muller-Landau and O. Sonnentag, 2015. Spatial Variability in Tropical Forest Leaf Area Density from Multireturn LiDAR and Modeling. *Journal of Geophysical Research*. doi:10.1002/2014JG002774
33. Xia S., J. Chen, D. Schaefer and **M. Detto**. Scale-dependent soil macro-nutrient heterogeneity reveals effects of litterfall in a tropical rainforest. 2015. *Plant and Soil* 391(1), 51-61.
32. M. Réjou-Méchain, H. C. Muller-Landau, **M. Detto** et al., 2014. Local spatial structure of forest biomass and its consequences for remote sensing of carbon stocks. *Biogeosciences*, 11, 6827-6840. doi:10.5194/bg-11-6827-2014
31. Anderson-Teixeira and 107 other authors including **M. Detto**, 2014. CFS-ForestGEO: A Worldwide Network Monitoring Forests in an Era of Global Change. *Global Change Biology*. DOI: 10.1111/gcb.12712
30. Muller-Landau, H. C., **M. Detto**, R. A. Chisholm, S. P. Hubbell, and R. Condit, 2014. Detecting and projecting changes in forest biomass from plot data. Pages 359-380 in

Forests and Global Change. D. Coomes and D. Burslem, editors. Cambridge University Press.

29. **Detto M.**, H. C. Muller-Landau, J. Mascaro and G. P. Asner, 2013. Hydrological networks and associated topographic variation as templates for the spatial organization of tropical forest vegetation. *PlosOne*, 10.1371/journal.pone.0076296.
28. Wood T., **M. Detto** and W. Silver, 2013. Sensitivity of soil respiration to variability in soil moisture and temperature in a humid tropical forest. *PlosOne*, DOI: 10.1371/journal.pone.0080965.
27. **Detto, M.**, G. Bohrer, J. Nietz, K. Maurer, C. Vogel, C. Gough, and P. Curtis, 2013. Multivariate Conditional Granger Causality Analysis for Lagged Response of Soil Respiration in a Temperate Forest. *Entropy*, 15(10), 4266–4284. doi:10.3390/e15104266
26. **Detto, M.** and H. C. Muller-Landau, 2013. Fitting ecological process models to spatial patterns using scale wise variances and moment equations. *The American Naturalist*, 181(4), E68–82. doi:10.1086/669678
25. Fares, S., R. Vargas, **Detto M.**, A.H. Goldstein, J. Karlik, E. Paoletti and M. Vitale 2013. Tropospheric ozone reduces carbon assimilation in trees: estimates from analysis of continuous flux measurements. *Global change biology*, 19(8), 2427–43. doi:10.1111/gcb.12222
24. Harrison, R. D., S. Tan, J.B. Plotkin, F. Slik, **M. Detto**, T. Brenes, A. Itoh and S. J. Davies 2013. Consequences of defaunation for a tropical tree community. *Ecology letters*, 16(5), 687–94. doi:10.1111/ele.12102
23. Baldocchi, D., **M. Detto**, O. Sonnentag, J. Verfaillie, Y.A. Teh, W. Silver and M. Kelly, 2012. The challenges of measuring methane fluxes and concentrations over a peatland pasture. *Agricultural and Forest Meteorology*, 153, 177–187. doi:10.1016/j.agrformet.2011.04.013
22. Hatala, J. A., **M. Detto** and D.D. Baldocchi, 2012. Gross ecosystem photosynthesis causes a diurnal pattern in methane emission from rice. *Geophysical Research Letters*, 39(6), L60469 doi:10.1029/2012GL051303
21. **Detto, M.**, A. Molini, G. Katul, P. Stoy, S. Palmroth and D.D. Baldocchi, 2012. Causality and persistence in ecological systems: a nonparametric spectral Granger causality approach. *The American Naturalist*, 179(4), 524–35. doi:10.1086/664628
20. Hatala, J. A., **M. Detto**, O. Sonnentag, S.J. Deverel, J. Verfaillie and D.D. Baldocchi, 2012. Greenhouse gas (CO₂, CH₄, H₂O) fluxes from drained and flooded agricultural peatlands in the Sacramento-San Joaquin Delta. *Agriculture, Ecosystems & Environment*, 150, 1–18. dx.doi.org/10.1016/j.agee.2012.01.009.
19. Ma, S., D.D. Baldocchi, J.A. Hatala, **M. Detto** and J. Curiel Yuste, 2012. Are rain-induced ecosystem respiration pulses enhanced by legacies of antecedent photodegradation in

- semi-arid environments? *Agricultural and Forest Meteorology*, 154, 203–213. [Dx.doi.org/10.1016/j.agrformet.2011.11.007](https://doi.org/10.1016/j.agrformet.2011.11.007).
18. Ryu, Y., D.D. Baldocchi, T.A. Black, **M. Detto**, B.E. Law, R. Leuning, et al., 2012. On the temporal upscaling of evapotranspiration from instantaneous remote sensing measurements to 8-day mean daily-sums. *Agricultural and Forest Meteorology*, 152, 212–222. [doi:10.1016/j.agrformet.2011.09.010](https://doi.org/10.1016/j.agrformet.2011.09.010).
 17. **Detto, M.**, J. Verfaillie, F. Anderson, L. Xu and D.D. Baldocchi, 2011. Comparing laser-based open- and closed-path gas analyzers to measure methane fluxes using the eddy covariance method. *Agricultural and Forest Meteorology*, 151(10), 1312–1324. [doi:10.1016/j.agrformet.2011.05.014](https://doi.org/10.1016/j.agrformet.2011.05.014).
 16. Mascaro, J., **M. Detto**, G.P. Asner and H.C. Muller-Landau, 2011. Evaluating uncertainty in mapping forest carbon with airborne LiDAR. *Remote Sensing of Environment*, 115(12), 3770–3774. [doi:10.1016/j.rse.2011.07.019](https://doi.org/10.1016/j.rse.2011.07.019).
 15. Sonnentag, O., **M. Detto**, B. Runkle and D.D. Baldocchi, 2011. Carbon dioxide exchange of a pepperweed (*Lepidium latifolium* L.) infestation: How do flowering and mowing affect canopy photosynthesis and autotrophic respiration? *Journal of Geophysical Research*, 116(G1), G01021. [doi:10.1029/2010JG001522](https://doi.org/10.1029/2010JG001522).
 14. Sonnentag, O., **M. Detto**, R. Vargas, Y. Ryu, B.R. Runkle, M. Kelly and D.D. Baldocchi, 2011. Tracking the structural and functional development of a perennial pepperweed (*Lepidium latifolium* L.) infestation using a multi-year archive of webcam imagery and eddy covariance measurements. *Agricultural and Forest Meteorology*, 151(7), 916–926. [doi:10.1016/j.agrformet.2011.02.011](https://doi.org/10.1016/j.agrformet.2011.02.011).
 13. Teh, Y. A., W.L. Silver, O. Sonnentag, **M. Detto**, M. Kelly and D.D. Baldocchi, 2011. Large Greenhouse Gas Emissions from a Temperate Peatland Pasture. *Ecosystems*, 14(2), 311–325. [doi:10.1007/s10021-011-9411-4](https://doi.org/10.1007/s10021-011-9411-4).
 12. **Detto, M.**, D.D. Baldocchi and G. Katul, 2010. Scaling properties of biologically active scalar concentration fluctuations in the atmospheric surface layer over a managed peatland. *Boundary-layer meteorology*, 136(3): 407–430. [doi:10.1007/s10546-010-9514-z](https://doi.org/10.1007/s10546-010-9514-z)
 11. Lasslop, G., M. Reichstein, **M. Detto**, A.D. Richardson and D.D. Baldocchi, 2010. Comment on Vickers et al.: Self-correlation between assimilation and respiration resulting from flux partitioning of eddy-covariance CO₂ fluxes. *Agricultural and Forest Meteorology*, 150(2), 312–314. [doi:10.1016/j.agrformet.2009.11.003](https://doi.org/10.1016/j.agrformet.2009.11.003).
 10. Liptzin, D., W.L. Silver, **M. Detto**, 2010. Temporal Dynamics in Soil Oxygen and Greenhouse Gases in Two Humid Tropical Forests. *Ecosystems*, 14(2), 171–182. [doi:10.1007/s10021-010-9402-x](https://doi.org/10.1007/s10021-010-9402-x)
 9. Vargas, R., **M. Detto**, D.D. Baldocchi and M.F. Allen, 2010. Multiscale analysis of temporal variability of soil CO₂ production as influenced by weather and vegetation. *Global Change Biology*, 16(5), 1589–1605. [doi:10.1111/j.1365-2486.2009.02111.x](https://doi.org/10.1111/j.1365-2486.2009.02111.x)

8. Stoy, P. C., A.D. Richardson and 15 other authors including **M. Detto**, 2009. Biosphere-atmosphere exchange of CO₂ in relation to climate: a cross-biome analysis across multiple time scales. *Biogeosciences Discussions*, 6(2), 4095–4141. doi:10.5194/bgd-6-4095-2009.
7. **Detto, M.**, G. Katul, M. Mancini, N. Montaldo and J.D. Albertson, 2008. Surface heterogeneity and its signature in higher-order scalar similarity relationships. *Agricultural and Forest Meteorology*, 148(6), 902–916.
6. **Detto, M.**, G. Katul, M. Siqueira, J.Y. Juang, and P. Stoy, 2008. The structure of turbulence near a tall forest edge: the backward-facing step flow analogy revisited. *Ecological applications*, 18(6), 1420–1435. doi: 10.1890/06-0920.1.
5. Wright, S. J., A. Trakhtenbrot, G. Bohrer, **M. Detto**, G. Katul, N. Horvitz, H.C. Muller-Landau, F.A. Jones and R. Nathan, 2008. Understanding strategies for seed dispersal by wind under contrasting atmospheric conditions. *Proceedings of the National Academy of Sciences of the United States of America*, 105(49), 19084–9. doi:10.1073/pnas.0802697105
4. **Detto, M.** and G. Katul, 2007. Simplified expressions for adjusting higher-order turbulent statistics obtained from open path gas analyzers. *Boundary-Layer Meteorology*, 122(1), 205–216. doi:10.1007/s10546-006-9105-1
3. Juang, J.-Y., G. Katul, A. Porporato, P.C. Stoy, M.S. Siqueira, **M. Detto**, Kim, H.-S., et al. 2007. Eco-hydrological controls on summertime convective rainfall triggers. *Global Change Biology*, 13(4), 887–896. doi:10.1111/j.1365-2486.2007.01315.x
2. Juang, J.-Y., G. Katul, A. Porporato, P.C. Stoy, M.S. Siqueira, **M. Detto**, Kim, H.-S., et al. 2007. Hydrologic and atmospheric controls on initiation of convective precipitation events. *Water Resources Research*, 43(3), doi:10.1029/2006WR004954
1. **Detto, M.**, N. Montaldo, J.D. Albertson, M. Mancini and G. Katul, 2006. Soil moisture and vegetation controls on evapotranspiration in a heterogeneous Mediterranean ecosystem on Sardinia, Italy. *Water Resources Research*, 42(8), doi:10.1029/2005WR004693

In review/preparation

50. Han Xu, **M. Detto**, S. Fang, Y. Li, Y. Li, F. He. Local spatial patterns of legumes in tropical forests reveal tradeoff between nitrogen fixation and soil nitrogen demanding.
51. Stephanie Pau, Youngil Kim, **Matteo Detto** and Christopher J. Still. Dynamic temperatures in a diverse tropical forest canopy and connections to canopy-atmosphere exchanges.
52. **Detto Matteo**, Joseph Wright and Helene Muller-Landau. Phenology of seed and leaves rain in response to periodic climatic variability in a seasonal wet tropical forest.
53. Sabrina E. Russo, S. M. McMahon, **M. Detto**, S. J. Wright, R. S. Condit, S. J. Davies, C. E.N. Ewango, C. Fletcher, C. V. S. Gunatilleke, I. A. U. N. Gunatilleke, J. Hart, T. Hart, S. Hubbell, A. Itoh, A. R. Kassim, S. Lum, J-R Makana, P. Ong, I-F. Sun, S. Tan, J. Thompson, S. L. Yap,

J. K. Zimmerman. The slow-fast continuum of tree demographic strategies shows tolerance of resource limitation than responsiveness to resources.

54. Anna Trugman, **M. Detto**, M. Bartlett, D. Medvigy and S. Pacala. Optimal hydraulic-carbon coupling and plant allometric theory explains size dependence of tree recovery from drought damage.
55. Megan Bartlett, **M. Detto** and S. Pacala. Increased drought shifts tropical forest functional composition towards more drought tolerant, rather than avoidant, hydraulic trait values.
56. Han Xu, **M. Detto** and Y. Lin. Community compensatory trend in a montane tropical forest.
57. Jin Wu, S. P. Serbin, K. S. Ely, B. T. Wolfe, L. T. Dickman, A. D. Collins, S. T. Michaletz, **M. Detto**, N. G. McDowell, S. J. Wright and A. Rogers. Capturing the variation in stomatal conductance to seasonal drought across two contrasting tropical forests to improve modeling of the water cycle
58. Pappas, Christoforos; Matheny, Ashley; Baltzer, Jennifer; Barr, Alan; Black, Thomas; Bohrer, Gil; Detto, Matteo; Maillet, Jason; Roy, Alexandre; Sonnentag, Oliver; Stephens, Jilmarie. Boreal tree hydrodynamics: asynchronous, diverging, yet complementary.

Conference presentations and seminars

2015. **Detto M.** and H. C. Muller-Landau. Persistence of spatial structures in tropical tree populations reveal time lags in underlying dynamics. Baltimore MD, *Ecological Society of America meeting* (invited).

2015. **Detto M.** Spatial patterns in tropical forests along a gradient of scales. *Research Institute of Tropical Forestry, Chinese Academy of Forestry, Guangzhou, China* (invited).

2015. **Detto M.** Spatial patterns in tropical forests along a gradient of scales. *Department of Civil, Environmental & Geodetic Engineering, The Ohio State University* (invited).

2013. **Detto M.** and H. C. Muller-Landau. Spatiotemporal ecological point processes: aggregation and persistence. Minneapolis MN, *Ecological Society of America meeting* (invited).

2013. Muller-Landau H.C. and **Detto M.** Tropical forest carbon stocks: measurement methods, patterns and correlates at local and landscape scales. Panama City, *Tupper seminar*.

2012. **Detto M.** and H. C. Muller-Landau Investigating spatial ecological aggregation using wavelets and moment equations. Matteo Detto and Helene C. Muller-Landau. Portland OR, *Ecological Society of America meeting* (invited).

2011. **Detto M.** Analyzing tree spatial pattern: when localized competition and dispersal promote coexistence. Panama City, *Tupper seminar*.

2010. **Detto M.**, G. Katul, J. Verfaillie and D. Baldocchi. Scaling properties of biologically active scalar concentration fluctuations in the surface layer over a managed peatland. Keystone CO, *AMS meeting: 29th Conference on Agricultural and Forest Meteorology*.

2009. **Detto M.**, D. Baldocchi, F. E. Anderson, A. H. Goldstein, A. Guha , J. Hatala, M. Kelly, B. Runkle, O. Sonnentag, W. L. Silver, Y. Teh, J. Verfaillie, D. Baer. Methane, Carbon and Water Fluxes in a Composite Landscape in the Sacramento-San Joaquin Delta. San Francisco, *AGU Fall Meeting*.

2006. **Detto M.**, N. Montaldo, J. Albertson, M. Mancini, G. Katul. Effects of land surface heterogeneity on second order scalar statistics in the surface boundary layer above a Mediterranean ecosystem. San Francisco, *AGU Fall Meeting*.

2005. **Detto, M.**, N. Montaldo, J. Albertson, M. Mancini, G. Katul. Energy and water fluxes in heterogeneous Mediterranean water-limited ecosystem. Wien, *EGU General Assembly*.

2004. **Detto M.**, N. Montaldo, J. Albertson, M. Mancini. Evaporation fluxes in heterogeneous Mediterranean water-limited ecosystem. Nice, *EGU General Assembly*.

Teaching & Mentoring

2013-2015. Supervised Ana G. Sanjur, Krystaal McClain, Erick Diaz E, Vanessa E. Rubio Ramos and Fabrizio Protti interns and fellows assisting with measurements and analysis of carbon stocks and fluxes in tropical forest, Smithsonian Tropical Research Institute.

2011- 2016. Lead the spatial analysis group at annual 3-week analytical workshops for the Center for Tropical Forest Science (CTFS) / Smithsonian Institution Global Earth Observatories (SIGEO). Advised participants from sites around the world on how to perform spatial and temporal analyses.

May 2004. Teaching assistant for the Masters in “Water Management” at Polytechnic of Cosenza, Italy.

Academic year 2003-4 and 2004-5. Teaching assistant for the course “Hydrology” at Polytechnic of Milano, Italy

Services

Reviewer for the journals: *Science, Ecology Letters, Global Change Biology, Ecology, Journal of Ecology, Theoretical Population Biology, Methods in Ecology and Evolution, PLoS One, Water Resource Research, The American Naturalist, Agriculture and Forest Meteorology, Boundary Layer Meteorology, Advances in Water Research, Journal of Geophysical Research, Remote sensing of the Environment*.

AGU and ESA International conferences contributor and co-organizer.

NSF reviewer.

Languages

Italian (native speaker), English (professional working proficiency) and Spanish (professional working proficiency). Ancient languages: Latin and Greek.

Technical Skills

High level computational programming in Matlab, R and other environments (Fortran and C++). GIS and remote sensing imaging (ENVI, ArcView). Automated microclimatic stations and data acquisition systems for bio-environmental monitoring.