Giacomo Nicolini

giacomo.nicolini@cmcc.it
g.nicolini@unitus.it
+39 0761 357 600/251

FIELD OF INTEREST
Green-house gas fluxes from terrestrial ecosystems, forest ecology, global change and its impact on ecosystems.

EDUCATION
- 2009-2011: PhD in Forest Ecology, University of Tuscia, Viterbo, Italy. 'Greenhouse gases exchange over and within a tropical forest in Africa'. 13.04.2012. With grant.
- 2004-2007: Master Degree in Forestry and Natural Systems Management, University of Florence, Italy. 25.09.2007, 110/110 with honors.
- 2000-2004: Bachelor Degree in Forestry and Environmental Science, University of Tuscia, Viterbo, Italy. 03.10.2004, 110/110 with honors.

CURRENT POSITION
- Post-Doc researcher at CMCC - Euro Mediterranean Centre on Climate Change, IAFENT - Impacts on Agriculture, Forest, and Natural Ecosystems Division

FORMER POSITIONS
- 2012.03-2013.02: Post-Doc researcher at the University of Tuscia, Viterbo, Italy. 'Analysis of the gas exchange of a primary tropical rainforest in Africa integrating eddy covariance, remote sensing and biomass data'.
- 2008-2009: Research assistant, Ibimet-CNR, Biometeorology Institute, Florence, Italy. Research activity on estimates of carbon fluxes at regional scale using ground and remote sensing data.
- 2007-2008: Research assistant, Ibimet-CNR/CeSIA, Biometeorology Institute, Florence, Italy. Research activity on biomass and dendrochronological study of forest plantations in the Sahelian region (Niger).

SCIENTIFIC ACTIVITY
- Eddy covariance data elaboration and analysis aimed to the study of CO_2, CH_4, N_2O, H_2O and energy fluxes from terrestrial ecosystems (tropical and boreal forests, tropical and boreal wetlands, temperate forests and croplands)
- Analysis of the carbon budget of tropical ecosystems (forests and wetlands)
- Installation and maintenance of micrometeorological systems for gas flux measurements (experience with LiCor, Los Gatos and Picarro gas sensors).
- Development of innovative techniques for the measure of biosphere/atmosphere gas exchange

SKILLS AND COURSES
- IT: R (R Foundation for Statistical Computing), Matlab (MatWorks), LabVIEW (National Instruments).
- Computing languages: S, G
- Languages: Italian (native), English (fluent), Portuguese (good), Spanish (moderate), French (basic).
- Attended courses: 1. Summer school 'Flux measurement techniques: methods, sensors, databases and modelling', ECOST European Cooperation in Science and Technology, Poznan, Poland, 2011.09. 2. Introduction to R, Statistical Sciences Dept. Sapienza University of Rome, 2011.06. 3. Technical and scientific data elaboration (Fortran95, C), Caspur, Rome, 2011. 4. LabView (Core 1, Core 2, Data Acquisition and Signal Conditioning, Instrument Control), National Instrument, Rome and Milan, 2011. 5. Development and cooperation, Italian-Belgian chamber of commerce, Brussels, Belgium, 2008.07.
- Interests: swimming, running, hiking, scuba diving, readings, guitar.

PRESENTATIONS
- Oral: Nicolini G., Stefani P., Castaldi S., Valentini R.. Assessment of methane fluxes from a tropical rain forest in Africa. EGU2013-10912. EGU General Assembly 2013, Vienna, Austria
- Poster: Nicolini G., Stefani P., Castaldi S., Valentini R.. Methane fluxes from an ephemeral wetland in Africa over the drying period. EGU2013-10988. EGU General Assembly 2013, Vienna, Austria
- Poster: Nicolini G., Avilov V., Kurbatova J., Fratini G., Vasenev I., Valentini R.. Evaluation of footprint models performances over a small crop field by means of a tracer experiment. EGU2013-11800. EGU General Assembly 2013, Vienna, Austria

- Poster: Nicolini G., Stefani P., Castaldi S., Valentini R.. A preliminary assessment of methane fluxes from a tropical rain forest in Africa. BG17-EGU2012-12294. EGU General Assembly 2012, Vienna, Austria
- Oral: Nicolini G., Stefani P., Valentini R.. A preliminary investigation on above and below canopy methane fluxes, concentration an vertical gradient at Ankasa forest, Ghana. ERC Africa GHG Project Meeting, CNR Roma, Italy, 2011.06
- Poster: Nicolini G., Fratini G., Forgione A., Stefani P., Valentini R.. Toward the development of a quasi-proportional eddy accumulation system for biosphere-atmosphere gas exchange measurement. Environment Including Global Change (conference), Palermo, Italy, 2010.10.

PAPERS IN PREPARATION
1. *Nicolini, G.*, Fratini, G., Avilov, V., Kurbatova, J.A., Vasenev, I., Valentini, R.. Performance of a closed-path eddy covariance system for applications constrained by limited fetches.
2. *Nicolini, G.*, Stefani, P., Valentini, R.. Assessment of methane fluxes in a tropical rain forest in Ghana.
3. *Nicolini, G.*, Stefani, P., Castaldi, S., Valentini R.. Methane fluxes from an ephemeral wetland in Africa.
4. *Nicolini, G.*, Stefani, P., Valentini, R.. The carbon balance of a virgin rain forest in Ghana over the last 5 years.

PUBBLICATIONS
1. *Nicolini, G.*, Castaldi, S., Fratini, G., Valentini, R., 2013. A literature overview of micrometeorological CH_4 and N_2O flux measurements in terrestrial ecosystems. Atmospheric Environment. 81, 311–319.
2. Fattore, F., Bertolini, T., Materia, S., Gualdi, S., Thongo M'Bou, A., *Nicolini, G.*, Valentini, R., De Grandcourt, A., Tedesco, D., Castaldi, S., 2013. Seasonal trends of dry and bulk concentration of nitrogen compounds over a rain forest in Ghana. Biogeosciences Discussions 10, 15225–15255.
3. *Nicolini G.*, Tarchiani, V., Saurer, M., Cherubini, P., 2010. Wood-growth zones in Acacia seyal Delile in the Keita Valley, Niger: is there any climatic signal?. Journal of Arid Environments, 74 (3), 355–359.
4. *Nicolini G.*, Tarchiani, V., Di Vecchia, A., Salbitano, F., 2009. Verso un metodo di valutazione sintetica della biomassa di rimboschimenti in zone semi-aride: limiti e prospettive nell'adozione di modelli allometrici a Keita, Niger. L'Italia Forestale e Montana, 64 (3): 165-184.