CURRICULUM VITAE

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Affiliations

University of……
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Current position

Education

2000 –2003: Doctoral degree in Agricultural, Forestry and Food Science at the University of Torino, Italy. Dissertation title "Genetic analysis of microbial population in agricultural and forestry soils". Advisor: Prof. Carlo E. Gessa

1997 - 2000: Post graduate degree in Applied Genetics at the University of Bologna, Italy. Dissertation title: "Structure of the intermediates in the Rad51-mediated reaction". The research has been conducted in the laboratory of Prof. N. Cozzarelli in the Molecular and Cellular Biology Department at the University of Berkeley, California. Advisors: Prof. D. Palenzona and Prof. Nick Cozzarelli.

1992 - 1997: bachelor degree in Biological Science (Biomolecular curriculum), University of Bologna. Dissertation title: "Aggregation of Bifidobacterium". Advisor: Prof. D. Palenzona.

Academic experience

Apr 2011 – present: Researcher at the University of Bolzano-Bozen
Mar 2011: Research assistant at the University of Bolzano-Bozen
Jan 2009 – Jan 2011: Postdoctoral fellow, University of New Hampshire. Advisor: Dr. Erik A. Hobbie.
Dec 2008: Senior Researcher Assistant, Faculty of Science and Technology, Free University of Bolzano/Bozen. The activity was related to the

organization of the research "Carbon cycle within an apple orchards". Specifically, I collaborated at the installation of a Eddy covariance tower in an apple tree in an apple orchard. Advisor: Dr. M. Tagliavini

Nov 2006 – Nov 2008: Research Assistant, Fruit Tree and Woody Plant Science Department, University of Bologna. The research "Evaluation of fruit tree nutrient demand and nutrient losses monitoring from an orchard" has been founded by the European Community as part of the ISAFRUIT project. Advisor: Dr. M. Tagliavini

2005: Organization staff member of the National Congress "La nutrizione delle colture da frutto (Fruit trees nutrition)", held in Bologna, Italy, the 6th-7th September 2005.

Nov 2003 – Oct 2006: Research Assistant, Fruit Tree and Woody Plant Science Department, University of Bologna. The research "Nutrient cycle in a fruit tree orchard" has been founded by the Emilia – Romagna Government. Advisor: Dr. M. Tagliavini

Jan – Nov 2000: statistical analysis of a survey covering feeding habits of Italian children and teenagers and analysis of anthropometric parameters for the determination of overweight and obesity in the analysed population. The research has been conducted at the Public Health Department under the supervision of Dr. A. Albertini.

Sept 1997 – Dec 1998: Post graduate research: "Development of advanced biotechnologies to identify pathogens in aquatic organisms". The research has been conducted at the Experimental Evolutionary Biology Department at the University of Bologna, under the supervision of Prof. D. Palenzona.

Teaching appointments

Bachelor and master thesis tutoring:
Bonora E. (2008) Evaluation of apple tree nutrient uptake.
Bonora E. (2006) Rilascio di nutrienti durante la decomposizione di residui colturali di melo e pesco. (Nutrient fluxes during apple and peach cultural residues)
Boldrini L. (2004) Esempio di applicazione dell'energia fotovoltaica per la gestione automatica dell'irrigazione di un pereto (Photovoltaic energy in the automatic management of the irrigation of a pear tree orchard).
Menarbin G. (2004) Flussi di nutrienti nel meleto (Nutrient fluxes in an apple tree orchard)

Master and Ph.D. schools teaching:
2003-2006: Teaching assistant of "Productive Tree Ecosystems" (bachelor and Ph.D levels).
200-2003: Organization and lead of seminar cycles at the Agricultural Chemistry Department and at the Ph. D. school.
2007: Co-organizer of "Theories of Embodiment and their application", a pilot course bringing together different disciplines from semiotics and philosophy to cognitive science, biology and physics. In particular I organized the lecture on the Theory of Complex Systems.

Research activity

1. Areas of scientific interest

- Cycle of nitrogen and carbon in natural and agroecosystems.

- Role of mycorrhizal fungi in biogeochemical processes in natural and antropic ecosystems.
- Use carbon and nitrogen isotopes as tracers.
- Use of the compound specific isotope analysis (mainly fatty acids from soil and fungal material) to estimate the contribution of different sources of carbon to soil organic matter.

2. Research projects

Prin 2008 - project "Carbon cycles in managed tree ecosystems"

Ministero Politiche Agrarie, Alimentari e Forestali. Progetto Nazionale RICERCHE AVANZATE IN AGRUMICOLTURA E LORO APPLICAZIONI – Cycle of nutrients in the citrus orchard systems. 2007-2010.

Autonomous Province Bolzano/Bozen. Project: Potential of CO2 fixation by apple orchards in South Tyrol. 2008-2010.

Free University of Bolzano/Bozen. Project: Assessing the role of environmental and tree-internal factors to soil respiration in the apple orchard . 2008-2010.

Conference organizations

Convegno Nazionale SOI Mineral Nutrition of fruit trees. Bologna 2005.

Editorial and reviewer activity

Agricultural systems
Agriculture, ecosystems and environment
Functional ecology
Italus hortus
Plant, Cell and Environment

List of publications

Refereed international journals:

1. Brunetto G., Ventura M., **Scandellari F**., Ceretta C.A, Kaminski J., Wellington de Melo G. and Tagliavini M. Nutrient release during the decomposition of mowed ryegrass and white clover in the vineyard and its contribution to mineral nutrition of grapevines. Submitted to Agriculture, Ecosystems and Environment.
2. Panzacchi P., Tonon G., Ceccon C., **Scandellari F**., Ventura M., Zibordi M., and Tagliavini M. Net primary and ecosystem productivities in an apple trees (*Malus domestica*) as affected by soil water availability. Submitted to Agriculture, Ecosystems and Environment.
3. **Scandellari F**., Ventura M., Gioacchini P., Vittori Antisari L. and Tagliavini M. 2009. Seasonal pattern of net nitrogen rhizodeposition from peach (*Prunus persica* (L.) Batsch) trees in soils with different textures. Agriculture, Ecosystems and Environment. DOI:10.1016/j.agee.2009.12.017
4. Ventura M, **Scandellari F**. (corresponding author), Bonora E. and Tagliavini M. 2009. Nutrient release during decomposition of leaf litter in a peach (*Prunus persica* L.) orchard. Nutrient Cycling in Agroecosystems. DOI: 10.1007/s10705-009-9317-0
5. **Scandellari F**., Hobbie E.A., Ouimette A.P., Stucker V.K. Tracing metabolic pathways of lipid biosynthesis in ectomycorrhizal fungi from position-specific ^{13}C-labeling in glucose. Environmental Microbiology. DOI:10.1111/j.1462-2920.2009.02013.x.
6. **(**on behalf of**)** Rete Nazionale Ricercatori Precari (National Association of Young University Researchers). 2009. Italy: 'draconian' new law galvanizes demonstrations. Nature 456: 166.
7. Ventura M., **Scandellari F**., Ventura F., Guzzon B., Rossi Pisa P., Tagliavini M, 2008. Nitrogen balance and losses through drainage waters in agricultural watershed of the Po Valley (Italy). European Journal of Agronomy (2008), doi:10.1016/j.eja.2008.05.002
8. **Scandellari, F**., Tonon, G., Thalheimer, M., Ceccon, C., Gioacchini, P., Aber, J., Tagliavini, M., 2007. Assessing nitrogen fluxes from roots to soil associated to rhizodeposition by apple (*Malus domestica*) trees. Trees - Structure and Function 21: 499-505.
9. Tagliavini M., Tonon G., **Scandellari F**., Quinones A., Palmieri S., Menarbin G., Gioacchini P. and Masia A. Nutrient recycling during the decomposition of apple leaves (*Malus domestica*) and mowed grasses in an orchard. Agriculture, Ecosystems & Environment. (2007) 118(1-4):191-200

10. Holmes, V.F., **Scandellari, F.,** Benjamin, K.R., Cozzarelli, N.R. Structure of reaction intermediates formed during *Saccharomyces cerevisiae* Rad51-catalyzed strand transfer. Journal of Biological Chemistry (2002) 277(41):38945-53.

Book chapters

1. Tonon G., Dezi S., Ventura M., **Scandellari F**. Effect of Forest Management on Soil Organic Carbon. In "Sustaining Soil Productivity in Response to Global Climate Change: Science, Policy and Ethics" Tom Sauer and John Norman (Eds.), OECD, Paris. Accepted.

National journals:

1. Tagliavini M., Drahorad W., **Scandellari F**., Zanotelli D. (2008). Macrocarenze, riconoscerle per risolverle. Informatore agrario (2008) 22:48-52
2. Panzacchi P., **Scandellari F.**, Tonon G., Tagliavini M. Contributo della decomposizione della lettiera alla nutrizione minerale delle colture arboree. Review n. 7 – Italus Hortus *(*2008) 15(1): 1-12 (invited review)
3. Ventura M., Opstad N., Zanotelli D., **Scandellari F**., Quartieri M., Tagliavini M. Monitoraggio delle perdite di azoto minerale per lisciviazione dal suolo di un pereto. Frutticoltura (2005) 67(10):40-44

Proceedings of international conferences:

1. Brunetto G, Ceretta CA, Melo GWB, Ventura M, **Scandellari F**, Tagliavini M. Disponibilidade de nitrogênio derivado da decomposição de resíduos de plantas de cobertura para a videira. In: VII Reunião Sul-Brasileira de Ciência do Solo " Ciência do solo no RS e SC: onde estamos e para onde vamos", 2008, Santa Maria. Anais da VII Reunião Sul-Brasileira de Ciência do Solo " Ciência do solo no RS e SC: onde estamos e para onde vamos". Santa Maria : Nucleo Regional Sul da SBCS, 2008.
2. Brunetto G, Ceretta CA, Kaminski J, Melo GWB, Ventura M, **Scandellari F**, Tagliavini M. Recuperação e acumulação na videira do nitrogênio derivado da decomposição de resíduos de plantas de cobertura. In: Fertbio 2008: Desafios para o uso do solo com eficiência e qualidade ambiental, 2008, Londrina. Fertbio 2008. Londrina : Embrapa Soja.
3. **Scandellari F**., Ventura M., Malaguti D., Ceccon C., Menarbin G., Tagliavini M. Net Primary Productivity and Partitioning of Absorbed Nutrients in Field-grown Apple Trees. VI International ISHS symposium. Faro, Portogallo, 19-23 Maggio 2008 (Acta Hort. in press)

4. **Scandellari F**., Ventura M., Ceccon C. and Tagliavini M. (2008) Nutrient use efficiency in orchards. Proceedings of the International conference Rational methods for the selection and use of agrochemical measures: risk modelling, monitoring and management. Cluj-Napoca, Romania, 14th-16th June 2007 (pag. 76-83)
5. Tagliavini M., **Scandellari F**. Nutrient Fluxes in Kiwifruit Orchards. 6th International Kiwifruit Symposium in Rotorua (New Zealand), 21st – 24th February 2006 Proc. VIth IS on Kiwifruit, Eds. A.R. Ferguson et al., Acta Hort. 753, ISHS 2007
6. Ventura M., **Scandellari F**., Opstad N., Zanotelli D., Quartieri M. and Tagliavini M. Soil nitrogen losses through leaching from tree row strips and grassed alleys in a pear orchard. (2005) 14th Nitrogen workshop, Maastricht, the Nederlands. 24th-26th October 2005 (pag 241-243).
7. Panzacchi P., Tonon G., **Scandellari F**., Ventura M., Ceccon C., Zibordi M., Corelli Grappadelli L., Tagliavini M. (2006). Net primary and ecosystem productivities in a apple (*Malus domestica*) orchard. In: The GHG Cycle in the Northern Hemisphere. Open Science Conference on The GHG Cycle in the Northern Hemisphere. November 14-18. (pp. 95).

Abstracts of international conferences:

1. Panzacchi P., Tonon G., Ceccon C., **Scandellari F**., Tagliavini M. Carbon balance of field grown apple (*Malus domestica*) trees. X European Society for Agronomy (ESA) meeting, September 2008
2. El-Jendoubi H., del Re V., **Scandellari F**., Abadia J., Tagliavini M., Abadia A. Nutrient (including iron) demand model in peach trees. ISINIP Symposium in Beijing, October 2008
3. Panzacchi P, Tonon G, Boldreghini P, Cantoni L, Ceccon C, **Scandellari F**, Tagliavini M., Carbon balance in tree ecosystems: a productive orchard compared to an artificial forest. X European Society for Agronomy (ESA) meeting, September 2008
4. Brunetto G., Melo G.W., Kaminski J., Ceretta C.A., **Scandellari F**., Ventura M., Tagliavini M. Effects of nitrogen fertilization of peach trees in a fertile soil in southern Brazil. VIII International symposium of temperate zone fruits in the tropics and subtropics. Florianopolis, Brasile, October 21-25, 2007.
5. **Scandellari F**., Hobbie EA, Ouimette AP, Peters J, Stucker V, Carbon isotopes of phospholipid fatty acids reveal fungal metabolism. Rhizosphere 2, Montpellier, France, August 26-31, 2007

6. **Scandellari F**., Tagliavini M., Hobbie E., Carbon use and isotopic fractionation of ectomycorrhizal fungi. 5th International Conference on Mycorrhiza, Granada, Spain. July 23 – 27, 2006
7. Ventura M., Rossi Pisa P., Guzzon B., **Scandellari F**., Ventura F., Amplatz N., and Tagliavini M., Watershed nitrogen balance and losses in an agricultural area of the Po Valley (Italy). (2005) 14th Nitrogen workshop, Maastricht, the Nederlands. October 24-26, 2005.
8. **Scandellari, F**., Tonon, G., Thalheimer, M., Gioacchini, P., Toselli, M., Antisari, L.V., and Tagliavini, M., 2005. Estimating root nitrogen absorbtion and nitrogen rizodeposition by growing ^{15}N labeled apple trees in unlabeled soils. Abstracts of Papers of the American Chemical Society, 230: U1779.
9. **Scandellari F**., Tonon G., Thalheimer M., Vittori Antisari L., Gioacchini P., Toselli M., Ceccon C., Menarbini G. and Tagliavini M. Assessing nitrogen fluxes from roots to soil associated to rhizodeposition by apple (*Malus domestica*) trees. (2004) Abstract book of the International Congress on Rhizosphere, Munich, Germany, September 12-17, 2004.
10. **Scandellari F**., Cavani L., Ramieri N.A., Marzadori C., Ciavatta C., Gessa C.E. Effects of fertilization on soil microbial community. BES Annual symposium, Lancaster, UK. March 25 – 27, 2003
11. Morrica, M, F. **Scandellari**, C. Cinti, C. Salomoni, A. Caputo, D. Palenzona, B. Del Re. Detection of virus in asymptomatic carrier fish by PCR technology. International Aquaculture conference, Verona, Italia, February 11-12, 1999.

Proceedings of national conferences:

1. Tagliavini M., **Scandellari F**., Quinones A., Malaguti D., Menarbin G., Palmieri S., Gioacchini P., Vittori Antisari L., Toselli M., Tonon G. Nutrient cycle in an apple orchard. Proceeding of the VII Scientific Days of Italian Horticultural Society, Napoli, May 4-6, 2004.
2. **Scandellari F**., Vittori Antisari L., Gessa C. E. Molecular characterisation of microbial community in the nature reserve "Bosco della Frattona" (Imola, BO). Proceedings of XXI Congress of the Italian Agricultural Chemistry Society, Ancona, Italia, September 23-26, 2003.
3. **Scandellari F**., Cavani L., Marzadori C., Ciavatta C. e Gessa C.E. Microbial community composition in fertilized soils. Proceedings of XX Congress of the Italian Agricultural Chemistry Society, Padova, September 24–27, 2002.

Abstracts of national conferences:

1. Zanotelli D., Montagnani L., Ceccon C., Melo W., Mimmo T., Andreotti C, **Scandellari F**., Tagliavini M. Flussi di carbonio nel meleto. IX Giornate Scientifiche SOI Firenze, March 10-12, 2010
2. Del Re, B., **Scandellari, F**., Palenzona, D. Aggregation in *Bifidobacterium* Proceeding of the congress of ABCD, SIBBM, SIMGBM, Pescara, Italia, September 30 –October 3, 1997.

Invited oral presentations at conferences

1. Molecular characterization of the soil microbial community in the natural reserve "Bosco della Frattona", (Imola, BO). XXI Congress of the Italian Agricultural Chemistry Society, Ancona, Italia (September 23-26, 2003)

Oral presentations at conferences

1. Toward a predictive model for the estimation of nutrient needs in apple orchards. VI International Symposium on Mineral Nutrition of Fruit Crops, Faro, Portugal (May 19-23, 2008)
2. C isotopes of phospholipids fatty acids reveal fungal metabolism. Rhizosphere 2, Montpellier, France (August 26-31, 2007)
3. Development of a model for the prediction of nutrient demand rates. ISAFRUIT II General Assembly, Bologna, Italia (June 20-22, 2007)
4. C use, metabolic modelling and isotopic fractionation of ECM fungi. 5th International Conference on Mycorrhiza (ICOM 5), Granada, Spain (July 23 – 27, 2006)