

CURRICULUM VITAE



Alessandro Buscaroli

Born in Imola (BO) 01/02/1962

Married with two children

ADDRESS

Via San Prospero, 22

40026 Imola (BO) Italy

Mob.: +39 335 7479392

Tel.: +39 0544 937310

Skype: abusca62

<https://www.unibo.it/sitoweb/alessandro.buscaroli>

POSITION HELD AND EDUCATIONAL QUALIFICATION

Associate Professor of Pedology, President of Division IV "Environmental and Social Role of Soil" of the Italian Society of Soil Science (SISS).

PhD, Doctor of Agronomy, Doctor of Agricultural Sciences, Agricultural Expert.

EDUCATION AND TRAINING

2022- ongoing

Associate Professor of Pedology SSD AGR/14

2002-2022

Confirmed university researcher SSD AGR/14

1999 - 2002

University researcher SSD AGR/14

1992 - 1995

Philosophy Doctor in Productivity of Cultivated Plants. Administrative headquarter the University of Udine; subsidiary headquarter the University of Bologna.

1990

Qualified to the profession of Doctor of Agronomy. I remained registered for a few years in the Order of Doctors of Agronomy and Forestry of the Province of Bologna and then I withdrew the registration.

1990

Bachelor in Agricultural Sciences, specialty in Plant Production at the University of Bologna.

1981

Graduation at the Agricultural Technical High School "G. Scarabelli" in Imola, which qualifies for the profession of Agricultural Expert.

PROFESSIONAL EXPERIENCE

1997 - ongoing

Continuing teaching activity at the University of Bologna, carried out at the University's Campus of Bologna, Ravenna and Imola. The subjects dealt with two main themes: the study of soil and geomatics.

2020

Technical consultancy assignment for the company T.E.R.R.A. srl relating to direct assignment by the Municipality of Mordano (BO) for specialist technical support for the environmental impact assessment and exposure for the clay quarry in Via Ringhiera in Mordano.

2018

I have been included in the long list of Sogesid S.p.A., a company fully owned by the Ministry of Economy and Finance and recognized by the European Commission as an in-house providing body of the Ministry of the Environment and Protection of Land and Sea, which provides technical and specialized support to this Ministry in the implementation of the Lines of Action in which the project CREIAMO PA is declined.

2018

Consultancy activity, as Judicial Police Auxiliary, for the performance of operations requiring specific technical skills, for the Carabinieri Command for the Protection of the Environment - Ecological Operative Unit (NOE) of Bologna.

2016 - in progress

Free technical consultancy to the Comitato Vediamoci Chiaro which opposes to the project of extending the TRE MONTI landfill in Imola. Organisation of conferences, press conferences, awareness-raising events, preparation and filing of technical reports to NOE, the Public Prosecutor's Office, the Regional Administrative Court and the State Council.

2014

Venice Court of Appeal. Consultancy as a Technical Consultant (CTP) in a case relating to an alleged agricultural land improvement in the Province of Treviso.

2013

Ordinary Court of Brescia. R.G.N. 9778/2006 and R.G.N. 14665/2003. Appointment as Technical Consultant (CTU) in a case relating to illegal spills of contaminated materials in an area of the former quarry located in Brescia.

2013

Free extra-institutional assignment for the design of reforestation projects in Benin as part of the Coo-Ben-Fix Project, proposed by Atout African - Arch It, a non-profit international solidarity association.

1997 - 1999

Research collaborator at the Experimental Centre for Soil Study and Analysis (CSSAS) of DISTA, University of Bologna.

1997

Scholarship holder of the Province of Parma for research on the theme "Cartography, remote sensing and GIS for educational purposes".

1995 - 1996

Scholar of the National Research Council for research on the theme "Impact of agro-technologies on agricultural systems and the environment".

INSTITUTIONAL ACTIVITIES

Teaching activity

Over the years, I have given more than 1000 hours of frontal teaching. Currently, I have teaching assignments within the Bachelor of Science in Environmental Science (72729 - GEOMATICS - 6 cfu) and the Master of Science in Environmental Analysis and Management (37378 - PEDOLOGY AND SOIL MANAGEMENT - 6 cfu; 99146 - GEOGRAPHIC INFORMATION SYSTEMS - 6 cfu; 58305 - INTERDISCIPLINARY LABORATORY (Module 3) - 1 cfu) on the Ravenna Campus of the Alma Mater Studiorum - University of Bologna.

In the past, I have carried out teaching activities within the Bachelor of Science, Master of Science and Master of Science programs, within the Bachelor of Science in Agricultural Sciences and the School of Specialization in Health Physics of the University of Bologna. Altogether, I did about 2500 hours of lessons.

Teaching assignments (AA 2012-13; 2013-14; 2014-15) in the second level University Master's Degree course "Biologist for risk and quality assessment and management in living and working environments" at the School of Science of the University of Bologna.

Teaching assignment (AA 2017-18) in the first level Master's Degree course "Environmental monitoring and risk prevention for health and the environment" at the School of Science of the University of Bologna.

Over the years I have carried out training activities, as teacher, in the framework of specialization courses organized within the Faculty of Science MM. FF. NN., Agriculture, Physics, Educational Sciences and professional training bodies (C.I.P.A, AGEOFORM, OIKOS, CE.SVI.P., etc.) on territorial and environmental issues.

I have been supervisor and co-supervisor of more than 70 theses of Bachelor, Master and PhD.

Reviewing activities

I carry out reviewing activities for the following international journals:

catena: **Catena** (ISSN: 0341-8162)

chem: **Chemosphere** (ISSN: 0045-6535)

crest: **Critical Reviews in Environmental Science and Technology** (ISSN: 1547-6537)

ecolind: **Ecological Indicators** (ISSN: 1470-160X)
ecss: **Estuarine, Coastal and Shelf Science** (ISSN: 0272-7714)
energy: **Energy** (ISSN: 0360-5442)
ijp: **International Journal of Phytoremediation** (ISSN: 1549-7879)
jema: **Journal of Environmental Management** (ISSN: 03101-4797)
jsss: **Journal of Soils and Sediments** (ISSN: 1614-7480)
stoten: **Science of the Total Environment** (ISSN: 0048-9697)**PROJECTS**

Scientific responsibility for the following projects:

2003-2004

Project "Investigation on the state and dynamics of microtoxics in the Province of Ravenna". Agreement among the Provincia di Ravenna, ARPA Sez. Ravenna, Interdepartmental Centre for Environmental Science Research (CIRSA) Alma Mater Studiorum - Università di Bologna.

2003-2005

Project "Soils' quality indexes". Agreement among the Provincia di Ravenna, ARPA Sez. Ravenna, Interdepartmental Centre for Environmental Science Research (CIRSA) Alma Mater Studiorum - Università di Bologna.

2006-2007

Project "Biomass census and recycling perspectives". Agreement among the Assessorato Università e Ricerca della Provincia di Ravenna, Arpa Sez. Ravenna, Interdepartmental Centre for Environmental Science Research (CIRSA) Alma Mater Studiorum - Università di Bologna.

2006-2007

Project "Study on the enrichment of heavy metals in the soils of the Province of Ravenna". Agreement among Assessorato Università e Ricerca della Provincia di Ravenna, Arpa Sez. Ravenna, Interdepartmental Centre for Environmental Science Research (CIRSA) Alma Mater Studiorum - Università di Bologna.

2006-2007

Project "P.R.E.A. - Experimental research project for the Energetic-Agronomic enhancement of organic matrices derived from agro-zootechnical sector ". Agreement among the Provincia di Ravenna, Soc. R.E.S., ARPA sez. Ravenna, Interdepartmental Centre for Environmental Science Research (CIRSA) Alma Mater Studiorum - Università di Bologna.

2007

Project "Agriculture that is good for the land". Project commissioned by the Confederazione Italiana Agricoltori (C.I.A.) of Ravenna to the Interdepartmental Centre for Environmental Science Research (CIRSA) Alma Mater Studiorum - Università di Bologna.

2007-2009

Project "For-biogas - Experimentation for the energetic-agronomic valorization of the organic fraction of solid urban waste and sewage sludge". Agreement among the Provincia di Ravenna, HERA, Interdepartmental Centre for Environmental Science Research (CIRSA) Alma Mater Studiorum - Università di Bologna.

2007-2009

Project "CITRORAME - Reducing the release of heavy metals into the environment through low input defence strategies: study and verification of the effectiveness of citric acid as a synergist of the fungicide activity of copper on grapevines and tomatoes". Agreement between l'Azienda Agraria Sperimentale "Mario Marani" and the Interdepartmental Centre for Environmental Science Research (CIRSA) dell'Alma Mater Studiorum - Università degli Studi di Bologna.

2008

Project "Hydrosalinity - Experimentation of crop models with high irrigation efficiency and hydro-saline compatibility for some horticultural species". Agreement between the Azienda Agraria Sperimentale "Mario Marani" and the Interdepartmental Centre for Environmental Science Research (CIRSA) dell'Alma Mater Studiorum - Università degli Studi di Bologna.

2021-ongoing

Project "Study of pedological, hydrological and geological characteristics and their interaction with the reproductive dynamics of the flag species *Puccinellia fasciculata* for the conservation of priority habitat 1340* in the Salse di Nirano Nature Reserve - Multi-annual and multidisciplinary research". Research agreement

between the Municipality of Fiorano Modenese and the Dip. BiGeA of Alma Mater Studiorum - University of Bologna.

2022

PSR-ER - 2022, Measure 16.1.01. "ENOCHAR" - Application of innovative matrices (compost and biochar) for the reduction of CO₂ releases to the atmosphere, synthetic inputs in vineyards and for the preservation of soil fertility exposed to the effects of climate change.

Participation in the implementation of the following research projects:

PRIN 2001

"Structure and function of metal proteins involved in biological cycles: a post-genomic molecular approach".

Scientific coordinator Prof. I. Bertini.

PRIN 2002

"Transport of oxanionic nutrients to the soil-root interface and to the apoplast and influence of metallic interferents: a study model". Scientific coordinator Prof. Z. Varanini.

PRIN 2004

"Chemical and biological indicators for a genetic definition and qualitative evaluation of the brown soils of the Po Valley". Scientific coordinator Prof. S. Silva.

2004-2005

Project "PROGWORM - Development of an integrated methodology to assess possible soil contamination by biomarkers and sentinel worms". Scientific coordinator Prof. E. Fabbri.

2004-2007

Program for monitoring and safeguarding the S.Vitale and Classe Pinewoods. Research agreement between the Comune di Ravenna and the Interdepartmental Centre for Environmental Science Research (CIRSA) Alma Mater Studiorum - Università di Bologna. Scientific coordinator Prof. G. Gabbianelli.

PRIN 2005

"The transformations of landscapes in rural areas: the reasons for change and possible future scenarios. Interdisciplinary insights for the protection, management and planning". Scientific coordinator Prof. P. Tassinari.

2006

2006

Progetto "BEACHMED-e - The strategic management of coastal defence for a sustainable development of the coastal areas of the Mediterranean". (PIC INTERREG IIIC – Zona Sud OCR codice 3S0155R).

PRIN 2007

"Geochemical balance for the evaluation of agri-environmental quality in a complex territorial system: the case study of the Ravenna area". Scientific coordinator Prof. U. Masi.

2009-2010

Progetto "Coastal salt intrusion project (C.S.I.). Expected interactions and territorial-environmental impacts on the Ravenna coast induced by possible salt intrusion phenomena". Scientific coordinator prof. G. Gabbianelli.

2011-2014

Project Technopole Emilia-Romagna Region. Interdepartmental Centre for Industrial Research (CIRI) Energy and Environment - U. O. Bioenergy. POR-FESR. Responsibility Prof. E. Tagliavini.

2011-2015

Project Technopole Emilia-Romagna Region. Interdepartmental Centre for Industrial Research (CIRI) Energy and Environment - U. O. Biomasses. Responsibility Prof. E. Tagliavini.

2013-2016

Project "RIGED-Ra - Project for the restoration and management of the Ravenna coastal dunes". Scientific coordinator Prof. G. Gabbianelli.

2018-ongoing

Project "ENOCHAR – Carbon conservation in agriculture" – Evaluation of the effects of the application of biochar to soil, alone or mixed with compost, on soil fertility and physical properties as well as the vegetative-productive response of the vineyard under field conditions in the medium-long term. Agreement among University of Bologna, CA.VI.RO., C.R.P.V.

2019

Project Technopole Emilia-Romagna Region. Interdepartmental Centre for Industrial Research (CIRI) Renewable Sources, Environment, Sea and Energy (FRAME). Responsibility Prof. F. Passarini.
2021-ongoing

Project "Black to the future - biochar and compost as soil amendment". European Institute of Innovation & Technology (EIT) FOOD – Collaboration with Consejo Superior de Investigaciones Cientificas (CSIC), Cyprus University of Technology (CUT), CAVIRO, ENOMONDO, University of Bologna. Partner, Principal Investigator and Task leader.

Membership in groups / associations

SISS - Italian Society of Soil Science

SIPE - Italian Society of Pedology

ESSC - European Society for Soil Conservation

IUSS - International Union of Soil Science

CIRI-FRAME - Interdepartmental Centre for Industrial Research, Renewable Sources, Environment, Sea and Energy

CIRSA - Interdepartmental Centre for Environmental Science Research

VEDIAMOCI CHIARO Committee

RESEARCH INTEREST

- Surveys and characterization of soils in different environmental contexts.
- Study of total, pseudo total and bioavailable content of soil elements in relation to contamination phenomena.
- Study on the phytostabilization and phytoextraction capacity of herbaceous species for use in land reclamation interventions (phytoremediation).
- Study of soils in coastal environments in relation to salinization and submersion processes (Wassents).
- Influence of salt wedge intrusion on soil characteristics and crop productivity.
- Role of soil in the dispersion of pollutants in life cycle assessment (LCA) analysis.
- Study of carbon stock variations in soils in relation to different management strategies.
- Characterization of digestates and biochar derived from different biomasses for their use in agriculture.
- Territorial transformations and GIS.

PERSONAL SKILLS

I am Italian mother tongue. Other languages English (advanced user), German (basic user).

I have excellent communication skills acquired during my twenty years of teaching experience in high schools, in teachers updating courses and within the university and master courses of first and second levels. Within the university courses, the evaluations provided by the students have always been excellent.

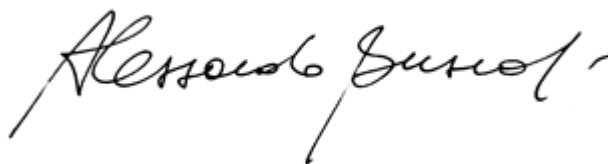
Over the years I have been scientific director of several research projects and I have been involved in the management of human resources, as well as instrumental and financial aspects, organizing the different activities. I have also been a member of the organizing committee of several conferences of the Italian Society of Soil Science (SISS), the Italian Society of Pedology (SIPE) and the European Society for Soil Conservation (ESSC). I have had the opportunity to carry out consulting activities as C.T.U. and C.T.P., on environmental and soil issues. I participated in the preparation of a reforestation project in Benin, presented by a non-profit organization. I was part of the working group on the Quality Management System of CIRI-Energia Ambiente. I have excellent skills on digital image processing and office suite tools (word processor, spreadsheet and presentation software) acquired during the activities of preparing technical reports on projects, scientific reports for conference activities, preparation of scientific articles and preparation of teaching materials.

I am an excellent user of GIS (Geographical Information Systems) and GPS (Geographical Positioning Systems) systems used in the usual professional, research and educational activities.

Skills in gardening, carpentry, hydraulics, masonry, cooking, domestic activities, acquired during forty years of direct experience. I play, at amateur level, various instruments including guitar, sax and piano. I usually practice cycling both on streets and off road, jogging, swimming and archery. I love music and reading.

Driving licence Motorcycles, A; Cars B.

Ravenna, 23/07/2022



Alessandro Buscaroli

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