



CURRICULUM VITAE

Prof. Teodoro Massimo Miano

Full Professor,

SSD **AGR/13 – Agricultural Chemistry**

[SSD **07/E1 – Chemistry and Plant Genetics**]

Dipartimento di Scienze del Suolo, della Pianta e degli Alimenti

Università degli Studi di Bari "Aldo Moro", Via Amendola, 165/A - 70126 Bari

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Education and professional accomplishments

- 1978** *Scientific High School, Brindisi*
- 1984** *Laurea in Agricultural Sciences (Soil Chemistry), Agricultural Faculty, University of Bari, Italy*
- 1984** *Professional Agronomist*
- 1997** *Habilitation Degree*
- 1988 - 1992.** *Assistant Professor, Inst. of Agricultural and Forest Chemistry, University of Basilicata, Italy*
- 1992 - 2000.** *Associate Professor, Inst. of Agricultural Chemistry, University of Bari, Italy*
- 2001 - present.** *Full Professor, Dept. Biology and Chemistry of Agroforestale e Ambientale, University di Bari, Italy*
- 2011 - present.** *Head, Dept. of Soil, Plant and Food Sciences, University of Bari, Italy*

Scientific experience (*fellowships, contracts, stages*)

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- 1984 - 1986.** *Research assistance, Inst. of Agricultural Chemistry, University of Bari, Italy (Prof. Nicola Senesi)*
- 1986** *Deutsche Forschungsgemeinschaft* fellowship, (6 months), *Lehrstuhl für Bodenkunde und Bodengeographie, University of Bayreuth, Germany (Prof. Wolfgang Zech)*
- 1987** *C.N.R. Fellowship, Institute of Agricultural Nematology, Bari, Italy*
- 1987** *C.N.R. Fellowship, Department of Soil and Environmental Sciences, University of California, Riverside, U.S.A. (Prof. Garrison Sposito)*
- 1986 - 1988.** *Short research contracts, Inst. of Agricultural Chemistry, University of Bari, Italy (Prof. Nicola Senesi)*
- 1987 - 1988.** *Short research contracts, Inst. of Agricultural and Forest Chemistry, University of Basilicata, Potenza, Italy (Prof. Giuseppe Piccarreta)*
- 1987 - present.** *Component and responsible of research units and projects: University Ministry, Agricultural Ministry, National Research Council, European Commission, Regional Environmental Protection Agency., Puglia Region.*
- 1992** *Short research period, Geologisches Institut, Universität Bern, Switzerland (Dr. William Shotyk)*





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Chemistry and Biochemistry Section

- 1993** Short research period, Norwegian Institute for Water Research (NIVA), Oslo (**Dr. Egil Gjessing, Dr. Ron L. Malcolm**)
- 1994** Short research period, Geologisches Institut, Universität Bern, Switzerland (**Dr. Karl Ramseyer**)
- 1995** Short research period, Marine Institute, University of Georgia, Sapelo Island, Georgia, USA (**Dr. James J. Alberts**)
- 1999** Short research period, Marine Institute, University of Georgia, Sapelo Island, Georgia, USA (**Dr. James J. Alberts**)

Assignments

- 1990 - 1993.** Secretary-Treasurer, Italian Society of Agricultural Chemistry
- 1994 - 2004. Secretary, Newsletter Editor, Int. Humic Substances Society (IHSS).**
- 1994 - 2005.** Member, Editing Committee "Bollettino della Società Italiana di Scienza del Suolo"
- 1997 - present.** Member, International Committee, International Symposia of Environmental Biogeochemistry (ISEB)
- 1997 - 1999.** Member, Board of Directors, Italian Society of Agricultural Chemistry
- 1997 - 2000.** Senior Advisor, Organic Agriculture Sector, Mediterranean Agronomic Institute/CIHEAM, Valenzano (Bari), Italy
- 1998 - present.** Research Project Evaluator: Italian University Ministry, Padova University, Georgian Academy of Science; US-Israel Binational Science Foundation; NATO Collaborative Research Grants; Research Council of Norway; Research Council of Georgia
- 1999 - 2003.** Advisor, Pedology and Agricultural Chemistry, Puglia Region - Technical University - Bari "Alta Murgia Regional Park.
- 2002 - present.** Coordinator, Scientific and Teaching Programs, Diploma and M.Sc. in Organic Farming, Mediterranean Agronomic Institute/CIHEAM, Valenzano (Bari), Italy
- 2003 - 2010.** Member and President, Commission II "Soil Chemistry", Board of Directors, Italian Society of Soil Science
- 2003 - 2008.** University Delegate, InterUniversity Consortium "Chemistry of Soil-Plant System (Bologna University)
- 2004 - 2008. President, Scientific Advisory Committee, CIHEAM, Paris, France**

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Scientific societies:



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Chemistry and Biochemistry Section

- 2004 - 2011. President, Soil Science Systems Division, member of the Scientific Program Committee, European Geosciences Union**
- 2005 - 2007.** Member, Board of Directors, Italian Society of Agricultural Chemistry
- 2006 - present.** Chair, Examination Committee, MSc in Mediterranean Organic Farming, Mediterranean Agronomic Institute, Valenzano, Bari
- 2006 - present. Vice-Chair, Commission 2.2 “Soil Chemistry”, International Union of Soil Sciences**
- 2007 - present.** Member, Working Group Ministry of Agriculture “Methods and Regulatory issues”, Rome, Italy
- 2007 - present.** Member, Evaluation Committee for Scientific Research Projects in Agriculture, Ministry of Agriculture, Rome, Italy
- 2007 - 2010.** Associate Editor, *Applied and Environmental Soil Science*
- 2008 - 2009.** President, Evaluation Committee for Scientific Research Projects in Organic Agriculture, Ministry of Agriculture
- 2008 - present. Coordinator, PhD Program in Agricultural Chemistry, Univ. of Bari, Italy**
- 2008 - 2012. Deputy President, European Confederation Soil Science Societies**
- 2009 - present.** Component, Scientific Committee, Rural Development and Sustainable Agriculture Course, Mediterranean Agronomic Institute/CIHEAM, Valenzano (Bari), Italy
- 2009 - 2012.** Project Leader, BIOLMED Project “Transnational Network for enhancing the Mediterranean organic olive-growing competitiveness”
- 2010 - present. National Coordinator, International Humic Substances Society (IHSS) – Italian Chapter**
- 2010 - 2012.** Vice President / President Elect, International Humic Substances Society
- 2010 - 2011.** Regional Agency for Research and Technology. Member, Committee on Quality Evaluation of Public Italian Universities
- 2011 - present.** Member, Board of Directors, Italian Society of Soil Science
- 2011 - present. Head (elected), Dept. of Soil, Plant and Food Sciences, University of Bari, Italy**
- 2012 - 2014. President, International Humic Substances Society**
- 2012 - present.** Member, Technical Committee on Fertilizers, Ministry of Agriculture, Rome, Italy
- 2013 - present. Academic Senate, University of Bari.**

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Awards

- 1991 Premio di studi "Luigi Perdisa"**, University of Bologna, Faculty of Agriculture and Edagricole Publisher (*ex aequo*, 2 prizes for 1991)
- 2012 – presente. Chair**, Philippe Duchafour Award Committee, Soil Science Systems Division, European Geosciences Union
- 2012 Honorary Chair**. XV Humic Science & Technology Conference, Northeastern University, Boston
- 2013 Union Service Award**. European Geosciences Union, Vienna, april 2013

Scientific collaborations (1986 – present)

- Geologisches Institute, Univ. Bern, Switzerland
- Marine Institute, Univ. of Georgia, Sapelo Island, USA
- Skidaway Institute of Oceanography, Georgia, USA
- Dept. Soil, Water & Climate, Univ. Minnesota, St. Paul, MN, USA
- Environ., Science, Policy & Management Dept., Univ. of California, Berkeley, USA
- Agder College, Kristiansand, Norway
- Inst. Soil Science & Agric. & Environ. Protection, Agric. Univ. of Wroclaw, Poland
- Faculty of Agriculture, University of Technology & Life Sciences, Bydgoszcz, Poland
- Chemistry Dept., South Dakota State Univ., Brookings, SD, USA
- Dept. Chemical & Environmental Sciences, Univ. of Limerick, Irlanda
- Dept. Soil Science & Soil Geography, Univ. of Bayreuth, Germania
- Bayreuth Institute of Terrestrial Ecosystem Research (BITÖK), Germany
- Institut für Bodenökologie, GSF, Neuherberg, Germany
- Dept. Soil & Water, Hebrew Univ. of Jerusalem, Rehovot, Israel
- Inst. of Environmental Geochemistry, University of Heidelberg, Germany
- CIHEAM – Istituto Agronomico Mediterraneo, Valenzano, Bari
- Centro Ricerca per lo Studio delle Relazioni tra Pianta e Suolo, CRA, Roma, Gorizia
- Unità di Ricerca per i Sistemi Colturali degli Ambienti Caldo Aridi, CRA-SCA, Bari
- Istituto per lo Studio degli Ecosistemi (ISE), CNR, Pisa
- ARPA Puglia, Bari

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- ❑ Department of Renewable Resources, University of Alberta, Edmonton, Canada
- ❑ USDA-ARS-National Laboratory for Agriculture and Environment, Ames, Iowa, USA

Academic activities (*past*)

- ★ UNIVERSITY OF BARI, FACULTY OF AGRICULTURE:
 1. MEMBER, GOV. BOARD;
 2. REFERENT, COMPUTER NETWORK;
 3. MEMBER, CENTRAL LIBRARY TECHNICAL AND SCIENTIFIC COMMITTEE;
 4. TEACHING PLANNING AND EVALUATION COMMITTEE; ENGLISH LANGUAGE EVALUATION COMMITTEE.
- ★ EVALUATION COMMITTEE FOR POSITIONS OF:
 1. Assistant Professor;
 2. First Researcher, CRA-MIPAF;
 3. PhD Programs of: i) Agricultural Chemistry; ii) Pedology; iii) Forest Management; iv) Environmental Sciences; v) Plant Biology; vi) Plant Production; vii) Applied Chemistry and Biochemistry;
 4. Post-Doctoral Fellowships;
 5. Associate Professor;
 6. Full Professor;
 7. Research Associate.
- ★ QUALITY EVALUATION, ITALIAN UNIVERSITY CONSORTIUM (CRUI). CAMPUS ONE PROJECT (ACADEMIC YEARS 2001/02 – 2003/04)

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Academic activities (*present*)

- ★ COORDINATOR, PHD PROGRAM IN Agricultural Chemistry, Dept. Soil, Plant and Food Sciences, University of Bari, Italy
- ★ ACADEMIC COORDINATOR, SOCRATES - Long Life Learning Program for: Agricultural University of Wroclaw, Poland; Aristotelis University di Salonicco, Greece; University of Technology & Life Sciences, Bydgoszcz, Poland
- ★ MEMBER, various COMMITTEES, University of Bari
- ★ HEAD, DEPARTMENT OF SOIL, PLANT AND FOOD SCIENCES (DI.S.S.P.A.), University of Bari "Aldo Moro" (2011 - present)
- ★ MEMBER, ACADEMIC SENATE, University of Bari "Aldo Moro" (2012 - present)

Teaching Activities (*courses, lab classes, seminars*)

University of Basilicata, Potenza (1988-1992)

Seminars and lab courses:

Soil Chemistry, Forest Chemistry, Climatology and Geopedology, Forest Chemistry and Technology, Organic Chemistry II, Mineralogy and Geology

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Chemistry and Biochemistry Section

Università of Bari (1992 – present)

Seminars and lab courses:

Soil Chemistry and Pedology, Forest Chemistry and Technology, Fertilization Chemistry, Chemistry and Biochemistry of Agrochemicals, Environmental Chemistry, Analytical Chemistry

PhD Courses:

Soil Colloidal Chemistry; Environmental Chemistry

Tutoring, advising and coordination of scientific programs of PhD students, post docs and collaborators

C.I.E.H.A.M., Valenzano, Bari (2001 - present)

Post-University Diploma and Master of Science in Mediterranean Organic Farming and Sustainable Agriculture

Soil Fertility; Introductory Course: Practical work and thesis selection

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Editing activities

B. Marano e T.M. Miano (Eds.) *Atti del VII° Convegno Nazionale della Società Italiana di Chimica Agraria*, Congedo, Galatina, 1991.

N. Senesi e T.M. Miano (Eds.) *Riciclo di biomasse di rifiuto e di scarto e fertilizzazione organica del suolo. Realtà e prospettive, vantaggi e rischi per l'agricoltura e l'ambiente*, Patron Editore, Bologna, 1991.

N. Senesi e T.M. Miano (Eds.) Abstracts of Invited and Volunteered papers of 6th International Meeting of the International Humic Substances Society on *Humic Substances in the Global Environment and Implications in Human Health*, 1992.

N. Senesi e T.M. Miano (Eds.) Proceedings of 6th International Meeting of the International Humic Substances Society on *Humic Substances in the Global Environment and Implications in Human Health*, Elsevier, Amsterdam, 1994.

N. Senesi e T.M. Miano (Eds.) Riassunti e Lavori del I° Convegno Nazionale International Humic Substances Society - Sezione Italiana "Le Sostanze Umiche nell'Ecosistema. Aspetti Scientifici ed Applicativi", Università di Bari, Bari, 1995.

N. Senesi e T.M. Miano (Eds.) Abstracts of Invited and Volunteered Papers of XIII International Symposium on Environmental Biogeochemistry on *Matter and Energy Fluxes in the Anthropocentric Environment*, 1997.

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- N. Senesi, R.G. Qualls, T.M. Miano (Eds.). Proceedings of the XIII International Symposium on Environmental Biogeochemistry, Organic Geochemistry (special issue), Vol. 30 (6), 1999.
- N. Senesi, J.A. Rice, T.M. Miano (Eds.). Selected papers presented at the XIII International Symposium on Environmental Biogeochemistry, Chemosphere (special issue), Vol. 39 (2), 1999.
- N. Senesi, T.M. Miano (Eds.) Il suolo: sistema centrale nell'ambiente e nell'agricoltura. Atti del Convegno Nazionale Società Italiana della Scienza del Suolo. SISS, Bari, 2007. ISBN 978-88-902831-0-9.
- T. Miano, B. Pezzarossa (Eds.). Qualità del suolo, alimenti e salute. Atti del I Congresso Nazionale, Palermo 2007. Biologi Italiani, XXXVIII, Vol. 4, 5, 6, 2008.
- L. Szajdak, T. Miano (Eds.). Processes, mechanisms and utilization of organic soils. Selected papers presented at the EGU General Assembly, Vienna 2007. Plant & Soil. Part I: Special Issue, 315:1-2, doi 10.1007/s11104-008-9825-8, 2009.
- B. Pezzarossa, T. Miano (Eds.). Qualità del suolo, alimenti e salute. Atti del II Congresso Nazionale, Bari 2008. Biologi Italiani, XXXIX, Vol. 6, 8, 9, 10, 2009.

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International Cooperation Projects

- 2006 – 2008 Rationalization of Ras El Ain Irrigation systems, Siria. Expert, irrigation waters; renovation and restructuring of soil, water, fertilizers laboratori.
- 2008 – 2012 BIOLMED - Transnational Network for enhancing the Mediterranean organic olive-growing competitiveness, Italia, Spagna, Grecia, Malta. Project Leader, Management and coordination activities.
- 2009 – 2012 Olio del Libano, Lebanon. Expert, olive oil wastewaters; renovation and restructuring of soil, water, fertilizers laboratori.
- 2009 – present. CANA-CNRS. Expert, Bathymetry study of the near shore Lebanese coast; marine fauna monitoring.
- 2012 – present. Olio del Libano 2, Lebanon. olive oil wastewaters; renovation and restructuring of soil, water, fertilizers laboratori.

Scientific Societies

International Union of Soil Sciences (IUSS), *Vice Chair Commission II*

International Humic Substances Society (IHSS), *Secretary, V. President, President, Italian Coordinator*

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European Geosciences Union, *SSS Division President, Chair P. Duchafour Award Committee*

International Symposium of Environmental Biogeochemistry (ISEB), *International Committee*

Soil Science Society of America (SSSA)

Società Italiana della Scienza del Suolo (SISS), *President Commission II, Member*

Società Italiana di Chimica Agraria (SICA), *Member, Advisory Board*

National Geographic Society

Congress Activities (*Scientific and Organizing Committee*)

- 1989** VII° Convegno Nazionale Società Italiana di Chimica Agraria, Potenza 12-14 ottobre 1989
- 1990** VIII° Convegno Nazionale Società Italiana di Chimica Agraria, Bari 25-27 settembre 1990
- 1991** Incontro di Studi "Movimenti Franosi e Metodi di Stabilizzazione", Facoltà di Agraria, Università della Basilicata, Potenza, 16-17 gennaio 1991
- 1991** Convegno Nazionale "Biomass '91. Riciclo di biomasse di rifiuto e di scarto e fertilizzazione organica del suolo", Bari 6-7 giugno 1991
- 1992** 6th International Meeting International Humic Substances Society, Monopoli, Bari, 20-25 Settembre 1992
- 1994** VII° Congresso Internazionale "Mediterranean Conference on Organic Wastes Recycling in Soils", Ordine Nazionale dei Biologi, Vieste (FG), 22-25 Settembre 1994
- 1994** Final Contractors Meeting STEP Project - Area 5, Commission European Communities, Monopoli, Bari, 15-19 Ottobre 1994
- 1995** I° Convegno Nazionale International Humic Substances Society - Sezione Italiana, Bari, 4-5 Maggio 1995
- 1997** XIII International Symposium on Environmental Biogeochemistry, Monopoli, Bari, 21-27 Settembre 1997
- 1998** Northeastern Seminar on Humic Substances II, Boston, USA, 26-27 Marzo 1997
- 1998** 9th International Meeting International Humic Substances Society, Adelaide, Australia, 21-25 Settembre 1998
- 1998** Il Compostaggio in Ambito Agricolo. Promozione ed Impiego di Compost in Agricoltura Biologica, CIHEAM/IAM-B, Valenzano (BA), 12 Giugno 1998

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- 1999** *Northeastern Seminar on Humic Substances III*, Boston, USA, 22-23 Marzo 1999
- 1999** *2nd Symposium Protection of Groundwater from Pollution and Seawater Intrusion*, Bari, 27 Settembre – 1 Ottobre 1999
- 2002** Giornate di Lavoro su: Campionamento ed Analisi di Suoli e Sedimenti, Verbania-Pallanza, 4-5 aprile 2002
- 2002** Giornate di Lavoro su: Campionamento ed Analisi dei Suoli e Siti Contaminati, Napoli, 14-16 novembre 2002
- 2003** Giornate di Lavoro su: Inquinamento e Degradazione del Suolo. Aspetti fisici, chimici e biologici. Monopoli (Bari), 16-18 ottobre 2003
- 2003** 5th Meeting of the Italian Chapter of the IHSS, "*The Role of Organic Matter in a Sustainable Agriculture*", Lerici, Italy, June 5-6, 2003
- 2004** Un nuovo Ruolo per l'Agricoltura. Ciclo di seminari sulla sacralità della Natura, Valenzano (Bari), 31 gennaio 2004
- 2004** *Soil Organic Matter and Organo-Mineral Interactions*. European Geosciences Union, Nice, France, 25-30 april 2004
- 2004** Il Riciclo Organico al Servizio dell'Agricoltura nel Rispetto dell'Ambiente, Castellana Grotte (BA), 27-28 maggio 2004
- 2004** La percezione della Scienza nella Società Occidentale. Torino, 15-16 dicembre 2004
- 2005** Dissodamento e spietramento della Murgia: disastro ecologico o tecniche agronomiche di messa in cultura dei terreni, Facoltà di Agraria, Bari
- 2005** *Functional Role of the Dissolved Organic Carbon (DOC) in Soil and Aquatic Systems*, Wien, Austria, 24-29 april 2005
- 2005** Convegno Annuale Società Italiana della Scienza del Suolo, Bari, 21-24 giugno 2005
- 2005** Int. Conference on "*Water, Land and Food Security in the Arid and Semi-Arid Regions*", CIHEAM/MAI, Bari, 6-11 september 2005
- 2005** Simposio "*Il suolo come patrimonio culturale*", Roma, 17-18 novembre 2005
- 2005** Giornate di Lavoro su "*Suolo e Qualità dell'Ambiente Urbano*", Torino, 6-7 dicembre 2005
- 2005** VI Convegno Nazionale, Sezione Italiana *International Humic Substances Society*, Perugia, 15-16 dicembre 2005
- 2006** EGU General Assembly, Wien, Austria, 2-7 april 2006
- 2006** Convegno Annuale Società Italiana della Scienza del Suolo, Imola, 27-30 giugno 2006

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Chemistry and Biochemistry Section

- 2006** Seminario di studio "La contaminazione del suolo e gli effetti sull'ambiente", Campobasso, 14 novembre 2006
- 2007** EGU General Assembly, Wien, Austria, 15-20 april 2007
- 2007** VII Convegno Nazionale, Sezione Italiana *International Humic Substances Society*, Catania, 15-16 giugno 2007
- 2007** Convegno Annuale Società Italiana della Scienza del Suolo, Milano-Chiavenna, 9-13 luglio 2007
- 2007** Qualità del Suolo, Alimenti e Salute, Palermo, 24-26 ottobre 2007
- 2008** EGU General Assembly, Wien, Austria, 13-18 april 2008
- 2008** Qualità del Suolo, Alimenti e Salute, Bari, 22-24 ottobre 2008
- 2009** EGU General Assembly, Wien, Austria, 19-24 april 2009
- 2009** *XIX International Symposium on Environmental Biogeochemistry*, Hamburg, 14-18 September 2009
- 2010** EGU General Assembly, Wien, Austria, 2-7 may 2010
- 2010** Qualità del Suolo, Alimenti e Salute, Napoli, 20-22 maggio 2010
- 2011** EGU General Assembly, Wien, Austria, 3-8 april 2011
- 2011** Convegno annuale Società Italiana della Scienza del Suolo, Ravenna-Imola, 7-9 giugno 2011
- 2011** Convegno annuale Società Italiana di Chimica Agraria, Foggia, 21-23 settembre 2011
- 2012** EGU General Assembly, Wien, Austria, 23-27 april 2012
- 2012** EUROSIL 2012, Bari, 2-6 july 2012
- 2012** WORLD SOIL DAY, Bolzano, 4-5 dicembre 2012
- 2013** EGU General Assembly, Wien, Austria, 7-12 april 2013
- 2013** BCD2013, Bari, Italy, 17-20 october 2013

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Invited talks and Seminars

1. *A comparison of fluorescent spectra of model organic polymers and humic materials*. U.S. Geological Survey, Denver, Colorado, U.S.A., 2 aprile 1987
2. *Inquinamento in agricoltura: gli effetti sul suolo*. Convegno Nazionale "Agricoltura, Ambiente, Salute", Lecce, 9-10 giugno 1990
3. *Ricerca e sperimentazione in Chimica del Suolo*. Tavola Rotonda S.I.S.S., Roma, C.N.R., 16 dicembre 1993

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4. *Comparative characterization of organic matter of terrestrial and aquatic environments by means of fluorescence spectroscopy.* Geologisches Institut, Universität Bern, Svizzera, 24 maggio 1994
5. *Fluorescence spectra of humic substances.* Dept. of Soil Science, University of Minnesota, St. Paul, U.S.A., 5 settembre 1995
6. *Spectroscopy applications and opportunities in soil and environmental sciences.* I Simpósio Nacional de Instrumentação Agropecuária, São Carlos, 27-29 novembre 1996
7. *Degradation and/or modifications of ligno-cellulosic residues during composting processes.* Convegno Nazionale Sezione Italiana I.H.S.S. "Dal suolo alla pianta, dalla pianta al suolo", Udine, 12-13 dicembre 1996
8. *Acidi umici: meccanismi d'azione e loro effetti sullo sviluppo dei vegetali.* Riunione Chimberg, Sorrento, 18-19 novembre 1997
9. *L'effetto delle sostanze umiche e meccanismi d'azione sullo sviluppo dei vegetali.* Accademia Pugliese delle Scienze, Bari, 28 gennaio 1998.
10. *Nature, origin and role of natural organic matter (NOM) in soils.* 7th Nordic Symposium on Humic Substances in Soil and Water, Kristiansand, Norway, 6-9 June 1999.
11. *Interaction processes between organic and inorganic contaminants and soil organic components.* 2nd Symposium Protection of Groundwater from Pollution and Seawater Intrusion, Bari, 27 Settembre – 1 Ottobre 1999.
12. *Organic matter and metal distribution in an ombrothrophic bog profile: mobile versus immobile organic matter.* Geoökologisches Kolloquium, Bayreuth, Germany, 24 gennaio 2002.
13. *La caratterizzazione della sostanza organica e sue proprietà fertilizzanti.* Giornata di studio "La fertilizzazione organica: elementi nutritivi a lenta cessione", Osservatorio Nazionale Permanente Fertilizzanti, Roma, 18 gennaio 2002.
14. *Metodi analitici per la determinazione delle caratteristiche chimiche del suolo e per l'estrazione e la caratterizzazione della sostanza organica naturale.* (Coordinatore di Gruppo). Giornate di Lavoro su: Campionamento ed Analisi di Suoli e Sedimenti, Verbania-Pallanza, 4-5 aprile 2002.
15. *Il ruolo della sostanza organica naturale (NOM) nel suolo e le implicazioni ambientali.* Scuola Superiore Italiana di Pedologia, Dipartimento di Agronomia, Coltivazioni Erbacee e Pedologia (ACEP), Università di Palermo, Palermo, 12 giugno 2002.
16. *Effetti diretti ed indiretti dei reflui oleari sulle proprietà del terreno.* Giornata di Studio su: I reflui oleari: da rifiuto a risorsa, Accademia dei Georgofili, Firenze, 3 ottobre 2002.

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17. *Geochemical role of available humus or dissolved organic matter (DOM) in soils and sediments*. Goldschmidt Geochemistry Conference, Kurashiki, Japan, 7-12 Sept. 2003.
18. *Qualità del Suolo: sostanza organica nativa e di apporto*. Un nuovo Ruolo per l'Agricoltura. Ciclo di seminari sulla sacralità della Natura, Valenzano (Bari), CIHEAM, 31 gennaio 2004.
19. *Organic farming: health, nutrition and organoleptic quality*. Food Safety and Quality: state of research in the southern mediterranean countries, Valenzano (Bari), CIHEAM, July 1-2, 2004.
20. *Suoli e vini*. Storie d'argilla. Ceramica e archeometria in Puglia, Rutigliano (Bari), Museo Civico Archeologico, 22 gennaio 2005.
21. *Humic Acids and Water Extractable Organic Matter (WEOM) along a deep soil profile*. Organic Matter and Humic Substances: Properties, Dynamics and Effects on Soil Quality. Bahia Blanca, Argentina, June 2-3, 2005.
22. *Problemi e prospettive dell'inquinamento e della degradazione del suolo*. Seminario di studio SISS – Commissione II su “La contaminazione del suolo e gli effetti sull'ambiente”, Campobasso, 14 novembre 2006.
23. *La centralità del suolo nelle dinamiche ambientali*. XX Congresso Internazionale Ordine Nazionale dei Biologi, Abano Terme (PD), 26-30 settembre 2007.
24. *Water and soil properties in the Ras El Ain area*. Final Workshop "Rationalization of Ras El Ain Irrigation systems", Damasco, 18 february 2008.
25. *Il problema dello spietramento come elemento di dissesto idrogeologico*. Terra & Acqua, V Mediterre, Bari, 9 maggio 2008.
26. *The olive oil campaign is coming: how to face and solve the social and the environmental implications of the olive oil mill wastewaters*. Ministry of Agriculture, Beirut, 30 september 2009.
27. *Past human activities and environmental changes as recorded by humic acids from raised bogs*. 15th IHSS, Tenerife, 27 june – 2 july 2010.
28. *Understanding the contribution of peat humic acids to the consistency of past human activity and environmental change reconstructions*. HSE9, Karpacz, Polonia, 25-29 maggio 2011.
29. *Innovazioni possibili per la difesa del suolo dalle azioni antropiche*. INFODAY “SOSTENIBILE TERRA”. Politecnico di Bari, 24 gennaio 2011.
30. *Does the humic acid fraction mirror paleoenvironmental information archived in bulk peat from ombrotrophic bogs?* XV Humic Science & Technology Conference, Northeastern University, Boston, 14-16 march 2012.
31. *A brief history of the International Humic Substances Society*. 16th IHSS, Hangzhou, 9-14 september 2012.





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32. *Gestione della sostanza organica e processi degradativi nel suolo*. Congresso Annuale AISSA, Palermo, 28-29 novembre 2012.

REFEREE activities (1988 – present)

Referee of scientific manuscript and research projects for National and International Organisms, scientific journals, Proceedings, Volumes

Institutions:

- ★ NATO Collaborative Research Grants
- ★ US-Israel Binational Science Foundation
- ★ Research Council of Norway
- ★ Research Council of Georgia
- ★ Università di Padova (Fondi di Ateneo)
- ★ PRRIITT Regione Emilia Romagna
- ★ Ministry of Agriculture, Forestry and Food, Research Committee
- ★ Core Organic II, European Commission

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Journals:

Agricoltura Mediterranea, Agricoltura e Ricerca, Agrochimica, Agronomie, Applied and Environmental Soil Science, Environment International, Environmental Science & Technology, Chemosphere, Geochimica Cosmochimica Acta, Geoderma, International Journal of Water, Journal of Environmental Quality, Organic Geochemistry, Proceedings: Biological Sciences, Soil Biology and Biochemistry, Thermochimica Acta, Water Research, Bollettino Società Italiana Scienza del Suolo

Laurea, Master of Science and PhD Thesis

Supervising and tutoring theses for Laurea, M.Sc. and PhD students

Laurea and Master of Science students, University of Bari

- Aspetti tecnologici e produttivi di una cartiera dotata di impianto di riciclaggio della carta. *Gianluca Cannoletta*, 1996.
- Effetti del trattamento aerobico e anaerobico sulle caratteristiche chimico-fisiche della sassa vergine come potenziale ammendante del suolo. *Angelo Galasso*, 2001.

Scientific societies:



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- Studio preliminare di profili pedologici di una toposequenza di suoli su calcari dell’Alta Murgia. *Bruna Capurso*, 2001.
- La tutela integrata negli aspetti qualitativi e quantitativi della risorsa idrica in Puglia. Un caso di studio. *Giorgia Lubisco*, 2001.
- Tecnologia sperimentale per il trattamento di percolati di discarica. *Francesco D’Alessandro*, 2003.
- Processi di trasformazione di rifiuti mercatali: aspetti microbiologici. *Sonia Siragusa*, 2003.
- Processi di trasformazione di rifiuti mercatali: aspetti chimici. *Maria Grazia Berloco*, 2003.
- Effetto dello spietramento su alcuni parametri fisici e chimici di suoli superficiali all’interno del Parco dell’Alta Murgia. *Giuseppe Toscano*, 2004.
- L’utilizzo di compost per ridurre la biodisponibilità di Zinco in suoli contaminati. *Giuseppe Antoccia*, 2005.
- Il corretto smaltimento dei reflui oleari. *Riccardo Larosa*, 2012.

PhD students, University of Bari

15

- Processi evolutivi delle componenti organiche solubili e solide in un profilo di una torbiera ombrotrofica. *Claudio Coccozza*, a.a. 1996/97-1988/99.
- Studio geopedologico di suoli naturali ed antropici nel Parco Nazionale dell’Alta Murgia: analisi geostatistica ed indicatori di stato. *Raffaele Lopez*, a.a. 1998/99-2000/01
- Studi di profili pedologici profondi in suoli naturali ed antropizzati in area Mediterranea. *Maddalena Corvasce*, a.a. 2001/02-2003/04.
- I suoli gessosi in ambiente mediterraneo: il caso studio di Siculiana (AG). *Giuseppe Lo Papa*, a.a. 2001/02-2003/2004.
- Humification processes and trace elements geochemistry in a swiss ombrotrophic peat bog. *Claudio Zaccone*, a.a. 2003/04-2006/07.
- Effect of compost and manure amendments on zinc bioavailability, speciation and plant trans location in an artificially contaminated soil. *Ziad Al Chami*, 2003/04-2005/06.
- Chemical and photochemical fate of Rotenone in soils in relation to soil components, *Ivana Cavoski*, 2004/05-2006/07.
- Soil Fertility Management Under Organic and Precision Agriculture, *Hamada Abd El Rahman*, 2008/09 – 2010/11.

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Master of Science students, Istituto Agronomico Mediterraneo di Bari

- Effect of using water extracts of compost and organic materials on soil fertility and plant nutrition. *Ahmed Hamdy El Naggari* (Egypt), 2002.
- Overall study of compost water extract application through fertigation system in organic farming. *Jovan Nikolic* (Montenegro), 2003.
- Does organic amendment change physical, chemical and biological properties of the soil on farm scale in the short period ? *Ivana Cavoski* (Serbia), 2004.
- Effect of various amendments on the yield and product quality of tomato crop in organic farming systems. *Kawtar Kortbi* (Morocco), 2005.

Research topics

Organic matter and humic fractions of soil; Humic-like materials of fungal origin; Waste materials and biomasses recycled as soil amendments in agriculture; Pesticides interaction and sorption in soil: degradation products, metabolites and soil organic matter fractions. Metal ions, soil organic matter and its fractions. Forest soil. Soluble sugar components of forest humic profiles; Rock removal and fragmentations of natural soils in mediterranean areas. Peat and organic soil characterizations. Dissolved organic matter in natural waters and main environmental functions. Biopesticides and plant extracts biomolecules: reactions, persistence and soil interactions. Natural Organic Matter (NOM) in aquatic and terrestrial systems. Physico-chemical fractions characterization. Paleo-climatic and paleo-environmental reconstruction with anthropogenic implications through undisturbed ombrotrophic peats.

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Main scientific activities

Editorial Activity (Volumes and journal <i>special issues</i>)		12
Publications	>	100
Summaries and Abstracts in meetings and congresses (international)	>	100
Summaries and Abstracts in meetings and congresses (national)	>	50
Invited seminars and lectures		32
Meeting activities (scientific and/or organizing committees)	>	50





Selected papers

2012

Montesano F.F., Mininni C., Coccozza C., Miano T., Santamaria P., Parente A. (in print). Nursery production of lettuce transplants using a posidonia based press compost as growing substrate. *AGROCHIMICA*, ISSN: 0002-1857, 2012.

Cavoski, I., Al Chami, Z., Bouzebboudja, F., Sasanelli, N., Simeone, V., Mondelli, D., Miano, T., Sarais, G., Ntalli, N.G. Caboni, P. *Melia azedarach* controls *Meloidogyne incognita* and triggers plant defense mechanisms on cucumber. *Crop Protection*, 35: 85-90, 2012.

Mininni C., Santamaria P., Abdelrhman M.H., Coccozza C., Miano T., Montesano F., Parente A. Posidonia-based Compost as a Peat Substitute for Lettuce Transplant Production. *HORTSCIENCE* 47:1438-1444, 2012. ISSN: 0018-5345.

Zaccone C., Miano T., Shotyk W. Interpreting the ash trend within ombrotrophic bog profiles: atmospheric dust depositions vs. mineralization processes. The Etang de la Gruère case study. *PLANT AND SOIL*, vol. 353, p. 1-9, 2012. ISSN: 0032-079X, doi: 10.1007/s11104-011-1055-9

2011

Zaccone, C., Casiello, G., Longobardi, F., Bragazza, L., Sacco, A., **Miano, T.M.** - Evaluating the 'conservative' behaviour of stable isotopic ratios ($\delta^{13}\text{C}$, $\delta^{15}\text{N}$, and $\delta^{18}\text{O}$) in humic acids and their reliability as paleoenvironmental proxies along a peat sequence. *Chemical Geology*, 285: 124-132, 2011.

Dell'Aglio, M., Gaudiuso, R., Senesi, G.S., De Giacomo, A., Zaccone, C., **Miano, T.M.**, De Pascale, O. - Monitoring of heavy metals in polluted soils by Laser Induced Breakdown Spectroscopy (LIBS). *Journal of Environmental Monitoring*, 13: 1422-1426, 2011.

Zaccone, C., Sanei, H., Outridge, P.M., **Miano, T.M.** - Studying the humification degree and evolution of peat down a Holocene bog profile (Inuvik, NW Canada): A petrological and chemical perspective. *Organic Geochemistry*, 42: 399-408, 2011.

Coccozza, C., Parente, A., Zaccone, C., Mininni, C., Santamaria, P., **Miano, T.** - Chemical, physical and spectroscopic characterization of Posidonia oceanica (L.) Del. residues and their possible recycle. *Biomass & Bioenergy*, 35: 799-807, 2011.

Coccozza, C., Parente, A., Zaccone, C., Mininni, C., Santamaria, P., **Miano, T.** - Comparative management of offshore posidonia residues: Composting vs. energy recovery. *Waste Management*, 31: 78-84, 2011.





2009

Cavoski, I., D'Orazio, V., **Miano, T.** - Interactions between rotenone and humic acids by means of FT-IR and fluorescence spectroscopies. *Anal. Bioanal. Chem.*, 395: 1145-1158, 2009.

Zaccone, C., D'Orazio, V., Shotyk, W., **Miano, T.M.** - Chemical and spectroscopic investigation of porewater and aqueous extracts of corresponding peat samples throughout a bog core (Jura Mountains, Switzerland). *Journal of Soils and Sediments*, 9: 443-456, 2009.

Zaccone, C., Soler-Rovira, P., Plaza, C., Coccozza, C., **Miano, T.M.** - Variability in As, Ca, Cr, K, Mn, Sr, and Ti concentrations among humic acids isolated from peat using NaOH, Na₄P₂O₇ and NaOH+Na₄P₂O₇ solutions. *Journal of Hazardous Materials*, 167: 987-994, 2009.

Senesi, G.S., Dell'Aglio, M., Gaudioso, R., De Giacomo, A., Zaccone, C., De Pascale, O., **Miano, T.M.**, Capitelli, M. - Heavy metal concentrations in soils as determined by laser induced breakdown spectroscopy (LIBS), with special emphasis on chromium. *Environmental Research*, 109: 413-420, 2009.

Szajdak, L., **Miano, T.** - Processes, mechanisms and utilization of organic soils (PREFACE). *Plant and Soil*, 315: 1-2, 2009.

Zaccone, C., Gallipoli, A., Coccozza, C., Trevisan, M., **Miano, T.M.** - Distribution patterns of selected PAHs in bulk peat and corresponding humic acids from a Swiss ombrotrophic bog profile. *Plant and Soil*, 315: 35-45, 2009.

Zaccone, C., Santoro, A., Coccozza, C., Terzano, R., Shotyk, W., **Miano, T.M.** - Comparison of Hg concentrations in ombrotrophic peat and corresponding humic acids, and implications for the use of bogs as archives of atmospheric Hg deposition. *Geoderma*, 148: 399-404, 2009.

2008

Cavoski, I., Caboni, P., Sarais, G., **Miano, T.** - Degradation and Persistence of Rotenone in Soils and Influence of Temperature Variations. *J. Agric. Food Chem.*, 56: 8066-8073, 2008.

Zaccone, C., Coccozza, C., Shotyk, W., **Miano, T.M.** - Humic acids role in Br accumulation along two ombrotrophic peat bog profiles. *Geoderma*, 146: 26-31, 2008.

Zaccone, C., Said-Pullicino, D., Gigliotti, G., **Miano, T.M.** - Diagenetic trends in the phenolic constituents of Sphagnum-dominated peat and its corresponding humic acid fraction. *Organic Geochemistry*, 39: 830-838, 2008.

Terzano, R., Al Chami, Z., Vekemans, B., Janssens, K., **Miano, T.M.**, Ruggiero P. - Zinc distribution and speciation within rocket plants (*Eruca vesicaria* L. Cavaleri)





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grown on a polluted soil amended with compost as determined by XRF microtomography and micro-XANES. *J. Agric. Food Chem.*, 56: 3222-3231, 2008.

Zaccone, C., Cocozza, C., Cheburkin, A.K., Shotyk, W., **Miano, T.M.** - Distribution of As, Cr, Ni, Rb, Ti and Zr between peat and its humic fraction along an undisturbed ombrotrophic bog profile (NW Switzerland). *Applied Geochemistry*, 23: 25-33, 2008.

2007

Cavoski, I., Caboni, P., Sarais, G., Cabras, P., **Miano, T.** - Photodegradation of Rotenone in Soils under Environmental Conditions. *J. Agric. Food Chem.*, 55: 7069-7074, 2007.

Zaccone, C., Cocozza, C., Cheburkin, A.K., Shotyk, W., **Miano, T.M.** - Highly Organic Soils as "Witnesses" of Anthropogenic Pb, Cu, Zn, and ¹³⁷Cs Inputs During Centuries. *Water, Air, & Soil Pollution*, 186: 263-271, 2007.

Zaccone, C., Cocozza, C., D'Orazio, V., Plaza, C., Cheburkin, A.K., **Miano, T.M.** - Influence of extractant on quality and trace elements content of peat humic acids. *Talanta*, 73: 820-830, 2007.

Zaccone, C., Cocozza, C., Cheburkin, A.K., Shotyk, W., **Miano, T.M.** - Enrichment and depletion of major and trace elements, and radionuclides in ombrotrophic raw peat and corresponding humic acids. *Geoderma*, 141: 235-246, 2007.

Zaccone C., **Miano T.M.**, Shotyk W. - Qualitative comparison between raw peat and related humic acids in an ombrotrophic bog profile. *Organic Geochemistry*, 38, 151-160, 2007.

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