

CURRICULUM VITAE ET STUDIORUM: PROF. MAURIZIO MAZZUCHELLI



Personal data: Born in Bondeno (Ferrara, Italy), July 12th, 1957

Present Position: Full Professor

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EDUCATION

- **March 1981** Degree in Geological Sciences (summa cum laude) at the University of Ferrara (Italy) with a thesis entitled 'Studio Geologico Petrografico delle Unità Stratiformi della Formazione Basica Ivrea Verbano in Val Sesia', under the supervision of Prof. Giorgio Rivalenti.

PREVIOUS POSITIONS AND FELLOSHIPS

- **From March 1983 to October 1988** Researcher in Mineralogy, Geochemistry and Petrology (S.79) at Università degli Studi di Ferrara, Italy.
- **From November 1988 to October 2000** Researcher in Mineralogy, Geochemistry and Petrology (S.79) at Università degli Studi di Modena e Reggio Emilia, Italy.
- **From November 2000 to October 2000** Associate Professor in Petrology and Petrography (D03B) at Università degli Studi di Modena e Reggio Emilia, Italy.
- **Since November 2002** Full Professor in Petrology and Petrography (GEO/07) at Università degli Studi di Modena e Reggio Emilia, Italy.
- **Since January 2011** Associated Scientist of the CNR - Istituto di Geoscienze and Georisorse, Pavia Unit, Italy.

VISITS AND STAYS

- **From November 1987 to September 1988** Visiting scientist at Geochemistry Department of Max-Planck-Institut, Mainz. Germany.

BRIEF DESCRIPTION OF THE RESEARCH ACTIVITY

- His main research interests are related to the petrogenetic processes at the crust-mantle transition. Within this line of research, he studied: a) Sections of old deep and intermediate crust (Ivrea-Verbano Zone); b) Continental anorogenic magmatism (Southern America Cratons); c) Continental lithospheric mantle (Ivrea Mantle bodies and South American mantle xenoliths). Currently he is working on: i) fluid and melt percolation processes through mantle peridotite matrix; ii) the role of mantle heterogeneity in subcontinental peridotite massifs and the genesis of basic magma; iii) mass transfer process of fluids in hydrated and carbonated mantle rocks from suprasubductive settings; iv) growth mechanism of mafic-ultramafic layered complexes; v) studies of mafic dike swarms as key markers of their mantle source, the petrogenetic evolution and the geodynamic environment in order to constrain the paleogeographic reconstruction.
- Main Expertises: Analytical chemistry on whole rock and mineral samples through X-Ray fluorescence spectrometry (XRF), Atomic Absorption Spectrometry (AAS), Scanning Electron Microscopy (SEM), Electron Probe Micro Analyses (EMPA). Isotopic systems of expertise: $^{87}\text{Sr}/^{86}\text{Sr}$, $^{143}\text{Nd}/^{144}\text{Nd}$, $^{206}\text{Pb}/^{204}\text{Pb}$, $^{207}\text{Pb}/^{204}\text{Pb}$, $^{208}\text{Pb}/^{204}\text{Pb}$.

MAJOR COLLABORATIONS

- Max-Planck-Institut für Chemie, Mainz (Germany) – A.W. Hofmann, K.P. Jochum
- Laboratoire Géosciences Océan - UMR Université de Brest-CNRS 6538 - Institut Universitaire Européen de la Mer – Plouzané (Brest, France) – C. Hémond
- Instituto de Geociências - Universidade de São Paulo (Brasil) – V.A.V. Girardi, C.T. Correia, W. Teixeira
- Instituto de Ciencias de la Tierra y Ambientales - Universidad Nacional de La Pampa (Santa Rosa, Argentina) – G.W. Bertotto
- Facultads de Ciencias Naturales y Museo - Universidad Nacional de La Plata (La Plata, Argentina) – C.A. Cingolani
- Consiglio Nazionale delle Ricerche - Istituto di Geoscienze e Georisorse, Unità di Pavia (Italy) – A. Zanetti

FUNDING AND PROJECTS

Principal Investigator (P.I.) and Contractor (C.) of the following research funds:

• 2022 – P.I. – Modena and Reggio Emilia University (FAR – Instruments)	20.000 €
• 2020 – P.I. – Modena and Reggio Emilia University (FAR – Instruments)	5.000 €
• 2017 – C. – Cofin-MIUR grant # 20178LPCPW_007	88.888 €
• 2017 – C. – Modena and Reggio Emilia University (ex 60%)	4.341 €
• 2015 – C. – Modena and Reggio Emilia University (ex 60%)	7.166 €
• 2015 – C. – Cofin-MIUR grant # 20158A9CBM_005	55.000 €
• 2011 – P.I. – Modena and Reggio Emilia University – Strategic Project	50.000 €
• 2011 – P.I. – Fondazione Cassa di Risparmio di Modena – IESO 2011	150.000 €
• 2009 – C. – Cofin-MIUR grant # 20099SWLYC_005	65.143 €
• 2008 – P.I. – Modena and Reggio Emilia University (ex 60%)	4.500 €
• 2007 – P.I. – Modena and Reggio Emilia University (ex 60%)	1.560 €
• 2007 – C. – Cofin-MIUR grant # 2007LRZ3E9_002	62.300 €
• 2006 – P.I. – Modena and Reggio Emilia University (ex 60%)	3.200 €
• 2005 – P.I. – Modena and Reggio Emilia University (ex 60%)	8.800 €
• 2004 – P.I. – Modena and Reggio Emilia University (ex 60%)	6.450 €
• 2003 – P.I. – Modena and Reggio Emilia University (ex 60%)	5.200 €
• 2003 – C. – Cofin-MIUR grant # 2003049194_004	24.300 €
• 2002 – P.I. – Modena and Reggio Emilia University (ex 60%)	7.550 €
• 2001 – P.I. – Modena and Reggio Emilia University (ex 60%)	5.500 €
• 2000 – P.I. – Modena and Reggio Emilia University (ex 60%)	3.750 €
• 1999 – P.I. – Modena and Reggio Emilia University (ex 60%)	4.250 €
• 1998 – P.I. – Modena and Reggio Emilia University (ex 60%)	4.200 €
• 1997 – P.I. – Modena and Reggio Emilia University (ex 60%)	4.000 €
• 1996-1998 – P.I. – CNR grant “Gruppo Alpi” Northern Ivrea-Verbano Zone	10.000 €
• 1996 – P.I. – Modena and Reggio Emilia University (ex 60%)	3.300 €
• 1983 – P.I. – CNR grant in petrology	1.250 €

TEACHING ACTIVITIES

- Teacher of the course: *Laboratory of Petrography* at the master of science in Geological Sciences, University of Ferrara (from the academic years 1982/1983 to 1986/1987)
- Teacher of the course: *Laboratory of Petrography* at the master of science in Geological Sciences, University of Modena (from the academic years 1988/1989 to 1989/1990)

- Teacher of the course: *Laboratory of Metamorphic Petrography* at the master of science in Geological Sciences, University of Modena (from the academic years 1990/1991 to 1992/1993)
- Teacher of the course: *Laboratory of Optical Mineralogy* at the master of science in Geological Sciences, University of Modena (from the academic years 1990/1991 to 1995/1996)
- Teacher of the course: *Petrography* at the master of science in Natural Sciences, University of Modena (from the academic years 1992/1993 to 1999/2000)
- Teacher of the course: *XRF analytical methodology* at PhD courses in “Metallogenesis and Petrology” and “Mineralogy and Crystallography”, University of Modena (from the academic years 1990/1991 to 1993/1994)
- Teacher of the course: *XRF analytical methodology* at PhD course in “Mineralogy, Petrology and Crystallography”, University of Modena (from the academic years 1994/1995 to 1996/1997)
- Teacher of the course: *Mineralogical Analyses of the Rocks* at the master of science in Geological Sciences, University of Ferrara (from the academic years 1995/1996 to 1999/2000)
- Teacher of the course: *Petrography* at the bachelor in Natural Sciences, University of Modena and Reggio Emilia (from the academic years 2000/2001 to 2007/2008)
- Teacher of the course: *Petrographical Analyses* at the bachelor in Geological Sciences, University of Modena and Reggio Emilia (from the academic years 2000/2001 to 2008/2009)
- Teacher of the course: *Archeometry of stone materials* at the bachelor in Sciences of Cultural Heritage, University of Modena and Reggio Emilia (academic year 2003/2004)
- Teacher of the course: *Geomaterials and Cultural Heritage - Petrography* at the bachelor in Sciences of Cultural Heritage, University of Modena and Reggio Emilia (from the academic years 2003/2004 to 2009/2010)
- Teacher of the course: *Rock Weathering* at the master of sciences in Recovery, Management and Valorisation of Natural Heritage, University of Modena and Reggio Emilia (from the academic years 2002/2003 to 2003/2004)
- Teacher of the course: *Rock Weathering* at the master of sciences in Sciences for the Environment, University of Modena and Reggio Emilia (academic year 2004/2005)
- Teacher of the course: *XRF analytical methodology* at PhD course in “Earth Sciences”, University of Modena and Reggio Emilia (from the academic years 2005/2006 to 2006/2007)
- Teacher of the course: *Petrology of raw materials* at the master of sciences in Geological Sciences, University of Modena and Reggio Emilia (from the academic years 2006/2007 to 2007/2008)
- Teacher of the course: *Petrographic analysis and applications* at the master of sciences in Geological Sciences and Technologies, University of Modena and Reggio Emilia (academic year 2008/2009)
- Teacher of the course: *Petrography for the Cultural Heritage* at the master of sciences in Conservation and Diagnostics of the Cultural Heritage, University of Modena and Reggio Emilia (from the academic years 2009/2010 to 2010/2011)
- Teacher of the course: *Sedimentary Petrography* at the master of sciences in Sciences for the Environment, University of Modena and Reggio Emilia (from the academic years 2011/2012 to 2012/2013)
- Teacher of the course: *Petrography of Geosites* at the bachelor in Sciences for Environmental, Natural and Cultural Heritage, University of Modena and Reggio Emilia (from the academic years 2011/2012 to 2012/2013)
- Teacher of the course: *Petrographic analysis* at the master of sciences in Geological Sciences and Technologies, University of Modena and Reggio Emilia (from the academic years 2015/2016 to 2017/2018)

- Teacher of the course: *Petrostructures of Crystalline Rocks* at the master of sciences in Geological Sciences and Technologies, University of Modena and Reggio Emilia (from the academic years 2018/2019 to 2019/2020)
- Teacher of the course: *Geological Mapping of crystalline basement* at the master of sciences in Geosciences, Geohazards and Georesources, University of Modena and Reggio Emilia (from the academic years 2020/2021 to present)
- Teacher of the course: *Magmatism and Volcanology* at the master of sciences in Science for Education, University of Modena and Reggio Emilia (from the academic years 2020/2021 to present)
- Teacher of the course: *Petrography* at the bachelor in Geological Sciences, University of Modena and Reggio Emilia (from the academic years 2008/2009 to 2020/2021)
- Teacher of the course: *Petrogenesis and Geodynamics* at the bachelor in Geological Sciences, University of Modena and Reggio Emilia (from the academic years 2021/2022 to present)

SUPERVISION OF PhD STUDENTS AND POSTDOCTORAL FELLOWS

- **1989-1991.** Co-Supervisor of one Ph.D. Student, Dr. Stefano Marchesi working on a thesis entitled '*Relazione tra processi metasomatici e fusion parziale di mantello sub-continentale: evidenze delle tettoniti del Basamento Sudalpino*'.
- **1991-1993.** Co-Supervisor of one Ph.D. Student, Dr. Marina Cavallini working on a project entitled '*Studio sperimentale di fusi di anatessi crostale ed implicazioni per la contaminazione dei magmi di mantello*'.
- **1993-1995.** Co-Supervisor of Ph.D. Student, Dr. Massimo Parenti working on a project entitled '*Petrografia della Zona Ivrea-Verbsano tra la Val d'Ossola e la Val Vigizzo: Fenomeni di ibridizzazione e di fusion crostale*'.
- **1994-1996.** Co-Supervisor of one Ph.D. Student, Dr. Maria Adelaide Barbieri working on a project entitled '*Caratteristiche petrologiche e geochemiche del mantello litosferico in Sud-America*'.
- **1999-2001.** Co-Supervisor of one Ph.D. Student, Dr. Angela Laurora working on a project entitled '*Petrologia del mantello litosferico di retro-arco: Caratterizzazione geochemica delle collezioni di xenoliti di Estancia Cisne e Cerro Cuadrado (Provincia di Santa Cruz, Argentina)*'.
- **1999-2001.** Co-Supervisor of one Ph.D. Student, Dr. Sara Ciuffi working on a project entitled '*Xenoliti ultramafici di Cerro de Los Chenques (Chubut, Argentina) e Tres Lagos (Santa Cruz, Argentina): petrologia e geochemica del mantello litosferico in ambiente di retro-arco*'.
- **2002-2004.** Supervisor of one Ph.D. Student, Dr. Sonia Giovannini working on a project entitled '*Indagine archeometrica sulla produzione metallurgica in bronzo delle Terramare (media e recente Età del Bronzo XVII-XIII secolo a.C)*'.
- **2018-2020,** Supervisor of one Ph.D. Student, Dr. Renzo Tassinari working on a project entitled '*PGE distribution and concentration in terrestrial and extra-terrestrial rocks*'.
- **2003-2004.** Co-Supervisor of one post-doctoral fellow, Dr. Gabriella Peressini working on a project entitled '*Determinazioni radiometriche in situ, su fasi cristalline e roccia totale nella Formazione Ivrea-Verbano*'.
- **2005.** Supervisor of one post-doctoral fellow, Dr. Sonia Giovannini working on a project entitled '*Indagini archeometriche su manufatti bronzei delle Terramare*'.
- **2006.** Co-Supervisor of one post-doctoral fellow, Dr. Sonia Giovannini working on a project entitled '*Refertilisation processes in the alpine peridotite massifs of the Ivrea-Verbano Zone*'.
- **2009.** Co-Supervisor of one post-doctoral fellow, Dr. Gabriella Peressini working on a project entitled '*Caratterizzazione morfologica, geochemica e geocronologica di zirconi*'.

- **2013.** Supervisor of one post-doctoral fellow, Dr. Tommaso Giovanardi working on a project entitled '*Eventi magmatici in mantello e crosta profonda: fasi iniziali del breakup continentale e dei processi di oceanizzazione*'.
- **2017.** Supervisor of one post-doctoral fellow, Dr. Tommaso Giovanardi working on a project entitled '*Geochemical and isotopic budget of highly metasomatised sub-continental mantle in the Africa and Europe geodynamic systems: modern and fossil analogues*'.

ACADEMIC DUTIES

- **2024-2025** President of the Commission for the Italian National Scientific Qualification (ASN) for the disciplinary sector 04/A1 - Geochemistry, Mineralogy, Petrology, Volcanology, Georesources and applications
- **2010-2012** Head of the Earth Science Department of the University of Modena and Reggio Emilia
- **2007-2010** President of the M.Sc. School in Science for the Recovery and Conservation of Archaeological Heritage (Corso di Laurea Magistrale in Scienze per il Recupero e la Conservazione del Patrimonio Archeologico) of the University of Modena and Reggio Emilia
- **2007-2010** President of the B.Sc. School in Sciences for the Cultural Heritage (Corso di Laurea in Scienze dei Beni Culturali) of the University of Modena and Reggio Emilia
- **Since 2012** Member of the Board of the Department of Chemical and Geological Sciences, University of Modena and Reggio Emilia
- **Since 2015** Delegate for tutoring and orientation activities for students of geological sciences and natural sciences of the Department of Chemical and Geological Sciences, University of Modena and Reggio Emilia
- **2015-2023** Coordinator of the Project for the Scientific Degrees (Progetto Lauree Scientifiche) of the University of Modena and Reggio Emilia
- **Since 2012** Member of the Quality Presidium (Presidio di Qualità) of the Department of Chemical and Geological Sciences of the University of Modena and Reggio Emilia
- **2007-2008** Member of the National Committee for the national tenure track evaluation for the Full Professor position in Petrology and Petrography (GEO/07)
- **2006-2007** Member of the National Committee for the national tenure track evaluation for the Associate Professor position in Petrology and Petrography (GEO/07)
- **2005-2010** Member of the Board of the Department of Earth Sciences, University of Modena and Reggio Emilia
- **2002-2003** Member of the National Committee for the national tenure track evaluation for the Researcher position in Petrology and Petrography (D03B)
- **1999-2001** Member of the Board of the Department of Earth Sciences, University of Modena and Reggio Emilia
- **1993-1995** Member of the Board of the Department of Earth Sciences, University of Modena and Reggio Emilia

AWARDS

- **1988** Alexander von Humboldt Foundation: "Forschungstipendium" at Max-Planck-Institut für Chemie and Otto-Hahn-Institut für Geochemie (Mainz, Germany).

MEMBERSHIPS AND APPOINTMENTS

- Counselor of the GNP (Gruppo Nazionale di Petrografia, National Council of Petrography) (2008-2013)
- President of the GNP (Gruppo Nazionale di Petrografia, National Council of Petrography) (2014-2017)

- Counselor of the FIST (Federazione Italiana di Scienze della Terra, Italian Federation Earth Sciences (2009-2013)
- Counselor of SIMP (Società Italiana di Mineralogia e Petrografia, Italian Society of Mineralogy and Petrography) (2014-2017)
- Vice-President of SIMP (Società Italiana di Mineralogia e Petrografia, Italian Society of Mineralogy and Petrography) (Since 2018)
- Member of the Italian Society of Mineralogy and Petrology (Società Italiana di Mineralogia e Petrologia, SIMP)
- Member of the Italian Geological Society (Società Geologica Italiana, SGI)
- Member of the Doctorate School 'Scienze della Terra' of the University of Modena and Reggio Emilia (from the academic years 2000/2001 to 2006/2007)
- Member of the Doctorate School 'Earth System Science' of the University of Modena and Reggio Emilia (from the academic years 2007/2008 to 2014/2015)
- Member of the Doctorate School 'M3ES - Models and Methods for Materials and Environmental Sciences' of the University of Modena and Reggio Emilia (since the academic 2015/2016)
- **Since 2016** Scientific coordinator of the General agreement on scientific, technological and academic cooperation (Accordo di collaborazione culturale e scientifico-tecnologica) between the University of Modena and Reggio Emilia and the Université de Bretagne Occidentale (Brest, France)
- **2009-2011** Scientific coordinator of the General agreement on scientific, technological and academic cooperation (Accordo di collaborazione culturale e scientifico-tecnologica) between the University of Modena and Reggio Emilia and the Universidade de São Paulo (São Paulo, Brasil)
- **Since 2009** Scientific coordinator of the General agreement on scientific, technological and academic cooperation (Accordo di collaborazione culturale e scientifico-tecnologica) between the University of Modena and Reggio Emilia and the Universidad Nacional de La Plata (La Plata, Argentina)
- **Since 2008** Scientific coordinator of the General agreement on scientific, technological and academic cooperation (Accordo di collaborazione culturale e scientifico-tecnologica) between the University of Modena and Reggio Emilia and the Universidad Nacional de La Pampa (Santa Rosa, Argentina)

ACTIVITIES IN REFERRED SCIENTIFIC JOURNALS.

- **2013-2015** Associate Editor of Italian Journal of Geosciences
- **2014** Guest Editor of Central European Journal of Geosciences

OTHER INFORMATION

BIBLIOMETRIC INDICATORS (Source Scopus) AND SCIENTIFIC PRODUCTION

Total number of citations: 2448

h-index: 29

Average number of citations per publication: 33.1

Average number of citations per year: 59.7

LIST OF SCIENTIFIC PUBLICATIONS ON INTERNATIONAL JOURNALS AND BOOK CHAPTERS AND MANUSCRIPTS IN JOURNALS WITHOUT IF

See: <http://personale.unimore.it/AddressBook/publications/mazzuc>