# UNIVERSITY STUDIES

Laurea in Scienze Geologiche (M. Sc. equivalent) - University of Turin (Italy), 1964. Supervisor: dr. G.I. ELTER.

Thesis: Geological study of the upper Italian Val Ferret, Val d'Aosta (Italy). March 1964.

# PREVIOUS POSITIONS

1964 - 1965 Field geologist of the Italian Geological Survey - c/o Institute of Geology - University of Turin

1965 - 1967 Assistente incaricato (Tutor demonstrator equivalent), Institute of Mineralogy and Petrology - University of Turin

1967 - 1977 Assistente ordinario (Lecturer equivalent) - Institute of Petrology - University of Turin

1977 - 1980 Professore incaricato (Assistant Professor equivalent) of Applied Petrology - Institute of Petrology - University of Turin

1980 - 1983 Professore straordinario (Associate Professor equivalent) of Petrology - Dept. of Earth Sciences - University of Calabria

1983 - 1984 Professor of Petrology (Chairman) - Dept. of Earth Sciences, University of Calabria

1984 - 1985 Full Professor, Petrology - Dept. of Earth Sciences – University of Calabria

1985 - 1991 Full Professor, Petrology - Dept. of Earth Sciences - University of Turin

1992 - 1995 Full Professor, Petrology - Dept. of Mineralogical and Petrological Sciences- University of Turin

1995 - 2002 Full Professor, Metamorphic Petrology - Dept. of Mineralogical and Petrological Sciences- University of Turin

2003 - 2009 Full Professor, Petrology - Dept. of Mineralogical and Petrological Sciences- University of Turin

2009 – 2011 Emeritus of Petrology and charged of the courses of Metamorphic Petrology and Rock-forming minerals and microstructures - Dept. of Mineralogical and Petrological Sciences- University of Turin

2012 Emeritus of Petrology – Dept. of Earth Sciences - University of Turin

# TEACHING EXPERIENCE

1965 - 1977 Responsible for courses of Rock Forming Minerals at the University of Turin

1977 - 1979 Responsible for the courses of Applied Petrology of the University of Turin

1979 - 1980 Gave courses in Petrology at the University of Calabria and of Applied Petrology at the University of Turin

1981 - 1983 Responsible for courses of Petrology at the University of Calabria

1984 - 1995 Responsible for courses of Applied Petrology at the University of Turin

1995 - 2009 Responsible for courses of Metamorphic Petrology at the University of Turin

1990 - 1998 Member of the teaching staff of the Ph.D. degree in Earth Sciences, union of the Universities of Cagliari, Genoa and Turin

1991 - 2006 Gave short courses on HP and UHP metamorphism at national and international PhD schools.

July 2003 Scientific Director of the Fifth EMU School and Symposium, organized in Budapest (Hungary), July 21-25, sponsored by the European Mineralogical Union, and Editor of Vol. 5 of EMU Notes in Mineralogy.

2003 - 2009 Responsible for courses of Igneous Petrology (2nd year), Sedimentary and Metamorphic Petrology (2nd year), Laboratory of Microscopic Petrography (3rd year), Metamorphic petrology (4th year), and Excursions on Crystalline Basement areas (4th year) at the University of Turin

2009 – 2011 Charged of the courses of Metamorphic Petrology and of Rock-forming minerals and microstructures - Dept. of Mineralogical and Petrological Sciences- University of Turin

**OTHER RESPONSIBILITIES**

1982-1983 Member of the Calabria University Budget Committee

1983-1984 Chairman of the Dept. of Earth Sciences, the University of Calabria, and

Chairman of the Corso di Laurea in Scienze Naturali (advisory committee M. Sc. Degree in Natural Sciences courses), University of Calabria

1984-1990 Chairman of the Corso di Laurea in Scienze Geologiche (advisory committee M. Sc. Degree in Geological Sciences courses), University of Turin

1992 & 2008 Chairman of the Piedmont board of the state examiners, qualifying the graduates in Geology as practitioners

1996-1998 Chairman of the Corso di Laurea in Scienze Geologiche (advisory committee M. Sc. Degree in Geological Sciences courses), the University of Turin

1997- 2004 Vice-head of Dept. of Mineralogical and Petrological Sciences, the University of Turin

1997-2009 Department co-ordinator for the Erasmus student and staff exchange with the Universities of Bucharest and Iasi (Romania), Huelva (Spain), Stockholm (Sweden), and Utrecht (Nederland)

2001-2005 Member for the Earth Sciences Area in the International School of Advanced Study of the University of Turin (ISASUT)

2000-2005 Head of the PhD in Earth’s Sciences, the University of Turin

2006-2009 Head of the specialization branch in Earth’s Sciences of the Ph.D. School in Science and High Technology, the University of Turin

2001-2007 Member of the Editorial Advisory Board of *Island Arc*

2001-2008 Vice-head of the *"G. Scansetti" Interdepartmental Centre for Studies on Asbestos and other Toxic Particulates*, the University of Turin

2001-2004 Member of the *Scientific Program Committee* of the *IGC 2004 Florence*

2001-2004 Italian Representative in the *Steering Committee for the preparation of a coordinated European curriculum in Petrology*

2001-2003 Vice-president of the *Italian Mineralogical and Petrological Society*

2004-2005 President of the *Italian Mineralogical and Petrological Society*

2007 Member of the Scientific Committee of the *Journées scientifiques “Serpentines”*,

10-12 October, Grenoble (France)

2007-2009 Member of the Editorial Advisory Board of *Elements*

2007-2009 Italian Representative in the *International Eclogite Conference Co-ordinating Committee* (I.E.C.C.C.)

2009-2015 President of the *"G. Scansetti" Interdepartmental Centre for Studies on Asbestos and other Toxic Particulates*, the University of Turin

**SCIENTIFIC AWARDS AND HONORIFICS**

23 May 2002: Honorary professor of the “*Alexandru Joan Cuza” University, Iaşi* (Romania)

18 June 2004: Awarded the prize «Prof. Luigi Tartufari» for Geology, Paleontology, Mineralogy of *Accademia Nazionale dei Lincei*, Rome

25 Nov. 2008: Awarded the «Grand Prix Léon Lutaud» de *l’Académie des Sciences* de *l’Institut de France* in *Paris*

15 May 2013: National *fellow* of the *Academy of Sciences of Turin*

2014: *Secretary* *of the Scientific Section of the Academy of Sciences of Turin*

2 Sept. 2015: Awarded the “*Plinius Medal 2015” of the Italian Society of Mineralogy and Petrology*.

10 Sept. 2016: Awarded the “*International Prize*” *of the Geological Society of Japan* for contributions in geological research.

**REVIEWER FOR THE FOLLOWING SCIENTIFIC JOURNALS**

Bollettino della Società Italiana di Mineralogia e Petrologia

Bollettino della Società Geologica Italiana

# Canadian Mineralogist

Contributions to Mineralogy and Petrology

Earth and Planetary Science Letters

European Journal of Mineralogy

Island Arc

Journal of Metamorphic Geology

Journal of the Geological Society

Journal of Petrology

Journal of Structural Geology

Lithos

Lithosphere

Mineralogical Association of Canada, Short Course Handbook "Geology of Gem Deposits"

Ofioliti

Periodico di Mineralogia

Rendiconti Lincei - Scienze Fisiche e Naturali

Rocks Mechanics and Rock Engineering

Schweizerische mineralogische und petrographische Mitteilungen

Tectonics

Terra Nova

**INTERNATIONAL COLLABORATIONS AND RESEARCH ACTIVITY**

1973–1975 Member of the American-Italian Working Group on the HP Sesia-Lanzo Zone, Western Alps, including R.G. Coleman (USGS), W. Gary Ernst (Stanford University) and G.V. Dal Piaz, G. Gosso and B. Lombardo (Torino).

1991–2001 Scientific collaboration with Dr. Takao Hirajima (*Kyoto University*) on the study of the UHPM in the southern Dora-Maira Massif, Western Alps.

1993–2007 Scientific collaboration with Prof. Xu Shutong, *Anhui Institute of Geology*, Anhui Province (China) on the study of UHPM in the Dabie Mountains and in the Su Lu orogen, for the understanding of petrology, *P-T* evolution and fluid–rock interaction during deep subduction of continental crust.

1995 Participant in the SARTUCYA campaign from 19.11.1995 to 5.12.1995 (Leaders: G. Mascle and P. Tricart, CNRS/UJF Grenoble), with the French CYANA submersible to observe and sample, on the floor of the Sardinia Channel, at a depth of c. 2500 m below sea level, the rocks of the submerged portion of the Apenninic-Maghrebian branch of the Alpine range.

1994-2009 Member and active scientist in the following research groups on the Ultrahigh-Pressure Metamorphism (UHPM) of the International Lithosphere Program (ILP), sponsored by UNESCO:

1994-1998 Task Group III-6: "*Ultrahigh-pressure Metamorphism and Geodynamics in Collision-Type Orogenic Belts*" (Chairperson: Cheng Yuqi)

1999-2004 Task Group III-8: “*Processes and Geodynamics in the Formation and Exhumation of the Ultrahigh-Pressure Metamorphic Terrains*” (Chairperson: J. G. Liou)

2005-2009 Task Force IV - "*Ultra-Deep Continental Crust Subduction*" (UDCCS)

(Chairperson: Larissa Dobrzhinetskaya)

2013–2015 Scientific collaboration with prof. Tetsumaru ITAYA ([*Okayama University of Science*](https://www.researchgate.net/institution/Okayama_University_of_Science)) on geochronological dating of UHPM phengites from the Lago di Cignana Unit, Valtournenche, Aosta Valley.

**RESEARCH ACTIVITY** mainly in the fields of:

1) Stratigraphy, igneous petrology and metamorphic evolution of the meta-ophiolites of the Piemonte Zone of western Alps, with special reference to the high-pressure and ultrahigh-pressure metamorphism;

2) Stratigraphy and metamorphic evolution of the crystalline basement of the western Alps, (including tectonic units belonging to the Helvetic, Penninic and Austro-alpine domains) and of the Calabrian-Peloritanian Arc in southern Italy;

3) Metamorphic reactions and evolution of the high-pressure and ultra-high-pressure metamorphism in the continental crust units of the western Alps, and Dabie Shan and Su Lu orogens in China;

4) Ore petrology of magnetite mineralization occurring in ultramafic rocks;

5) Petrology of serpentinized ultramafic rocks with special reference to rodingites and metasomatic reaction rocks;

6) Investigations on asbestos and asbestos-like minerals of petrographic interest from metamorphic ophiolites of western Alps;

7) Fluid-rock interaction during subduction with special attention to the origin of “whiteschists” (continental crust), jadeitites (oceanic lithosphere), and microdiamonds;

8) Archaeometry of south European "jades" and studies on rock deterioration and conservation of Italian monuments;

9) Investigations on new rock-forming minerals balangeroite, carlosturanite, magnesiobeltrandoite);

10) Popularization of geology and petrology of the western Alps and Calabrian-Peloritanian Arc, southern Italy.

The research activity is documented by over **200 articles** mostly published in International Journals, and **5 geological maps**.