

Giovanni Capponi

Full professor

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Education and training

1980

Degree in Geological Sciences

Nuove osservazioni stratigrafico - strutturali sull'attacco Gruppo di Voltri - Cristallino del Savonese - 110/110 e lode

University of Genova - Genova - IT

Academic experience

1983 - 1992

Researcher

University of Genova - Genova - IT

1992 - 2001

Associate Professor

University of Genova - Genova - IT

2001 - ONGOING

Full Professor

University of Genova - Genova - IT

Research interests

The research activity of Prof. Giovanni Capponi deals mainly with geo-structural and tectonic reconstruction in orogenic belts, with emphasis on the HP-LT units during the phases of ocean suturing, continental collision and subsequent uplift and exhumation. Areas of interest are the Alpine belt and the Ross Orogeny, in Antarctica, where he promoted new research field work in key areas, focussing on the structural and metamorphic evolution of oceanic units, involved in the subduction and in the subsequent exhumation.

Results have been obtained in Italy, (Western Alps and Tuscan Archipelago) and in Antarctica (northern Victoria Land). In Antarctica Prof. GC focused his activity in northern Victoria Land, being involved in 9 ItaliAntartide expeditions.

Main achievements on the structural and metamorphic evolution of these units are:

- the disentangling of the relations between deformation and metamorphism in the oceanic units of the Voltri Massif (Ligurian Alps, southern Western Alps).

- The interplay between rocks and fluids in the ultramafic rocks of the Voltri Massif, with links with the gold mineralization.
- Reconstruction of the structural relationships between the different tectonic units in the Franco Cape, Island of Giglio (Tuscan Archipelago).
- Analyses of the deformation history of the oceanic units and geological mapping in the Gorgona Island (Tuscan Archipelago).
- Structural analysis in the Wilson, Bowers and Robertson Bay terranes, that constitute the northern Victoria Land (Antarctica).
- Structural reconstruction of the tectonic evolution of the contact between the Wilson and the Bowers terranes. This research led to the finding of the first eclogites ever signalled in Antarctica (and the second in the entire southern hemisphere).
- The interplay between rocks and fluids in the mafic and ultramafic rocks of the Wilson and Bowers terranes. This research led to the finding of the first gold mineralization ever signalled in Antarctica.
- Structural reconstruction of the tectonic evolution of the contact between the Bowers and the Robertson Bay terranes, with comparison to the correlatives units in southern Australia.
- Analysis of the northern Victoria Land - Australia - Tasmania - New Zealand system, suggesting a reconstruction of the paleogeographic scenario before the Gondwana break-up.

Most of such researches were coupled with the production of a large number of geological maps, also in the framework of the CARG (Italian acronym of Geological Mapping Project) and GIGAMAP project (acronym of German Italian Geological Antarctic Map Program). The GIGAMAP project involved geologists from Italy, Germany, New Zealand and USA.

All the described researchs has been conducted thanks to several national and international projects, with fruitful collaboration with the following institutions:

BGR (Bundesanstalt für Geowissenschaften und Rohstoffe), Hannover (DE).

GNS (Geological and nuclear Sciences), Dunedin, New Zealand.

University of Michigan, USA.

University of Texas at Austin, USA.

University of Patras, Grecia.

BGR (Bundesanstalt für Geowissenschaften und Rohstoffe), Hannover, Germania.

British Antarctic Survey (BAS), Cambridge, UK.

Canterbury University, Christchurch, New Zealand.

Isotopengeologie, Università di Berna, Svizzera.

School of Earth and Environment, Università di Leeds, UK.

ETH, Zurich, Svizzera.

GC scientific work is described in more than 100 papers in national and international journals and produced more than 30 geological maps.