

## **Geology of the Alpi Apuane and their marbles: an updated overview**

Giancarlo Molli, Dipartimento di Scienze della Terra – Università di Pisa

### *Abstract*

The Alpi Apuane are well known throughout the world for the marbles (in particular the celebrated white Carrara marble) which in this mountain range are extracted since more than two thousand years. The presences of marbles in a region otherwise mainly characterized by un-metamorphic rock-types attracted the attention of naturalists and geologists since beginning of '800. This is the reason why the area became the object of the first modern detailed geological maps in Italy and a key area for structural and tectonic investigations up to now. After an overall tectonic introduction of the area the seminar will present an update geologic overview of the Alpi Apuane with special focus on structures, tectono-metamorphic evolution and timing of deformation as base to discuss key issues relevant for the entire Apennines building. The microstructural variability of the marbles will be illustrated and relate with the different kinematics and dynamic stages of the wedge at the crustal scale.

### *About the author.*

Giancarlo Molli got the diploma in Geological Sciences and the PhD in Structural Geology at the University of Pisa (1990-1995). After being visiting as PhD student and post-Doc researcher at the University of Manchester (UK), Basel (CH) and at the CNRS Geosciences Montpellier (FR) he got the position of Researcher at the University of Pisa (1999-2017), where is now Associate Professor. His research interest focusses on the following subjects: i) orogenic processes and their geometric and kinematic signatures; ii) zone of localized deformation, their microstructures and relationships with tectonic setting; iii) cyclicity of deformation and record of seismicity in exhumed fault zone; iv) recent and active tectonics of the Apennines.

Research areas of current and past studies include Apennines, Corsica, Calabria, Alps, Himalaya, Taiwan, Andes. Teaching activity in Tectonics and Applied Structural Geology at the University of Pisa. He is author of more than 100 papers in international peer reviewed scientific journals.

