

## Short CV of Giorgio Minelli

### PERSONAL:

Italian citizen, born 30/04/56, military service completed. Married, 3 children.

### LANGUAGES:

Italian (mother tongue), English fluently spoken and written

### EMPLOYMENT

From 2001 to today Associate Professor in courses of Structural Geology , Tectonics and Seismic interpretation in University of Perugia

From 1984 to 2001 Research Assistant, University of Perugia

### WORK PLACE

Università di Perugia

Dipartimento di Fisica e Geologia

Via Pascoli

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### EDUCATION

Academia

- 1992: PhD in Structural Geology (Imperial College of Science and Technology, University of London). Thesis: "Tectonic evolution of the Perugia Massif Area, Northern Apennines". Tutor Prof. E.H. Rutter (Manchester University, UK)
- 1987: NATO grant (6 months at the Imperial College of Science and Technology, University of London)
- 1981: Laurea in Geological Sciences (Università degli Studi di Perugia) Tutor Prof. G Pialli

### TEACHING

- 2002 to today: Associate Professor of : 1) Structural Geology applied to HY geology; 2) Seismic interpretation and tectonics for the MSc in Petroleum Geology.
- From 1999 to 2011: Associate Professor of the General Geology Course for the Bachelor degree for Manager of Civil Protection activity, Università di Perugia
- From 2009 to 2013 Associate Professor of Structural Geology course and seismic reflection interpretation in 4 editions of Integrated Petroleum Geoscience Course (IPGC) for West Africa and Asia eni's employed.
- 1993 to 1997: Lecturer of Structural Geology for the Degree in Geological Sciences, University of Perugia
- From 1984 to 1992 lecturer of modules in the Geology and Geophysics Courses for the Degree in Geological Sciences (Laurea) in University of Perugia.

Teaching from 1995 to today in internal courses for eni's employed.

### RESEARCH METHODOLOGY

The research activity is mainly performed in a team of experts and is based on the integration of geological data (field data, wells) with geophysical data (seismic reflection, logs, gravimetry, magnetic), through using geophysical, numerical and analogical modelling.

### MAIN RESEARCH FIELDS

- Structural analysis, kinematic and geodynamic at meso and mega-scale evolution of compressional, extensional and strike slip systems. In Northern Apennines, Southern Apennines, Adriatic Sea, Tyrrhenian Sea, Andean foothills (Argentina), Marocco, Southern Zagros (Iran), offshore Ghana, offshore Kenya and Tanzania, Manner basin, Libya, Algeria, Mozambique, Angola, Nigeria, Gabon, Mergui Basin (Thailandia)
- Geological interpretation of seismic reflection surveys, gravimetric and magnetic modelling.
- Analogical modelling of compressive and strike-slip structures by using sand box apparatus.
- FEM numerical experiments in compressional and extensional systems.
- Drainage network formation and tectonic activity.

- Fractures and faults distribution vs fluid flow in fractured carbonate reservoirs.
- Fracture systems analysis from field, cores and wireline log data." Development of a data base to statistically process fractures mapped on field and/or image logs." Project and design of a Core Fracture Digitizing Tool (CFD) to reconstruct fracture attitude in well cores and link it in real time to a reservoir analysis data base.
- Geo-numerical modelling and state of stress: application of numerical modelling (FEM) to analyse the state of stress in compressional and extensional systems during geological evolution.
- Setting up and development of experimental petrophysics, rock deformation and for experimental petrophysics, rock deformation of sedimentary rocks at high confining pressure, pore pressure and temperature.
- Balancing and restoring geological cross sections in compressional, extensional and strike slip systems
- Planetary geology: Geo-structural analysis of Mars from home reconstructed dtm based on MOLA data.

The results of these applied and scientific works have been published on about 60 papers of International and Italian geosciences magazines and exposed during international and national scientific meetings.

### SOFTWARE SKILLS

3DMOVE, IHS KINGDOM, ABAQUS, SURFER

### GRADUATE AND POSTGRADUATE COURSES ORGANIZATION

- From 2009 to 2012 is Responsible of Laurea Magistrale (MSc) in Geologia degli Idrocarburi supported by eni
- From 2009 to 2015 responsible for organization of 5 editions of Integrated Petroleum Geoscience Course (IPGC) for West Africa and Asia eni's employed (total of 100 participants)
- In 2014-2015 course for Mozambique eng.s geological training

### ATTENDED INDUSTRY COURSES

2010: Structural geology applied to petroleum geology by Dr. Charles Kluth (Chevron-Colorado School of Mines).

2009: Basin Analysis (P. Allen, Imperial College)

2007: GOCAD software (eni, Milan)

2000: Fractured Reservoir Analysis (AAPG course) by R. Marret (Austin, Texas University)

1998

Giorgio Ranalli (Università di Ottawa) Geodinamica e tettonica delle placche..

Reologia della litosfera ed inversione tettonica:

1997:

Bernard Colletta (IFP) Structural geology and analog modelling

1996: New techniques in structural geology by Dr. Charles Kluth (Chevron Oil Overseas).

1995: Geological section balancing techniques using GEOSEC 4.1(Cogniseis Development, London)

1995: Sedimentary Basin evolution by Prof. G. E. Gorin (University of Ginevra)

1994: Fractured Reservoir Analysis (AAPG course) by R. Nelson (AMOCO).

1988: Seismic reflection interpretation by Prof. A.W: Bally (RICE University, Houston, USA).

### SCIENTIFIC COLLABORATIONS FROM 1987 TO TODAY

- Italian Academic Institutions (Roma La Sapienza, Roma3, Milano, Parma, Pavia, Bologna)
- Italian Research Institutions (CNR (National Research Council), INGV (National Institute for Geophysics and Volcanology), ASI (Italian Space Agency))
- Foreign research/academic Institutions: Imperial College of Science and Technology (UK), Manchester University (UK), ETH, Zurich (Swiss), IFP ( Institut Francais du Petrole), Arizona University, ESA (European Space Agency)
- Oil companies: ENI, AMOCO, OMV, BRITISH GAS, ENTERPRISE, LASMO, TEXACO, IFP ( Institut Francais du Petrole , JAPEX, YPF/Repsol , ENEL.

### MEETING AND FIELD TRIP ORGANIZATION

Leader of many, from 3 to 5 days long, field trips in Umbria Marche and Tuscany area mainly focused on tectonic evolution of the region from Permian to today.

In particular the connection between compressional and extensional structure I highlighted.

These field trips connect the field geology with the deep tectonic setting as results from the wells and the seismic reflection lines crossing the region.

EAGE meeting about fractured reservoir held in Perugia in 2008.

#### **REFEREE ACTIVITY**

Referee of Italian and International geosciences magazines

#### **PROFESSIONAL ASSOCIATIONS**

Active member of the: Scientific Com. of EAGE (member of Research panel). Member of AAPG, member of SEG, member of AGU, member of EGU, member of Societa' Geologica Italiana, Ordine Nazionale dei Geologi, European Union of Geosciences, International Association of Mathematical Geology, Istituto Nazionale di Fisica Nucleare (INFN).