

CURRICULUM VITAE

EDUCATION:

- 15/01/2017 – 15/04/2017 **International collaboration and period abroad during PhD**
RWTH Aachen University, Aachen, Germany. (guest of Dr. Stefan Back)
Seismic reflection data interpretation, structural restoration, fold-and-thrust belts
- 01/11/2015 – 08/03/2019 **PhD in Structural Geology and Global Tectonics**
University of Perugia, Perugia, Italy
“Deep Water Fold-and-Thrust Belts (DWFTBs) developed at continental margins: modern and fossil examples”.
Geological survey, geological cross sections, seismic reflection interpretation, balancing methods, structural restoration, fold-and thrust belts
- 14/04/2015 - 15/07/2015 **Master thesis at ENI (written in English)**
ENI, 5° p.u., San Donato Milanese, Milano, Italy
“3D Seismic reconstruction and sequential restoration of a normal fault: implications on the permeability evolution of the fault zone”.
Seismic reflection data interpretation, 2D/3D modelling and restoration, fault seal analysis, statistics
- 21/10/2013 - 21/09/2015 **MSc in Petroleum Geology (110 cum laude/110)**
University of Perugia, Perugia, Italy
- 01/09/2011 - 31/07/2012 **Erasmus during Bachelor**
University of Zaragoza, Zaragoza, Spain
- 01/09/2009 - 21/10/2013 **Bachelor in Geology (102/110)**
University of Genova, Genoa, Italy

PROFESSIONAL EXPERIENCES:

- 01/02/2020 to 31/01/2021 **Post-doc research fellowship**
MUSE 4D Project
“Interpretation of seismic reflection profiles and balanced geological cross sections of the southern Apennines and Calabria” Geological survey, geological cross sections, seismic reflection data interpretation, 2D/3D modelling and restoration, seismology
- 21/10/2019 to 20/12/2019 **International collaboration and period abroad**
Uppsala University, Uppsala, Sweden (guest of Prof. Hemin Koyi)
Analogue modelling of extensional tectonics and construction of a 3D model from the sections, conversion of displacement to earthquake magnitudes
- October 2019 **Organizing Committee of International Structural Geology School G. Pialli, edition 2019**
“Seismic interpretation of passive margins - rift tectonics, volcanism, salt versus non-salt systems”, held by Dr. Stefan Back (RWTH Aachen University)
- 01/02/2019 - ongoing **Post-doc research fellowship**
“Surface and subsurface geological studies of the seismogenic faults in Umbria, Italy”.
Geological survey, geological cross sections, seismic reflection data interpretation, 2D/3D modelling and restoration, seismology
- 2016 to 2017 **Assistant at the MSc course “Petroleum Geology” (held in English)**
Move software, Prograding delta restoration module, Fault Seal Analysis module
- 2017 to 2019 **Assistant at the MSc. course “Structural Geology” (held in Italian)**
Teaching section balancing and restoration, Chevron method, field geology
- 2016 to 2019 **Assistant at the BSc course “Geological field mapping” (held in English and Italian)**
Umbria-Marche units, field geology, mapping, teaching
- 2016 to 2019 **Assistant at the BSc course “Geology 2” (held in Italian)**
Stratimetry, geological map interpretation, stereonet, general theory
- 2016 to 2018 **Teacher for the divulgation project: “Piano Nazionale Lauree Scientifiche (PLS)”**
Geomorphology, Hydrogeology, hazards, mapping, Remote sensing, high school students
- 2016 to 2018 **Presenter for three editions of the divulgation festival “Sharper: Research Night”**
Sandbox, earthquake generation, hazards and safety
- 14/04/2015 - 15/07/2015 **Internship at ENI**

ENI, 5° p.u., San Donato Milanese, Milano, Italy

Seismic interpretation, 3D seismic modelling and restoration, step-by-step Fault Seal Analysis, dedicated software (Petrel, Move, and TrapTester)

01/08/2013 - 31/08/2013

Internship G.E.T. srl

Geotechnical analysis

SCIENTIFIC PRODUCTION

Thesis co-supervisor

MSc thesis co-supervisor. *Sandbox model: insights on epicenter distribution and magnitude of earthquakes associated to normal faulting*. A.A. 2019/2020

MSc thesis co-supervisor. *Compression vs. extension along a gravity driven fold-and-thrust belt: the southern Orange Basin (South Africa)*. A.A. 2018/2019.

BSc thesis co-supervisor. *Stile strutturale ed analisi cinematica lungo due sezioni geologiche regionali attraverso l'appennino umbro-marchigiano*. A.A. 2017/2018.

Publications

Porreca, M., G. Minelli, M. Ercoli, A. Brobia, P. Mancinelli, F. Cruciani, C. Giorgetti, F. **Carboni**, F. Mirabella, G. Cavinato, A. Cannata, C. Pauselli, and M.R. Barchi, 2018. Seismic Reflection Profiles and Subsurface Geology of the Area Interested by the 2016–2017 Earthquake Sequence (Central Italy). *Tectonics* 37, <https://doi.org/10.1002/2017TC004915>.

Carboni, F., S. Back, & M.R. Barchi, 2019. Application of the ADS method to predict a “hidden” basal detachment: NW Borneo fold-and-thrust belt. *Journal of Structural Geology* 118, 210–223.

Carboni, F., F. Brozzetti, F. Mirabella, F. Cruciani, M. Porreca, M. Ercoli, S. Back and M.R. Barchi. Geological and geophysical study of a thin-skinned tectonic wedge formed during an early collisional stage: the Trasimeno Tectonic Wedge (Northern Apennines, Italy). *DOI: 10.1017/S001675681900061X*.

Carboni, F., G. Viola, L. Aldega, M.R. Barchi et al. New geochronological constraints on the tectonic evolution of the Tertiary Outer Tuscan Nappe (Northern Apennines) by the K-Ar illite age constraints. *Tectonophysics*. *In preparation*.

Giorgetti, C., **F. Carboni**, S. Azzaro, M. Porreca, M. Michele, and M.R. Barchi. Seismic reflection profiles and geological cross-sections across the area of the 2016–2017 seismic sequence: comparison with seismological data. *In preparation*.

Conferences Abstracts

Carboni F., F. Brozzetti, F. Cruciani, M. Ercoli, G. Minelli, F. Mirabella, M. Porreca, and M.R. Barchi, 2016. The Tuscan Nappe front in the Trasimeno area (Western Umbria): geological interpretation of a thin-skinned, Deep Water Fold-and-Thrust Belt. In *Geosciences on a changing planet: learning from the past, exploring the future* (eds. D. Calcaterra, S. Mazzoli, F.M. Petti, B. Carmina & A. Zuccari), vol. 40, 88° SGI Congress, Naples (Italy), 7th–9th September, 2016.

Carboni, F., M.R. Barchi, F. Brozzetti, F. Cruciani, M. Ercoli, F. Mirabella, and M. Porreca, 2017. Kinematic reconstruction of a thin-skinned, deep-water fold and thrust belt: the case of the Outer Tuscan Nappe (Umbria, Italy). *Geophysical Research Abstracts*, Vol. 19, EGU2017-5490.

Porreca M., Minelli G., Ercoli M., Brobia A., Mirabella F., Mancinelli P., Cruciani F., Giorgetti C., Cavinato G., Cannata A., Pauselli C., **Carboni** F., and Barchi M.R., 2017. Seismic reflection profiles and deep geological sections across the area interested by the 2016-2017 earthquake sequence. SIMP-SGI-SOGEI-AIV Congress, Pisa (Italy), 4th–6th September, 2017

Carboni F., M.R. Barchi, F. Brozzetti, F. Cruciani, M. Ercoli, F. Mirabella, and M. Porreca, 2017. Kinematic and mechanic analysis of the Outer Tuscan Nappe: an exhumed case of far-field stress Deep Water Fold-Thrust Belt. *GeoSed Meeting*, Perugia (Italy), June 19th–20th, 2017.

Carboni F., S. Back, M.R. Barchi, 2017. Comparison between two DWFTBs: the Outer Tuscan Nappe (Northern Apennines, Italy) vs. offshore Sabah (NW Borneo). *The Geological Society Meeting*, London (England), October 31st–November 2nd, 2017.

M. Ercoli, M. Porreca, C. Pauselli, P. Mancinelli, A. Cannata, A. Brobia, **F. Carboni**, F. Cruciani, C. Giorgetti, G. Minelli, F. Mirabella, M.R. Barchi, . Seismic attributes analysis to enhance detection of geologic al subsurface features across the 2016-2017 earthquake area (Central Italy). 36° GNGTS, Trieste (Italy), 14th-16th November, 2017.

M. Porreca, G. Minelli, M. Ercoli, A. Brobia, P. Mancinelli, F. Cruciani, C. Giorgetti, A. Cannata, F. Mirabella, **F. Carboni**, C. Pauselli, M.R. Barchi, 2017. Seismic reflection study of the subsurface geology and seismogenic faults in the area interested by the 2016-2017 earthquake sequence (Central Italy). 36° GNGTS, Trieste (Italy), 14th-16th November, 2017.

Carboni, F., F. Cruciani, F. Brozzetti, M. Ercoli, M. Porreca, F. Mirabella, S. Back, M.R. Barchi, 2018. Kinematic and mechanic analysis of an exhumed case of Deep Water Fold-and-Thrust Belt: the Outer Tuscan Nappe, Italy. *AAPG Congress 2018*, Granada (Spain), 15th–17th March, 2018.

M. Porreca, G. Minelli, M. Ercoli, A. Brobia, P. Mancinelli, F. Cruciani, C. Giorgetti, **F. Carboni**, F. Mirabella, A. Cannata, C. Pauselli, and M.R. Barchi, 2018. Geological interpretation of seismic reflection profiles across the area interested by the Norcia Mw 6.5 mainshock (Central Italy). *Geophysical Research Abstracts*, Vol. 20, EGU2018-10256.

Carboni, F., S. Back, M.R. Barchi, 2018. Comparison between two DWFTBs: Outer Tuscan Nappe (Northern Apennines, Italy) vs. Sabah DWFTB (NW Borneo). YORSGET 2018, Montgenevre (France), 2nd – 6th July, 2018.

Carboni, F., F. Cruciani, M.R. Barchi, 2018. Kinematic evolution of two gravity-driven deep-water fold-and-thrust belts: the Orange Basin and the Lamu Basin case-studies. CAG Congress, Aveiro (Portugal), 21st – 28th July, 2018.

Giorgetti, C., S. Azzaro, **F. Carboni**, M. Michele, M. Porreca, M.R. Barchi & GSG Group, 2019. Seismic reflection profiles and geological cross-sections across the area of the 2016-2017 seismic sequence: comparison with seismological data. CRUST workshop 2019, Perugia (Italy), 9th – 10th July, 2019.

Carboni F., S. Azzaro, C. Giorgetti, M. Porreca, M. Michele, M.R. Barchi, 2019. Seismic reflection profiles and geological cross-sections across the area of the 2016-2017 seismic sequence: comparison with seismological data. 12th Geosymposium of young researchers, Silesia (Poland), 2nd – 4th September 2019.

Carboni F., S. Back, M.R. Barchi, 2019. Early collisional deepwater fold-and-thrust belts: NW Borneo vs. Outer Tuscan Nappe (Northern Apennines). 12th Geosymposium of young researchers, Silesia (Poland), 2nd – 4th September 2019.

Carboni F., G. Viola, L. Aldega, R. van der Lelij, M.R. Barchi, 2019. New geochronological constraints on the tectonic evolution of the Tertiary Tuscan Nappe (Northern Apennines) by K-Ar fault gouge dating. 12th Geosymposium of young researchers, Silesia (Poland), 2nd – 4th September 2019.

SKILLS:

Language	ITALIAN: native SPANISH: C1 ENGLISH: C1
Software (general)	Microsoft office 365, Corel Draw, Surfer
Software (geology)	QGIS, Move, Petrel, TrapTester, KingdomSuite
Geology	Field geology, geological cross sections, fold-and-thrust belts, 3D modelling, 2D/3D geometrical balancing and structural restoration, seismic reflection data interpretation, sedimentology, fault seal analysis, seismogenic faults, extensional tectonics, landscape evolution

HOBBIES:

Sports	Rugby (main activity), swimming, tennis, calisthenics, power lifting, climbing, speleology, canyoning, trekking, hiking, running, biking
Various	Play harmonica and ukulele, reading

Filippo Carboni, Ph.D.

