



TO MAGNIFICO RETTORE OF UNIVERSITA' DEGLI STUDI DI MILANO

ID CODE 4513

I the undersigned asks to participate in the public selection, for qualifications and examinations, for the awarding of a type B fellowship at Dipartimento di Scienze della Terra "A. Desio"

Scientist- in - charge: Professor Della Porta Giovanna

**Alessandro Mancini**

## CURRICULUM VITAE

### PERSONAL INFORMATION

Surname	Mancini
Name	Alessandro
Date of birth	22/09/1984

### PRESENT OCCUPATION

Appointment	Structure
-	-

### EDUCATION AND TRAINING

Degree	Course of studies	University	year of achievement of the degree
PhD	Earth Sciences	University of Perugia	2019 - excellence
Young researcher	Earth Sciences	KULeuven university, Belgium	2015
Master	Earth Sciences	Sapienza University of Rome	2012 - 110/110 cum laude

### FOREIGN LANGUAGES

Languages	level of knowledge
Italian	Native speaker
English	Proficient user
Spanish	Proficient user
Catalan	Proficient user

### AWARDS, ACKNOWLEDGEMENTS, SCHOLARSHIPS

Year	Description of award
2015	Travel grants to participate to the Travertine - Tufa workshop, Denizli, Turkey.



2014	Travel grants to participate to the International Sedimentological Congress (Geneva, Switzerland).
2011	Winner of a scholarship to prepare the Master thesis in a foreign country.

## TRAINING OR RESEARCH ACTIVITY

*October 2015 - October 2018: PhD in Perugia University (Supervisor, Capezzuoli E., Swennen R. and Cirilli S.). The Lapis Tiburtinus travertine (Tivoli, Central Italy) as reservoir analogue for some of the Pre-salt carbonate systems.*

*Aim of the thesis and activity: the Lapis Tiburtinus travertines (Tivoli, Central Italy) was studied as reservoir analogue of the Brazilian Pre -salt carbonates. The entire travertine succession (up to 70 m in thickness) and the geometries of the different geobodies, cropping out in an area of 28 Km<sup>2</sup> are been characterized with a multidisciplinary approach including strong and exhaustive field and lab activities, facies analysis, geochemistry, petrophysics and 3D modelling. Line drawings (20), detailed stratigraphic logs (37) and boreholes (9) for sedimentological characterization were performed and correlated at basin scale; more than 200 samples were taken to detail the microfacies, the diagenesis the geochemistry (ICP-OES, C and O stable isotopes, Sr Isotopes) and the petrophysical parameters. 3D modelling of the entire study area was carried out by the use of dedicated software to compare such reconstructions (analogues) with the subsurface reservoir.*

*Skills Acquired: 3D laser scanner reconstructions, 3D photogrammetry reconstruction (in collaboration with Professor Cherin M., University of Perugia), 3D modelling with numerical and vector approach.*

*Other activities performed:*

- lectures for student of Master in Petroleum Geology, related to 3D modelling with open source - free software, especially related to carbonate rocks.*
- Assistance during the field excursion of the students, especially related to the realization of geological maps of Jurassic succession of Umbria - Marche area.*
- Collaboration and assistance during the School of Palaeoanthropology in Perugia University (organized by Professors Cherin M., and Rettori R.).*

*November 2014 - September 2015: contract of young researcher with KU Leuven university (Belgium) in collaboration with Professor Swennen R..*

*Activity: geological map, line drawing, stratigraphic logs, core characterization (in collaboration with Professor Della Porta G., University "Statale" of Milan) and 3D modelling of the Lapis Tiburtinus travertines (Tivoli, Italy). Facies and microfacies analysis, C and O stable isotopes measurements, geochemical analysis (ICP -OES), diagenesis study with cathodoluminescence (CCL) and petrophysical characterization.*

*September 2012 - September 2014: collaboration with the Palaeontology group of University of Barcelona.*

*Activity: field mapping, facies analysis and stratigraphic reconstruction of the Bartonian - Priabonian mixed carbonate siliclastic succession of Vic, Barcelona and Girona (Spain). Detailed*



*reconstruction of the relationships between coralalgal buildups and Nummulite banks. Realization of thin section for the microfacies characterization of the different lithotypes. Work performed in collaboration with Professors Ferràndez-Cañadell C. and Pomar L..*

*September 2011 - November 2011: Sedimentological and paleontological study of mixed carbonate -siliciclastic succession of Oris (Spain).*

*Activity: Study of Eocene outcrops based on stratigraphic logs, microfacies analysis and characterization of mixed carbonate - siliciclastic succession of the Ebro Basin (Vic, Spain), with special emphasis on coralalgal buildups and Nummulites banks. Work performed in collaboration with Professors Serra-Kiel J. and Ferràndez-Cañadell C. of Barcelona University in the framework of my Master thesis. Realization of thin section for the microfacies characterization of the different lithotypes.*

*March 2010 - September 2010: Geological map of the Cornicolani Mts. (Rome).*

*Activity: realization of geological maps to better understand the geometries of the Jurassic unit cropping out in the area. Realization of stratigraphic logs characterized by a sedimentological point and study of ammonoids in collaboration with Prof. Mariotti N. of Sapienza University of Rome. Realization of thin section for the microfacies characterization of the different lithotypes.*

*September 2008 - February 2009: Bachelor thesis on Jurassic succession of Colle Grosso (Cornicolani Mts., Rome).*

*Activity: geological mapping of the Jurassic succession and stratigraphic logs, characterized by a paleontological and sedimentological point of view. Review of the Jurassic stratigraphy of the area. Realization of thin section for the microfacies characterization of the different lithotypes.*

#### SELF-EMPLOYED GEOLOGIST-GEOSCIENTIST

26 Nov. 2019 - 15 Jan. 2020: Geologist - INGV/ University of Perugia. Geochemical study of central Italy aquifers using springs and thermal springs. A new approach to reconstruct a map of the heat flux in Central Italy. Supervisor: Prof. Francesco Frondini.

17 Oct. 2013 - 5 Nov. 2013: Geologist - ICDP (International Continental Drilling Project), Baza, Granada (Spain) BASE project (BAza Seismic Experiment): Characterization of the structure and filling of Baza (Granada, Spain) basin with seismic reflection. GFZ Helmholtz centre, Potsdam (Germany). Assistance on the realization of three seismic lines (54 km). Professional sector: scientific and technical activities.

23 Oct. 2013 - 5 Nov. 2013: Geologist- BGC (Berkeley Geochronology Center), Orce, Venta del Moro (Valencia, Spain). Supervisor: Gary Scott.

Collection of samples for palaeomagnetism. Professional sector: palaeomagnetism.

1 Dec. 2006 - 1 Feb. 2007: Geologist

- Università degli studi di Roma "Sapienza", Piazzale Aldo Moro 5, Roma (Italy). Geophysical surveys (tomography, electrical lines, regularization and control of waste disposal sites). Supervisor: Prof. Stefano Rizzo. Professional sector: scientific and technical activities.



1 Nov. 2005 - 1 Dec. 2006: Geology technician

- Studio Associato "Overland", Via Alessandro Malladra 35-00157, Roma (Italy). Assistant in geological surveys, tomography, stratigraphy survey, location piezometers in boreholes, geological - Technical laboratory of Geotechnical Engineering. Professional sector: scientific and technical activities.

## COURSES

- June 2019: 3<sup>rd</sup> International school of fluid geochemistry: Geochemical modelling and environmental issues; Perugia, Italy.
- May-June 2016: Hydrothermal gas studies.
- May 2016: First International Short Course on "Application of Laser Ablation Inductively Coupled-Plasma Mass Spectrometry (LA-ICP-MS) to Earth Sciences.

## SEMINARS

- 14-15/05/2018: Workshop: what is wrong with carbonates?
- 01/12/ 2017: Field trip "Il Bacino delle Acque Albule ed il *Lapis Tiburtinus*" (co-leader with Capezzuoli E. Geosed)
- 30/11/ 2017: 2° Giornata "Incontri di geologia".
- 22/11/2017: Continental carbonates: Spanish examples.
- 22/11/2017: Ebro Basin: Neogene evolution of a foreland basin.
- 26/04/2017: Il rilievo 3D: dalle fotografie ai modelli tridimensionali.
- 09/03/2016: Study of sedimentary basin: A multidisciplinary approach.
- 02/02/2016: Magma degassing, heating and volcanic unrest: The case of Campi Flegrei.
- 22/01/2016: Avo Analysis of Seismic Data.
- 21/01/2016: Quantitative analysis and inversion of GPR (and seismic) data.

## MASTER THESIS FOLLOWED (Perugia-KU Leuven universities)

-Joachim Lamal, 2016-2017. Sedimentpetrological study of the SN1 and SN2 travertine boreholes (Tivoli, Italy) with special emphasis to stable isotopic trends. Main tutor: Swennen R., Co-tutor: Capezzuoli E., Mancini A. (in collaboration with KU Leuven).

-Gabriele Lezi, 2016-2017. Determinazione del flusso di CO<sup>2</sup> associato alla deposizione dei travertini: il caso di Rapolano. Main tutor: Frondini F., Co-tutor: Capezzuoli E., Mancini A.

-David Matarazzi, 2015-2016. Depositi di travertino di Tivoli e le loro relazioni con il processo di degassamento terrestre in Italia centrale. Main tutor: Frondini F., Co-tutor: Mancini A.



-Fabio Scalera, 2015-2016. Petrographic characterization of Testina travertine, Tivoli (central Italy). Main tutor: Capezzuoli E., Co-tutor: Claes H., Mancini A.

-Luca Rettori, 2015-2016. Petrographic characterization of tufa and travertine deposits through photogrammetry and laser scanning methods. Main tutor: Capezzuoli E., Co-tutor: Frixia A., Mancini A.

## PROJECT ACTIVITY

Year	Project
2015-2017	2015-2017: TraRAS. The <i>Lapis Tiburtinus</i> travertine (Tivoli, Central Italy) as reservoir analogue for some of the Pre-salt carbonate systems. In collaboration with BG, TOTAL, Petrobras, University of Perugia, KU Leuven, Budapest and Denizli (Prof. R. Swennen, Prof. M. Ozkul., Dr. S. Kele).

## CONGRESSES AND SEMINARS

Date	Title	Place
2019	Mancini A., Frondini F., Capezzuoli E., Galvez Mejia E., Lezzi G., Matarazzi D., Brogi A., Swennen R., 2019. Travertines masses from western Central Italy and natural Earth degassing: an approach to evaluate the geogenic CO <sub>2</sub> flux. 16-19 September 2019.	SIMP-SGI-SOGEI congress, Parma, IT
2019	Mancini A., Capezzuoli E., Erthal M., Swennen R., 2019. 3D reconstruction of travertine depositional system based on hierarchical approach. A step forward in the interpretation of some Pre-salt carbonate plays?. 10-13 September 2019.	34st IAS Meetings of Sedimentology, Rome, IT
2019	Mancini A., Capezzuoli E., Erthal M., Scalera F., Della Porta G., Swennen R., 2019. The <i>Lapis Tiburtinus</i> travertines (Acque Albule Basin, Central Italy): base level variations vs tectonic activity. Implications at basin scale. 10-13 September 2019.	34st IAS Meetings of Sedimentology, Rome IT
2017	Swennen R., Aratman C., Capezzuoli E., Claes H., Erthal M., Janssens N., Kele S., Mancini A., Mohammadi Z., Özkul M., Soete J., Török A., Verbiest M., 2017. Reservoir analogues to better constrain geobody architecture, genesis and petrophysical characteristics of continental carbonates. 15-18 October 2017	AAPG, International Conference & Exhibition, London, UK



2017	TrARAS meeting (travertine reservoir analogue study), 2017. 1-3 June 2017	Meeting with SHELL, TOTAL and PETROBRAS, Tivoli, IT
2017	Mancini, A., Capezzuoli, E., Swennen, R., 2017. Virtual 3D modelling of a Pre-Salt reservoir analogue: the Lapis Tiburtinus travertine basin. 19-20 June 2017.	Meeting GeoSed-SGI, Tivoli, IT
2016	Mancini, A., Capezzuoli, E., Swennen, R., 2017. 3D reconstruction of a Pre-Salt reservoir analogue: Geometries, distribution and geobody architecture of the "Lapis Tiburtinus" travertine Basin (Tivoli, Italy). 23-25 May 2016.	32st IAS Meetings of Sedimentology, Marrakech, MA
2015	Mancini, A., Capezzuoli, E., Erthal, M., Swennen, R., 2015. Different travertine lithofacies of Tivoli area (Italy): geometries, distribution and Paleoenvironmental implication. 5-8 November 2015.	Travertine - Tufa workshop, Denizli, TR
2015	Mancini, A., Capezzuoli, E., Erthal, M., Swennen, R., 2015. Tivoli travertine deposits: a 3D sedimentological model of a reservoir analogue. 22-25 June 2015.	31st IAS Meetings of Sedimentology, Krakow, PL
2014	Mancini, A., Ferrandez-Cañadell, C., 2014. The role of paleogeography and tectonic control in the Upper Eocene neritic facies of the NE Ebro basin: the Coll d'Úria Limestones. 18-22 August 2014.	IAS19th International sedimentological congress, Geneva, CH
2014	Mancini, A., Ferrandez-Cañadell, C., 2014. Paleoenvironmental analysis of early Priabonian coral buildups, San Martí Xic Formation, Orís (Vic, SE Ebro basin, Spain). 18-22 August 2014.	IAS19th International sedimentological congress, Geneva, CH
2012	Mancini, A., 2012. Palaeoenvironmental Analysis of Eocene Coral Reefs, San Martí Xic Formation, Orís (SE Ebro Basin, Spain). 1-6 octubre 2012.	Jornadas de la Sociedad Española de Paleontología y Simposios, Soler, SP

## PUBLICATIONS

**Della Porta G., Mancini A., Capezzuoli E., Ruscitto V., 2019.** Travertine facies: a Tivoli core-workshop and a walk through the Sapienza University Campus. 34st IAS Meetings of Sedimentology, Rome, Italy, 10-13 September 2019, Field Trip Book IW3 and mobile app.

**Mancini A., Frondini F., Capezzuoli E., Galvez Mejia E., Lezzi G., Matarazzi D., Brogi A., Swennen R., 2019.** Evaluating the geogenic CO<sub>2</sub> flux from geothermal areas by analysing quaternary travertine masses. New data from western central Italy and review of previous CO<sub>2</sub> flux data. Quaternary science review, 215, 132-143. Impact Factor: **4.334**, SCImago Journal Rank (SJR): **2.668**.

**Mancini A., Frondini F., Capezzuoli E., Galvez Mejia E., Lezzi G., Matarazzi D., Brogi A., Swennen R., 2019.** Porosity, bulk density and CaCO<sub>3</sub> content of travertines. A new dataset from Rapolano, Canino and



Tivoli travertines (Italy), 2019. Data in brief, 25, 1-7. Impact Factor: **0.93**, SCImago Journal Rank (SJR): **0.366**.

**Brogi A., Capezzuoli E., Moretti M., Olvera-Garcia E., Matera P.F., Garduno-Monroy V.H., Mancini A., 2018.** Earthquake-triggered soft-sediment deformation structures (seismites) in travertine deposits. *Tectonophysics*, 745, 349-365. Impact Factor: **2.686**, SCImago Journal Rank (SJR): **1.611**.

**Mancini A., Capezzuoli E., Swennen R., 2017.** Virtual 3D modelling of a Pre-Salt reservoir analogue: the Lapis Tiburtinus travertine basin (Tivoli, Italy). *Journal of Mediterranean Earth Sciences* Vol. IX, 175-179. Source normalized impact for paper SNIP: **0.165**, SCImago Journal Rank SJR: **0.152**.

**Marques Erthal, M., Capezzuoli, E., Claes, H., Soete, J., Mancini, A., Swennen, R., 2017.** Shrub morphotype depositional model from Tivoli continental carbonate deposits (Central Italy). *Sedimentary Geology*, 347, 79-99. Impact Factor: **2.575**, SCImago Journal Rank (SJR): **1.277**.

**Mancini A., Manni R., Margottini S., 2012.** La geologia dei Monti Cornicolani. in: Giardini M. (a cura di), Sant'Angelo Romano (Monti Cornicolani, Roma). Un territorio ricco di storia e di natura. Comune di Sant'Angelo Romano, Regione Lazio., 27-50.

**Mancini A., Mancini A., 2009.** La linea di costa pliocenica del versante occidentale dei Monti Lucretili. *Annali Associazione Nomentana di Storia e Archeologia*. Numero 10, 5-20.

**Mancini A., 2005.** Rivisitazione della Grotta della Cava dell'Acqua. *Rivista della Federazione Speleologica del Lazio* numero 4, 8-9.

## OTHER INFORMATION

**Communication skills:** Team spirit, good ability to adapt to multicultural environments, gained through my experiences abroad, good communication skills gained through my experience as a hiking guide.

**Organisational / managerial skills:** Excellent organizational skills, ability to perform tasks in multitasking, excellent ability to work either in groups or individually (acquired in the workplace and university) and excellent ability to adapt to multicultural environment.

**Job-related skills:** Excellent skills in the use of machinery for the realization of petrological thin sections, geochemical laboratory, cathodoluminescence and in geological survey.

**Computer skills:** Excellent knowledge of MS Office, Corel Draw, and statistical programs (Analiseries - SGeMS). Expert in 3D modelling whit vector and numerical approach (Surfer, Google Sketchup), Photogrammetry (Photoscan) and Laser scanning (Cloudcompare). Expert in realization of mobile app for geological field trips. Ability to work on Windows and Macintosh platforms.



**MEMBERSHIP**

- Member of the International Association of Sedimentologists (IAS)
- Member of the Italian GEOSed group
- Member of the Italian Geological Society (SGI)
- Member of Italian Geochemical Society (SoGEI)

**HOBBY**

**Jan. 1999 - Present: Hiking**

- Sentiero Verde (Hiking Association), Via L.P. Guerra 22 - 00173, Roma (Italy).
- Discovery of new paths and tracing of new routes, leading people in geological and naturalistic walks.

**Present: Fly fishing**

Declarations given in the present curriculum must be considered released according to art. 46 and 47 of DPR n. 445/2000.

The present curriculum does not contain confidential and legal information according to art. 4, paragraph 1, points d) and e) of D.Lgs. 30.06.2003 n. 196.

Place and date: Rome, 24/01/2020

SIGNATURE