

ALLEGATO B

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[Lorenzo Gemignani] CURRICULUM VITAE

INFORMAZIONI PERSONALI (NON INSERIRE INDIRIZZO PRIVATO E TELEFONO FISSO O CELLULARE)

COGNOME	GEMIGNANI
NOME	LORENZO
DATA DI NASCITA	[17, 08, 1985]

Lorenzo Gemignani, Ph.D.

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Education

- 2013-2018 **Ph.D., Earth Science**, *Vrije Universiteit Amsterdam*, Amsterdam, Netherlands
Granted by Marie Curie Action, EU FP7 (grant agreement no'. 316966).
 - $^{40}\text{Ar}/^{39}\text{Ar}$ and fission-track radio isotopic dating
 - Provenance analysis and detrital thermochronology
 - Numerical modeling: Watershed, landscape evolution, and erosion rates analysis
 - Development of analytical techniques for micas analysis on the Helix plus MC mass spectrometer (Thermo Fisher Sc.)
 - Electron Micro-probe analysis (EMP)
 - Paleomagnetic (Remi and Siang section, NE-India) and paleoenvironmental data acquisition (High Himalayan Lakes, India)
 - Co-Tutoring 2 M.Sc. thesis (T. D. van Gerve, V. de Breij)
 - Remote area field work: mapping and sample collection (India, Nepal, China)
- 2009-2011 **M.Sc., Geological Science and Technologies**, *Università di Pisa*, Pisa, Italy
2007 **Scholarship, 6 months** UPMC-Jussieu, Paris, France
Granted by Socrates-Erasmus interchange program
- 2005-2009 **B.Sc., Earth Sciences**, *Università di Milano*, Milan, Italy
2000-2005 **Classical Education**, *Liceo Classico G. Parini*, Milan, Italy
- ### Internships
- 2013-2015 **iTECC - Initial Training Network workshops**, co-organized: VU Amsterdam (NL), LEC-Lancaster (UK), ISTerre-Grenoble (FR), Thermo Fisher Scientific-Bremen
- 2012 **Basic of Gravimetry**: Data acquisition and processing for geothermal exploration, *Università di Trieste and OGS, Italy*
- 2009-2011 **GIS and Cartography**, *Università di Pisa*, Italy

Academic Research Experiences

Current Position

- Oct. 2018 - Present **Post-doc Research Associate**, Tectonic and Sedimentary System group, FU-Berlin, Germany.

Current Research Projects

- Horizon 2020 - RADIATE under the Grant Agreement 19001937 (Nov. 2019).
- "Slab tearing or slab retreat as triggers of extension at the Dinaric-Hellenic transition?" - DFG (Deutsche Forschungsgemeinschaft), FU Berlin, Germany.

Academic Positions and Granted projects

2016-2018 **Guest Researcher**, VU Amsterdam, The Netherlands.

2017-2018 **Lecturer**, *Università degli Studi di Torino*, Italy.

- Lectures of geology for international students (in English)
- Field trip course of the Sicilian fold and thrust belt, Sicily, Italy

Granted Research Proposal

- HORIZON 2020 Project RADIATE under the Grant Agreement 19001937 (Nov. 2019).

Granted Fellowship

- MiNeRAL - Erasmus+, EU research project, Università degli Studi di Torino, Italy
- iTECC - European Research Council FP7/People/2012/ITN, grant no.316966
- "M.Sc. contribution for thesis in foreign country 2010-2011" - Università di Pisa, Italy

Current Teaching Activity

- Mapping and geological profile 2 (3 CPU) - in English
- Advanced Geological Mapping - (3 CPU) - in English
- Laboratory Methods (3CPU) - in English

Ph.D. Thesis Supervision

- M.Sc. Mark Grund, "Tectonic evolution of the Skutari-Peja-Normal Fault (SPNF), Northern Dinarides" (co-supervised with Prof. Dr. Mark Handy). FU-Berlin.

M.Sc. Thesis Supervision

- B.Sc. Leonardo Caprioli, "Structural analysis and geochronology of the SPNF at the transition with the Kosovo basin, Kosovo (co-supervised with Prof. Dr. Mark Handy). FU-Berlin, Germany.
- B.Sc. Benedict Mittelbach, "Erosion and accumulation rates of the Tropoja basin (NE Albania)" (Horizon 2020 - RADIATE). FU-Berlin, Germany- ETH- Zurich.
- M.Sc. Thomas van Gerve, "Exhumation rates from the eastern Alps as detected from mica Ar-dating" (co-supervised with Prof. Dr. Jan R. Wijbrans). VU Amsterdam, The Netherlands.

Invited Talks

- 02/2020 "Smurf" Seminar, Potsdam-University, Potsdam, Germany.
- 01/2019 Tectonic and Sedimentary group seminar. FU-Berlin, Germany.
- 04/2018 Institute Symposium, Università degli Studi di Torino, Turin, Italy.

Congress Committee

Scientific committee, *Yorsget-2020, Catania, Italy*.

Organisation committee, *HKT-2016, Aussois, France*.

Manuscript Reviewer

- Since 2018 - Solid Earth, Copernicus publications.

Co-Organized Field Work Expeditions

- 2019: Field mapping class - Kosovo and Albania, (FU- Berlin 2 weeks)
- 2017: Guide to fold and thrust belt geology, an example from East Sicily (Mineral project, 3 weeks).
- 2015: Yanmou basin, Hunnan-Sichuan , China (iTECC project, 5 weeks).
- 2014: Inside Himalayan lakes, Western Nepal (iTECC project, 8 weeks).
- 2013: Arunachal Pradesh and Assam, India (iTECC project, 9 weeks).
- 2013: Eastern Alps: Austria, Switzerland, Italy, Slovenia (iTECC project, 1 week).
- 2010: Himalaya, Mustang, Nepal (PRIN 2010, 8 weeks)
- 2008: Western Alps - Val Saint Bartelemy - Aosta Valley, Italy (5 weeks)

Work Experiences

2012–2013 **Consultant geologist**, *Evaluation of Diatomite and Calcite deposits (Algeria)*, Geofield srl., San Miniato (Pi), Italy.

- Ore deposit evaluation and mine planning.
- Technical reporting, due diligence.

2011–2013 **Geophysics data surveys team member**, *Geoenergy srl.*, Cascina (Pi), Italy.

- Gravimetry planning and data acquisition.
- Low-Frequency Passive Seismic Spectroscopy data acquisition.

Skills

Molecular and Atomic Spectroscopy

- Noble-Gas Mass Spectrometry ($^{40}\text{Ar}/^{39}\text{Ar}$)
- Fission track analysis (zircon - apatite)
- Electron microprobe analysis and scanning electron microscopy (EMP and SEM)
- LA ICP Mass Spectrometry

Fieldwork Geology/Geophysics

- Field work analysis and collection of structural, and surface data;
Analysis of rocks fabric and kinematic indicators, geological mapping and sampling.
- Lakes sediment coring.
- Exploration geophysics: Passive low-frequency seismic network analysis, gravimetric analysis, topographic analysis.
- Geographical Information System (GIS).
- GPS and GNSS: Data acquisition and processing

Management activity

- Team organization and project leading.
- Field expedition organization.
High altitude (>4000 m a.s.l) and remote area field expeditions.

Informatics

- Linux and Windows OS
- Microsoft Office, Open Office
- Adobe Suite
- GIS (ArcGIS, QGIS)
- Languages: Matlab and R (basic)
- L^AT_EX

Languages

Italian	Native	<i>Mother Tongue</i>
English	Advanced	<i>Working proficiency</i>
French	Advanced	<i>Working proficiency</i>
Dutch	basic	<i>Colloquial</i>

Society Memberships

- AGU (American Geophysical Union), since 2015
- EGU (European Geosciences Union) since 2014
- SGI (Italian Geological Society) since 2011
- IGHG (Italian Group of Himalayan Geology) since 2011
- TecTask (IUGS Task Group on Tectonics) since 2017

Publication

Selected Peer-reviewed journal publications

- Govin, G., Van der Beek, P., Najman, Y., **Gemignani, L.**, Huyghe, P., Dupont-Nivet, G., Bernet, M., Mark, C., Wijbrans, J., (in press). Early onset and late acceleration of rapid exhumation in the Namche Barwa syntaxis, eastern Himalaya. *Geology*.
- Xilin Sun, Kuiper, F. K., Yuntao Tian, Changan Li, Zengjie Zhang, **Gemignani, L.**, Rujun Guo, and J. R. Wijbrans, (2020). $^{40}\text{Ar}/^{39}\text{Ar}$ mica dating of late Cenozoic sediments in SE Tibet: Implications for sediment recycling and drainage evolution. *Journal of the Geological Society*. <http://dx.doi.org/10.1144/jgs2019-099>
- Xilin Sun, Kuiper, K.F., Yuntao Tian, Chang' an Li, Gemignani, L., Zengji Zhang, (2020). Impact of idraulic sorting and weathering on mica provenance studies: An example from the Yangtze River. *Chemical Geology*, 532, 119359.
- Huyghe, P., Bernet, M., Galy A., Naylor, M., Cruz, J., Gyawali B., **Gemignani, L.**, Mugnier, J-L., (2020). Rapid exhumation since at least 13 Ma in the Himalaya recorded by detrital apatite fission-track dating of Bengal fan (IODP Expedition 354) and modern Himalayan river sediments. *Earth and Planetary Science Letters* 534, DOI: <https://doi.org/10.1016/j.epsl.2020.116078>
- **Gemignani, L.**, Kuiper, K.F., Wijbrans, J.R., Xilin Sun, Santato, A., (2019). Improving the precision of single grain mica $^{40}\text{Ar}/^{39}\text{Ar}$ dating on smaller and younger Muscovite grains: application to provenance studies. *Chemical Geology*, 511, pp. 100-111. DOI: <https://doi.org/10.1016/j.chemgeo.2019.02.013>.
- Najman, Y., Mark, C., Barfod, D. N., Carter, A., Parrish, R., and **Gemignani, L.**, (2019). Spatial and temporal trends in exhumation of the Eastern Himalaya and syntaxis as determined from a multitechnique detrital thermochronological study of the Bengal Fan. *GSA Bulletin*. <https://doi.org/10.1130/B35031.1>
- **Gemignani, L.**, Beek van der, P., Braun, J., Najman, Y., Bernet, M., Garzanti, E.A., Wijbrans R.J., (2018). Downstream evolution of the thermochronologic age signal in the Brahmaputra catchment (eastern Himalaya): implications for the detrital record of erosion. *Earth Plan. Sci. Lett.*, n. 499, DOI: 10.1016/j.epsl.2018.07.019
- Braun J, **Gemignani, L.**, Beek van der, P. (2018). Extracting information on the spatial variability in erosion rate stored in detrital cooling age distributions in river sands. *ESurf*, vol. 6, p. 257-270, ISSN: 2196-6338
- Zhuang, G., Najman, Y., Tian, Y., Carter, A., **Gemignani, L.**, Wijbrans, J., Qasim, M.J., Asif Khan, J. M. (2018). Insights into the evolution of the Hindu Kush- Kohistan- Karakoram from modern river sand detrital geo- and thermochronological studies. *Journ. of the Geol. Society*, ISSN: 0016-7649, doi: <https://doi.org/10.6084/m9.figshare.c.4124573>
- **Gemignani, L.**, Sun, X., Braun, J., Gerve van der, T.D., Wijbrans, J. R., (2017). A new detrital mica $^{40}\text{Ar}/^{39}\text{Ar}$ dating approach for provenance and exhumation of the Eastern Alps. *TECTONICS*, vol. 36, p. 1521-1537, ISSN: 1944-919404.
- Carosi, R., Montomoli, C., Iaccarino, S., Massonne, H., Rubatto, D., Langone, A., **Gemignani, L.**, Visonà, D. (2016). Middle to late Eocene exhumation of the Greater Himalayan Sequence in the Central Himalayas: Progressive accretion from the Indian plate. *GSA Bulletin*, vol. 128, ISSN: 0016-7606, doi: 10.1130/B31471.1
- Carosi, R., **Gemignani, L.**, Godin, L., Iaccarino, S., Larson, K.P., Montomoli, C., Rai, S.M. (2014). A geological journey through the deepest gorge on earth: The kali gandaki valley section, west-central nepal. *Journal of the Virtual Expl.*, ISSN: 1441-8142, doi: 10.3809/Jvirtex.vol.2014.052.

Published Thesis

- Gemignani, L., (2018). Extracting erosion and exhumation patterns from detrital thermochronology, an example from the eastern Himalaya. PhD Thesis Manuscript, in English, 186 pages, ISBN: 978-90-9030865-4.
- Gemignani, L., (2011). La zona di taglio Kalopani KSZ (massiccio dell'Annapurna, Mustang, Nepal): analisi strutturale e geocronologia. MSc Dissertation, in Italian, 126 pages.

Selected Conference Proceedings

- Gemignani, L., Kuiper K., Wijbrans, J.R., Improving the precision of single grain mica $^{40}\text{Ar}/^{39}\text{Ar}$ dating on smaller and younger Muscovite grains: application to provenance studies. Geophysical Research Abstracts Vol. 21, EGU2019-5234, 2019.
- Gemignani, L., Peacock, D., Jessell, M., Carosi, R., (2018). TecTask OpenTerminology, a public debate regarding geological terminology for Geoscientists. In: Yorsget, Montgenevre, France 2-6 July, 2018. Yorsget Abstract.
- Gemignani, L., Beek van der, P., Najman, Y., Braun, J., Garzanti, E.F., Bernet, M., Wijbrans, J. R., (2017). Long term and present-day erosion of the Eastern Himalaya as detected by detrital thermochronology. Geophysical Research Abstracts, Vol. 19, EGU2017-13123, EGU general Assembly 2017.
- Gemignani, L., Sun X, Braun J, Gerve van der T, Wijbrans J R, (2017). Detrital mica $^{40}\text{Ar}/^{39}\text{Ar}$ approach for provenance and exhumation of the Eastern Alps. Geophysical Research Abstracts, Vol. 19, EGU2017-4562, 2017, EGU General Assembly 2017.
- Van Der Beek, P. A.; Govin, G.; Najman, Y.; Millar, I.; Bernet, M.; Gemignani, L.; Pascale, H.; Wijbrans, J. R.; Dupont Nivet, G., (2017). Onset of Rapid Exhumation in the Namche Barwa Syntaxis Constrained by Detrital Thermochronology. American Geophysical Union, Fall Meeting 2017, abstract T12A.
- Gemignani, L., Wijbrans, J.R., Najman, Y., Beek van der, P., Bernet, M., (2016). Downstream Evolution of the Eastern Himalayan Detrital Signal as Recorded by Thermochronology in the TsangpoSiangBrahmaputra River Sediments. In: HimalayanKarakorumTibet Workshop, Aussois, France.
- Gemignani, L., Wijbrans, J.R., Najman, Y., Beek van der, P., (2015). Intense dilution of the Eastern Himalayan syntaxis detrital signal as recorded by thermochronology in the Yarlung-Siang-Brahmaputra river sediments. American Geophysical Union, Fall Meeting 2015, abstract id. V33D-3125.

Data

14-07-2020

Luogo

Berlino

Lorenzo Gemignani