

**UNIVERSITÀ DEGLI STUDI DI MILANO**

selezione pubblica per n. 1 posto/i di Ricercatore a tempo determinato ai sensi dell'art.24, comma 3, lettera b) della Legge 240/2010 per il settore concorsuale A4/02-GEOLOGIA STRUTTURALE, GEOLOGIA STRATIGRAFICA, SEDIMENTOLOGIA E PALEONTOLOGIA, settore scientifico-disciplinare GEO/02 - GEOLOGIA STRATIGRAFICA E SEDIMENTOLOGICA presso il Dipartimento di SCIENZE DELLA TERRA "ARDITO DESIO", (avviso bando pubblicato sulla G.U. n. 50 del 30/06/2020) Codice concorso 4401.

## Edoardo Dallanave

### CURRICULUM VITAE

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

COGNOME	DALLANAVE
NOME	EDOARDO
DATA DI NASCITA	25/11/1976

**ACADEMIC EXPERIENCE**

- October 2018–present** Principal Investigator (Research Associate) at the Department of Earth and Environmental Sciences of the University of Bremen (Germany).
- March 2012–March 2018** Principal Investigator (Research Associate) at the Department of Earth and Environmental Sciences of the Ludwig Maximilians University (München, Germany).
- March 2010–Feb. 2012** Postdoctoral Research Fellow at the Geosciences Department of the University of Padova (Italy).
- Jan. 2007– Dec. 2009** Ph.D. student at the Geosciences Department of the University of Padova (Italy).
- March 2005–Dec. 2006** Research work in collaboration with the Geological Survey of Lombardy (Italy) and the Fossils Museum of Meride (Switzerland).  
*Work Description:* Magnetic stratigraphy and characterization of Alpine Triassic sedimentary rocks.

**EDUCATION**

- March 2010** Ph.D. in Earth Science.  
*Awarding institution:* University of Padova (Italy).
- October 2004** Degree in Earth Science.  
*Awarding institution:* University of Milan (Italy).

**ITALIAN NATIONAL SCIENTIFIC ABILITATION (ASN)**

- 7 JULY 2020** Formal request accepted (Prof. Il Fascia), currently under evaluation. All three bibliometric indices (number of citations, number of publications, H-index) are above the minimum values required.

**RESEARCH INTEREST**

My main scientific interest is paleo- and rock-magnetism applied to different geological problems. These include paleogeographic reconstructions, magneto-biochronology (particularly during the Cenozoic), and magnetic properties of volcanic materials. My interest in paleogeography is addressed to the southwest Pacific area (i.e., Zealandia continent) as well as the Alpine Tethys area during the Mesozoic, as tested by a number of publications (please refer to publications list). Among the different topics, I am currently working on the stratigraphic records recovered during IODP Exp. 371, on which I sailed as on-board Paleomagnetist. These

results integrate recent data obtained from exposed sections in New Zealand and New Caledonia to complete the picture of the Zealandia area stratigraphic-tectonic evolution. In terms of magnetostratigraphy, I obtained significant results also from the Italian Southern Alps. A challenging line of research that I am exploring in different settings is using rock-magnetic proxies to evaluate the intensity and style of the chemical weathering of silicate through time. Weathering of silicates is the only natural process buffering the CO<sub>2</sub> level in the atmosphere on a long-term scale, with enormous implications on climate and life.

#### INTERNATIONAL OCEAN DISCOVERY PROGRAM (IODP)

- |   |  |
|---|--|
| <b>Feb. 4–Apr. 6 2021</b>               | Officially invited to sail as paleomagnetist onboard the vessel JOIDES Resolution on IODP Exp. 392 “Agulhas Plateau Cretaceous Climate”.   |
| <b>July–August 2020<br/>(postponed)</b> | Officially invited to sail as paleomagnetist onboard the vessel JOIDES Resolution on IODP Exp. 388 “Equatorial Atlantic Gateway”.          |
| <b>July 26–Sept. 27 2017</b>            | Onboard Paleomagnetist during IODP Exp. 371 “Tasman Frontier Subduction Initiation and Paleogene Climate” on the vessel JOIDES Resolution. |

#### FIELDWORK

A big part of my scientific career consists of fieldwork. I conducted several field campaigns in order to carry on geological mapping, stratigraphic sections logging and sampling, even in hostile environmental conditions. Below are outlined the most relevant. The associated publications are listed in the Publications section.

- |   |  |
|---|--|
| <b>New Caledonia<br/>(2014–2018)</b>          | Three fieldwork campaigns around the island, for a total of 6 weeks, to perform logging and description of sedimentary sections, and sampling for paleomagnetic and biostratigraphic studies.                                    |
| <b>New Zealand<br/>(2012–2020)</b>            | Five field campaigns, for a total of ~10 weeks, in different parts of both the North and the South Islands, to perform mapping, logging, description, and sampling of Cenozoic sedimentary sections.                             |
| <b>Venetian Southern Alps<br/>(2007–2018)</b> | Several field campaigns, related also to my doctorate work, in order to perform logging, description, and sampling for magneto-biostratigraphy of several sedimentary sections cropping out in the Piave River valley (Belluno). |
| <b>Northern Alps</b>                          | Field campaign, in high mountain environment, to log and sample Jurassic and Cretaceous sedimentary rocks belonging to the Briançonnais paleogeographic domain (Alpine Tethys).  |
| <b>Giudicarie Alps</b>                        | Approximately 1 months of fieldwork to perform geological mapping around the village of Daone (TN, Italy), related to my MSc activities.   |

#### FUNDED RESEARCH PROGRAMS

- |                                |  |
|--------------------------------|--|
| <b>October 2018–Sept. 2020</b> | Exploring the coupling between plate tectonic and climate evolution: Eocene–Oligocene chronology of the southwest Pacific.<br>DFG project DA1757/2-1, fully funded for 24 months at the University of Bremen.  |
| <b>March 2015–Febr. 2018</b>   | Early Cenozoic climate and tectonic evolution of the southwest Pacific Ocean.<br>DFG project DA1757/1-1, fully funded for 36 months at the LMU München (Germany).  |
| <b>March 2012–Febr. 2015</b>   | Magnetostratigraphy and rock-magnetism of the Mead Stream section, New Zealand: a tool to investigate the temporal and spatial evolution of a Late Cretaceous–early Eocene southern Pacific continental margin.<br>DFG project BA1210/19-1 and 2, fully funded for 36 months at the LMU München (Germany). |

#### CONVENING

- |                 |  |
|-----------------|--|
| <b>CBEP2020</b> | Member of the Scientific Committee of the Climate and Biotic Events of the Paleogene, 2020 (postponed to 2021 due to COVID-19); Co-organizer and Chair of the meeting theme 4: “Tectonics, Surface Environments and Hydrological |
|-----------------|--|

Processes", consisting of two sessions:

4.1- Source-to-sink sedimentation during warm intervals of the Paleogene

4.2- Impact of paleogeography on our understanding of Paleogene Climate

<https://www.marum.de/Forschung/Climatic-and-Biotic-Events-of-the-Paleogene-2020.html>

**STRATI 2019** Convener and co-chair of the General session on Stratigraphy (ST11.4)  
<http://www.strati2019.it>

#### TEACHING

**University of Bremen** *Marine environmental archive project*, 3h weekly lectures (summer semester 2019), Faculty of Geosciences, University of Bremen (Germany).

*ECORD Training Course 2019*, 25-29 March 2019, Magnetostratigraphy Module, MARUM (Bremen, Germany).

Supervisor of several Data Analysis projects as part of the MSc program.

**University of Munich** *Paleomagnetism: application to magnetostratigraphy and paleogeography*. Weekly lectures 2h (summer semester 2016) at the Department of Earth and Environmental Sciences, LMU München (Germany).

Advisor and Co-advisor of several BSc and MSc theses.

#### NON-ACADEMIC WORK EXPERIENCE

**2003-2005** *Company: ENSR Italia Job Description: Fieldwork in the environmental reclamation area.*

**Octob. 2004-Nov. 2004** *Company: Ingea Srl Job Description: Fieldwork in the environmental reclamation area.*

#### PUBLICATIONS

- 2020**
- **Dallanave, E.**, Maurizot, P., Agnini, C., Sutherland, R., Hollis, C.J., Collot, J., Dickens, G.R., Bachtadse, V., Strogen, D.P., Morgans, H.E.G., 2020. Eocene (46-44 Ma) onset of Australia-Pacific plate motion in the southwest Pacific inferred from stratigraphy in New Caledonia and New Zealand. *Geochemistry Geophys. Geosystems* 21(7). <https://doi.org/10.1029/2019GC008699>
  - Kirscher, U., Gevorgyan, H., Meliksentsian, K., Navasardyan, G., **Dallanave, E.**, Breikreuz, C., Bachtadse, V., 2020. Quaternary ignimbrites of western Armenia - Paleomagnetic and anisotropy constraints on flow direction and stratigraphy. *Journal of volcanology and geothermal research*, *in press*. <https://doi.org/10.1016/j.jvolgeores.2020.106982>
  - Sutherland, R., Dickens, G.R., Blum, P., Agnini, C., Alegret, L., Asatryan, G., Bhattacharya, J., Bordenave, A., Chang, L., Collot, J., Cramwinckel, M.J., **Dallanave, E.**, Drake, M.K., Etienne, S.J.G., Giorgioni, M., Gurnis, M., Harper, D.T., Huang, H.-H.M., Keller, A.L., Lam, A.R., Li, H., Matsui, H., Morgans, H.E.G., Newsam, C., Park, Y.-H., Pascher, K.M., Pekar, S.F., Penman, D.E., Saito, S., Stratford, W.R., Westerhold, T., Zhou, X., 2020. Continental scale of geographic change across Zealandia during Paleogene subduction zone initiation. *Geology* 48. doi: 10.1130/G47008.1.
  - Crouch, E.M., Morgans, H.E.G., Shepherd, C.L., Naafs, B.D.A., **Dallanave, E.**, Phillips, A., Hollis, C.J., Pancost, R.D., 2020. Climatic and environmental changes across the Early Eocene Climatic Optimum at mid-Waipara River, Canterbury Basin, New Zealand. *Earth Sciences Reviews* 200, 1-20, doi: 10.1016/j.earscirev.2019.102961.
  - Luciani, V., Fornaciari, E., Papazzoni, C., **Dallanave, E.**, Giusberti, L., Stefani, C., Amante, E., 2020. Integrated stratigraphy at the Bartonian–Priabonian transition: correlation between shallow benthic and calcareous plankton zones (Varignano section, northern Italy). *Geological Society of America Bulletin* 132, 495-520, doi: 10.1130/B35169.1.
- 2019**
- **Dallanave, E.**, Chang, L., 2019. Early Eocene to early Miocene magnetostratigraphic framework for IODP Expedition 371 (Tasman Frontier Subduction Initiation and Paleogene Climate). *Newsletter*

on Stratigraphy, doi: 10.1127/nos/2019/0556.

- Rivero Cuesta, L., Westerhold, T., Agnini, C., **Dallanave, E.**, Wilkens, R.H., Alegret, L., 2019. Paleoenvironmental changes at ODP Site 702 (South Atlantic): anatomy of the Middle Eocene Climatic Optimum. *Paleoceanogr. Paleoclimatology* 34, 1–20, doi: 10.1029/2019PA003806
- Sutherland, R., Dickens, G.R., Blum, P., Agnini, C., Alegret, L., Bhattacharya, J., Bordenave, A., Chang, L., Collot, J., Cramwinckel, M.J., **Dallanave, E.**, Drake, M.K., Etienne, S.J.G., Giorgioni, M., Gurnis, M., Harper, D.T., Huang, H.-H.M., Keller, A.L., Lam, A.R., Li, H., Matsui, H., Morgans, H.E.G., Newsam, C., Park, Y.-H., Pascher, K.M., Pekar, S.F., Penman, D.E., Saito, S., Stratford, W.R., Westerhold, T., Zhou, X., 2019. Tasman Frontier Subduction Initiation and Paleogene Climate, Proceedings of the Integrated Ocean Drilling Program Volume 371. International Ocean Discovery Program, College Station, Texas, USA.
- 2018** • **Dallanave, E.**, Kirscher, U., Hauck, J., Hesse, R., Bachtadse, V., Wortmann, U.G., 2018. Paleomagnetic time and space constraints of the Early Cretaceous Rhenodanubian Flyschzone (Eastern Alps). *Geophysical Journal International* 213, 1804–1817, doi:10.1093/gji/ggy077.
- **Dallanave, E.**, Agnini, C., Pascher, K.M., Maurizot, P., Bachtadse, V., Hollis, C.J., Dickens, G.R., Collot, J., Monesi, E., 2018. Magneto-biostratigraphic constraints of the Eocene micrite-calciturbidite transition in New Caledonia: tectonic implications. *New Zealand Journal of Geology and Geophysics* 61(2), 145–163, doi:10.1080/00288306.2018.1443946.
- Sutherland, R., Dickens, G.R., Blum, P., Agnini, C., Alegret, L., Bhattacharya, J., Bordenave, A., Chang, L., Collot, J., Cramwinckel, M.J., **Dallanave, E.**, Drake, M.K., Etienne, S.J.G., Giorgioni, M., Gurnis, M., Harper, D.T., Huang, H.-H.M., Keller, A.L., Lam, A.R., Li, H., Matsui, H., Morgans, H.E.G., Newsam, C., Park, Y.-H., Pascher, K.M., Pekar, S.F., Penman, D.E., Saito, S., Stratford, W.R., Westerhold, T., Zhou, X., 2018. Expedition 371 Preliminary Report: Tasman Frontier Subduction Initiation and Paleogene Climate. International Ocean Discovery Program, doi:10.14379/iodp.pr.371.2018.
- 2017** • Di Genova, D., Kolzenburg, S., Wiesmaier, S., **Dallanave, E.**, Neuville, D., Hess, K.U., Dingwell, D., 2017. A subtle chemical tipping point governing mobilization and eruption style of rhyolitic magma. *Nature* 552, 235–238, doi:10.1038/nature24488.
- 2016** • D’Onofrio, R., Luciani, V., Fornaciari, E., Giusberti, L., Boscolo Galazzo, F., **Dallanave, E.**, Westerhold, T., Sprovieri, M., Telch, S., 2016. Environmental perturbation at the early Eocene ETM2, H2, and I1 events as inferred by Tethyan calcareous plankton (Terche section, northeastern Italy). *Paleoceanography* 31, 1225–1247, doi:10.1002/2016PA002940.
- Agnini, C., Spofforth, D.J.A., Dickens, G.R., Rio, D., Pälike, H., Backman, J., Muttoni, G., **Dallanave, E.**, 2016. Stable isotope and calcareous nannofossil assemblage records for the Cicogna section: toward a detailed template of the late Paleocene and early Eocene global carbon cycle and nannoplankton evolution. *Climate of the Past* 11, 4329–4389, doi:10.5194/cpd-11-4329-2015.
- Nalin, R., Ghinassi, M., Foresi, L.M., **Dallanave, E.**, 2016. Carbonate deposition in restricted basins: a Pliocene case study from the central Mediterranean (northwestern Apennines). *Journal of Sedimentary Research* 86, 236–367, doi:10.2110/jsr.2016.14.
- **Dallanave, E.**, Bachtadse, V., Crouch, E.M., Tauxe, L., Shepherd, L., Morgans, H.E.G., Hollis, C.J., Hines, B.R., Sugisaki, S., 2016. Constraining early to middle Eocene climate evolution of the southwest Pacific and Southern Ocean. *EPSL* 433, 380–392, doi:10.1016/j.epsl.2015.11.010.
- 2015** • Bianchi, V., Salles, T., Ghinassi, M., Billi, P., **Dallanave, E.**, Duclaux, G., 2015. Numerical modeling of tectonically driven river dynamics and deposition in an upland incised valley. *Geomorphology* 241, 353–370, doi: 10.1016/j.geomorph.2015.04.007.
- **Dallanave, E.**, Agnini, C., Bachtadse, V., Muttoni, G., Crampton, J.S., Strong, C.P., Hines, B.R., Hollis, C.J., Slotnick, B.S., 2015. Early to middle Eocene magneto-bichronology of the southwest Pacific Ocean and climate influence on sedimentation: Insights from the Mead Stream section, New Zealand. *GSA Bulletin* 127(5/6), 643–660, doi: 10.1130/B31147.1
- Muttoni, G., Tartarotti, P., Chiari, M., Marieni, C., Rodelli, D., **Dallanave, E.**, Kirsher, U., 2015. Paleolatitude of Late Triassic radiolarian cherts from Argolis, Greece: Insights on the paleogeography of the western Tethys. *Palaeogeography, Palaeoclimatology, Palaeoecology* 417, 476–490, doi: 10.1016/j.paleo.2014.10.010.

- 2014** • **Dallanave, E.**, Bachtadse, V., Agnini, C., Muttoni, G., Hollis, C.J., Hines, B.R., Morgans, H.E.G., Strong, C.P., Tauxe, L., Crampton, J.S., 2014. Early-middle Eocene magneto-biochronology of the Southern Pacific Ocean: new data from the South Island of New Zealand. *Rend. Online Soc. Geol. It.* 31, 50-51, doi: 10.3301/ROL.2014.40.
- 2013** • Muttoni, G., **Dallanave, E.**, Channell, J.E.T., 2013. The drift history of Adria and Africa from 280 Ma to present, Jurassic true polar wander, and zonal climate control on Tethyan sedimentary facies. *Palaeogeography, Palaeoclimatology, Palaeoecology* 386, 415–435, doi: 10.1016/j.palaeo.2013.06.011.
- 2012** • **Dallanave, E.**, Agnini, C., Muttoni, G., Tauxe, L., Rio, D., 2012. Is there a normal magnetic polarity event during the Paleocene–Eocene thermal maximum (~55 Ma)? Insight from the paleomagnetic record of the Belluno Basin (Italy). *Geophysical J. International* 191(2), 517–519.
- **Dallanave, E.**, Agnini, C., Muttoni, G., Rio, D., 2012. Paleocene magneto-biostratigraphy and climate-controlled rock magnetism from the Belluno Basin, Tethys Ocean, Italy. *Palaeogeography, Palaeoclimatology, Palaeoecology* 337–338, 130–142, doi: 10.1016/j.palaeo.2012.04.007.
- 2010** • **Dallanave, E.**, Tauxe, L., Muttoni, G., Rio, D., 2010. The silicate weathering machine at work: Rock-magnetic data from the Cicogna section (NE Italy). *Geochemistry, Geophysics, Geosystems* 11(7), Q07008, doi:10.1029/2010GC003142.
- **Dallanave, E.**, Muttoni, G., 2010. Il segreto del clima è nelle rocce (*The secret of the climate is in the rocks*). *Darwin* 37, 40–45 (*not peer reviewed*).
- 2009** • **Dallanave, E.**, Agnini, C., Muttoni, G., Rio, D., 2009. Magneto-biostratigraphy of the Cicogna section (Italy): implications for the late Paleocene–early Eocene time scale. *Earth and Planetary Science Letters* 285, 39–51, doi:10.1016/j.epsl.2009.05.033.
- 2008** • Agnini C., **Dallanave E.**, Fornaciari E., Giusberti L., Grandesso P., Rio D., Stefani C., Backman J., Capraro L., Lanci L., Luciani V., Muttoni G., Palike H., Spofforth D. & Tateo F., 2008. Il Paleogene inferiore in facies pelagica del Veneto nord-orientale (*The early Paleogene pelagic sediments of the NE Veneto Region*). *Rendiconti online Soc. Geol. It.* 4, 5–12.
- 2007** • **Dallanave E.**, Muttoni, G., 2007. Analisi paleomagnetica della sezione Triassica del Monte S. Giorgio (*Paleomagnetic analysis of the M.te S. Giorgio Triassic section, Southern Alps*). *Geologia Insubrica*, Vol. 10 (*not peer reviewed*).

#### CONFERENCE ABSTRACTS

- **Dallanave E.**, et alii. Magnetostratigraphic framework for IODP Expedition 371 (Tasman Frontier Subduction Initiation and Paleogene Climate). STRATI 2019, Milan (Italy).
- **Dallanave E.**, et alii. Timing of the Eocene plate motion change in the southwest Pacific: the Magnetostratigraphic record of New Caledonia and New Zealand. EGU Meeting 2019, Vienna (Austria).
- **Dallanave E.**, et alii. Magnetostratigraphic framework for IODP Expedition 371 (Tasman Frontier Subduction Initiation and Paleogene Climate): preliminary results. IODP/ICDP Kolloquium 2019, Köln (Germany).
- **Dallanave E.**, et alii. IODP Expedition 371: Tasman Frontier Subduction Initiation and Paleogene Climate. IODP/ICDP Kolloquium Bochum 2018, Bochum (Germany).
- **Dallanave E.**, et alii. Eocene tectonic compression in Northern Zealandia: Magneto-biostratigraphic constraints from the sedimentary records of New Caledonia (Southwest Pacific Ocean). AGU Fall Meeting 2017, New Orleans (LA, USA).
- **Dallanave E., (keynote speaker)** et alii. Early to middle Eocene chronology of Zealandia: magnetostratigraphic data from New Zealand and New Caledonia. Geological Society of New Zealand Meeting 2015, Wellington (New Zealand).
- **Dallanave E.**, et alii. Tracing the efficiency of chemical weathering through magnetic properties of sediment: The Paleocene–Eocene case study. Goldschmidt 2015, Prague (Czech Republic).
- **Dallanave E.**, et alii. Early to middle Eocene magneto-biochronology of the southwest Pacific Ocean and climate influence on sedimentation: new data from the Mead Stream section (Marlborough, New Zealand). AGU Fall Meeting 2014, San Francisco (CA, USA).

- **Dallanave E.**, et alii. Early-middle Eocene magneto-biochronology of the Southern Pacific Ocean: new data from the South Island of New Zealand. CBEP Meeting 2014, Ferrara (Italy).
- **Dallanave E.**, et alii. Early-middle Eocene magneto-biochronology of the Southern Pacific Ocean: new data from the South Island of New Zealand. AGU Fall Meeting 2012, San Francisco (CA, USA).
- **Dallanave E.**, et alii. Magneto-biostratigraphy and rock-magnetism of the late Cretaceous-late Paleocene Ardo section (Belluno Basin, NE Italy). EGU Meeting 2011, Vienna (Austria).
- **Dallanave E.**, et alii. Late Cretaceous-early Eocene magneto-biostratigraphy and rock-magnetism from the Belluno Basin (NE Italy). CBEP Meeting 2011, Salzburg (Austria).
- **Dallanave E.**, et alii. Late Paleocene to Early Eocene Magneto-Biostratigraphy of the Cicogna section (Belluno Basin, NE Italy): A record of continental weathering. EGU Meeting 2009, Vienna (Austria).
- **Dallanave E.**, et alii. Magnetic characterization of the late Paleocene-early Eocene Cicogna section (NE Italy): climate forcing on sedimentation. AGU Fall meeting 2009, San Francisco (CA, USA).
- **Dallanave E.**, et alii. The magneto-bio-chemostratigraphy of the Torrente Cicogna section (Italy): a record of Late Paleocene-Early Eocene climate. EGU Meeting 2008, Vienna (Austria).
- **Dallanave E.**, et alii. Late Paleocene to Early Eocene Magneto-Biostratigraphy of the Cicogna section (Belluno Basin, NE Italy), AGU Fall Meeting 2008, San Francisco (CA, USA).

Data

08/07/2020

Luogo

Brema (Germania)