

LUCCHI Renata Giulia, CURRICULUM VITAE

Senior Research Scientist
National Institute of Oceanography and Applied Geophysics (OGS)
Borgo Grotta Gigante, 42/c
I-34010 Sgonico (Trieste) Italy
Phone: (+39) 040 21 40 355; Fax: (+39) 040 32 73 07
Mobile: (+39) 366 48 95 802
E-mail: rglucchi@inogs.it
ORCID number: 0000-0001-5111-6968
Scopus Author ID: 6701711144
Status: married with 3 children (1997, 1999, 2003)

ACADEMIC BACKGROUND

2018: National Scientific Qualification as full-professor (04/A2 Structural and Stratigraphic Geology, Sedimentology and Paleontology).
1997: Philosophiae Doctor (PhD) in Marine Geosciences at Cardiff University of Wales (UK).
1990: Degree and MSc equivalent in Earth Sciences at the University of Milan (Italy).

RESEARCH PROFILE AND INTERESTS

Marine geologist mainly working on sediment cores for sediment facies analyses and facies association for the reconstruction of marine sedimentary processes and paleoenvironments at low- and high-latitude continental margins. Field of application: evolution of polar continental margins in relation to natural climatic changes.

PROFESSIONAL BACKGROUND

Since September 2010: Research scientist at the National Institute of Oceanography and Applied Geophysics (OGS), working in the Geophysical Division.

2018-2021: Adjunct Professor II at the Centre for Arctic Gas Hydrate, Environment and Climate (CAGE), UiT – The Arctic University of Norway, Tromsø, Norway.

2004-2010: Research scientist at the GRC Geociències group of the University of Barcelona, Department of Stratigraphy, Palaeontology and Marine Geosciences.

2003-2004: Research fellowship at the National Institute of Oceanography and Applied Geophysics (OGS), Trieste (Italy).

1998-1999 and 2000-2001 (with interruption for maternity leave): Post-doc at the Department of marine, environmental and geological sciences (Univ. of Trieste, Italy).

1994-1997: PhD course at the Department of Earth Sciences, Cardiff University, (UK).

1993: Visiting scientist at the Institute of Oceanographic Sciences-Deacon Laboratory (IOS, Wormley-Godalming, UK).

1992-1993: Postgraduate research assistant of Prof. M.B. Cita at the Department of Earth Sciences, University of Milan (Italy).

Decembre 1986: under-graduated field operator for seismic survey with the scientist group of the Istituto per la Geofisica della Litosfera, CNR of Milan (PI: Dr. G. Biella).

FIELD EXPERIENCE ON OCEANOGRAPHIC CRUISES

Participation to 14 oceanographic cruises (Mediterranean and Arctic Seas) for over 250 days of shipboard experience mainly working as (chief-) sedimentologist. Chief scientist during 3 cruises 2 of which within the Eurofleets-2 Research Infrastructure (EC-FP7).

PROJECT MANAGEMENT EXPERIENCE

2020: IODP Full Proposal FRAME: Eastern Fram Strait Paleo Archive (985-Full2). Submitted October 1st, 2020. Lead.

2019: IODP Ancillary Letter EFRAM-ARC: Eastern Fram Strait Paleo Archive (Active APL-954). Submitted April 1st, 2019. Lead.

2016-2019: PNRA-AXED: Anoxic environments in Arctic sediment drifts, Italian PNRA project. Budget: 97,000.00 Euro. Co-proponent and WP coordinator for sedimentology.

2016: Eurofleets2-BURSTER: Bottom currents in a stagnant environment, Eurofleets-2 Regional-2 call 2014, accepted with 3 days of ship-time on the RV Polarstern (June 2016) with additional 30,000.00 Euro for shipment expenses. Principal Investigator.

2014: Eurofleets2- PREPARED: Present and past flow regime on contourite drifts west of Spitsbergen, Eurofleets-2 polar call 2013, accepted with 10 days of ship-time on the RV G.O. SARS (June 2014) with additional 38,000.00 Euro for shipment expenses. Principal Investigator.

2014-2016: PNRA-CORIBAR-IT: Ice dynamics and meltwater deposition in the NW Barents Sea: a 5-Nations effort for MeBo drilling the Arctic, Italian PNRA project. Budget: 232,000.00 Euro. Principal Investigator.

2009: Intra-European Marie Curie PLUMES: Impact of subglacial meltwater plumes on sediment dispersal, ocean circulation, ecosystems and climate changes, Grant agreement PIEF-GA-2009-254300-PLUMES. Budget: 229,253.20 Euro (2 years contract, not benefitted due to overlap with the present permanent position).

Since 1998: WP Coordinator on sediment core analyses for 6 PNRA projects funded by the Italian Ministry of Education and Research, and 3 IPY projects funded by the Spanish Ministry of Science and Education.

TEACHING AND TUTORIAL ACTIVITIES

2021-present: Co-responsible of the course *Paleo-reconstruction of Polar Margins* at the University of Venice within the doctorate in Polar Science, and the Master-II-level and doctorate in Science and Management of Climate Change.

2017-2021: Member of the faculty board of the PhD in Science and Management of Climate Change, at the Ca' Foscari University of Venice (I).

2018-2021: Co-responsible of the course *Ice Sheets and Glaciers in the Climate System* at the University of Venice within the doctorate in Science and Management of Climate Change.

Since 2015: Lecture at the course of *Glaciology* for the PhD in Earth Sciences, Fluid Dynamics and Mathematics, University of Trieste.

2014-2017: Lecture at the course of *Sedimentology* for under-graduated students at the Dept. of Mathematics and Geosciences, University of Trieste.

Since 2013: Lecture at the course of *Marine Geology*, for Master students at the Dept. of Mathematics and Geosciences, University of Trieste.

1994-1996: Lecture assistant at Cardiff University of Wales (UK) for the undergraduate academic course of “Introducing to Rocks”.

2009-present: Advisor and co-advisor of 7 PhD and 7 Master students at the University of Trieste (Italy), University of Barcelona (Spain), University of Siena (Italy), University of Pisa (Italy), University of Venice (Italy), and Royal Holloway University of London (UK).

PUBLIC OUTREACH

Activity of scientific dissemination for high school teachers, students at every school level, and for the general public. Activity of research-work training for secondary school's students.

ORGANIZATION OF SCIENTIFIC MEETINGS

2020: Chair of ECORD Magellan-Plus Workshop EFRAM-ARC: The drill of a high-resolution Early Pleistocene Arctic palaeoclimatic record (Trieste, 21st–24th January, 2020).

2019: Convener: *Sedimentary processes on high-latitude continental margins*. 34th Conference of the International Association of Sedimentologists (IAS) (Rome, September 10–13, 2019).

2017: Vice-chair of Organizing Committee at the International Conference on *Past Antarctic Ice Sheet Dynamics* (PAIS). SCAR-endorsed research network. (Trieste, September 10–15, 2017).

2016: Co-convener: *Polar region on a changing planet: learning from the past, exploring the future*. 88^o Congress of the Italian Geological Society (Naples, September 7–9, 2016).

2014: Chair of the International Conference on *Palaeo-Arctic Spatial and Temporal (PAST) Gateways*. IASC-endorsed research network (Trieste, May 19–23, 2014).

REVIEWER FOR SCIENTIFIC JOURNALS

Quaternary Science Review, Earth Science Reviews, Global and Planetary Change, Geosciences, Journal of Quaternary Research, Marine Geology; Sedimentology; Geo-Marine Letters, arktos.

INSTITUTIONAL RESPONSIBILITY, MEMBERSHIP, COMMISSIONS OF TRUST

Member of the Italian Geological Society (SGI), the European Geoscience Union (EGU), and the International Association of Sedimentologists (IAS).

2019-present: member in the advisor board of ARICE (Arctic Research Icebreaker Consortium <http://www.europeanpolarboard.org/activities/scientific-initiatives/arice/>).

Since 2018: OGS alternate delegate in the Italian Arctic Scientific Committee (CSA) within the Italian Research Program in the Arctic (PRA).

2017-2021: Member of the faculty board of the PhD in Science and Management of Climate Change, at the Ca' Foscari University of Venice (I).

Since 2015: Member of the scientific editorial board of the Springer research journal: *arktos The Journal of Arctic Geosciences* (<http://www.springer.com/earth+sciences+and+geography/journal/41063>)

2012-2018: member of the PAST Gateways steering committee (Palaeo-Arctic Spatial and Temporal Gateways), IASC endorsed research network programme (<http://www.geol.lu.se/pastgateways>)

TRACK RECORD

62 articles on peer-reviewed journals (52 on Scopus, with 860 Citations and h-index=18), and 7 published scientific reports. Last 5 years publication:

- Rossi, G., Böhm, G., Saraò, A., Cotterle, D., Facchin, L., Giurco, P., Lucchi, R.G., Musco, M.E., Petretera, F., Picotti, S., Salon, S., 2020. Focus on glaciers: a geo-photo exposition of vanishing beauty. *Geoscience Communication* 3, 381–392. | <https://doi.org/10.5194/gc-3-381-2020>
- Bazzaro, M., Ogrinc, N., Relitti, F., Lucchi, R.G., Giani, M., Adami, G., Pavoni, E., De Vittor, C., 2020. Geochemical signatures of intense episodic anaerobic oxidation of methane in near-surface sediments of a recently discovered cold seep (Kveithola trough, NW Barents Sea). *Marine Geology*, 425, 106189 | <https://doi.org/10.1016/j.margeo.2020.106189>.
- Petrini, M., Colleoni, F., Kirchner, N., Hughes, A.L.C., Camerlenghi, A., Rebesco, M., Lucchi, R.G., Forte, E., Colucci, R.R., Noormets, R., Mangerud, J., 2020. Simulated last deglaciation of the Barents Sea Ice Sheet primarily driven by oceanic conditions. *Quaternary Science Reviews*, 238, 106314. | doi.org/10.1016/j.quascirev.2020.106314
- Geletti R., Del Ben A., Colizza E., Lucchi R.G., Candoni O., Mocnik A., 2020. Mud volcanoes and Coral mounds related to gas seepages in the Otranto Channel - South Adriatic Sea. D'Angelo S., Battaglini L. and Fiorentino A. (Eds), *Inventory of fluid emissions in Italian Seas. Memorie descrittive della Carta Geologica d'Italia, ISPRA 105, 71–75, ISSN 05360242 , ISBN 978-88-9311-077-8.*
- Caricchi, C., Sagnotti, L., Campuzano, S.A., Lucchi, R.G., Macrì, P., Rebesco, M., Camerlenghi, A., 2020. A refined age calibrated paleosecular variation and relative paleointensity stack for the NW Barents Sea: Implication for geomagnetic field behavior during the Holocene. *Quaternary Science Reviews*, 229, 106133 | <https://doi.org/10.1016/j.quascirev.2019.106133>
- Shackleton, C.S., Winsborrow, M.C.M., Andreassen, K., Lucchi, R.G., and Bjarnadottir, L., 2019. Ice-margin retreat and grounding-zone dynamics during initial deglaciation of the Storfjordrenna Ice Stream, western Barents Sea. *Boreas* 49(1), 38–51 | DOI 10.1111/bor.12420
- Jimenez-Espejo, F.J., Presti, M., Kuhn, G., McKay, R., Crosta, X., Escutia, C., Lucchi, R.G., Tolotti, R., Yoshimura, T., Ortega Huertas, M., Macrì, P., Caburlotto, A., De Santis, L., 2020. Late Pleistocene oceanographic and depositional variations along the Wilkes Land margin (East Antarctica) reconstructed with geochemical proxies in deep-sea sediments. *Global and Planetary Change* 184, 103045 | DOI:10.1016/j.gloplacha.2019.103045
- Caridi, F., Sabbatini, A., Morigi, C., Dell'Anno, A., Negri, A., Lucchi, R.G. Patterns and environmental drivers of diversity and community composition of macrofauna in the Kveithola Trough (NW Barents Sea) (2019) *Journal of Sea Research* 153, 101780 | DOI: 10.1016/j.seares.2019.101780
- Llopart, J., Urgeles, R., Forsberg, C.F., Camerlenghi, A., Vanneste, M., Rebesco, M., Lucchi, R.G., Rütther, D.C., Lantsch, H., 2019. Fluid flow and pore pressure development throughout the evolution of a trough mouth fan, western Barents Sea. *Basin Research* 31(3), 487–513 | DOI: 10.1111/bre.12331
- Caricchi, C., Lucchi, R.G., Sagnotti, L., Macrì, P., Di Roberto, A., Del Carlo, P., Husum, K., Laberg, J.S., Morigi, C., 2019. A high-resolution geomagnetic relative paleointensity record from the Arctic Ocean deep-water gateway deposits during the last 60 ky. *Geochemistry, Geophysics, Geosystems* 20(5), 2355–2377 | DOI:10.1029/2018GC007955

- Bensi, M., Kovačević, V., Langone, L., Aliani, S., Ursella, L., Goszczko, I., Soltwedel, T., Skogseth, R., Nilsen, F., Deponte, D., Mansutti, P., Laterza, R., Rebesco, M., Rui, L., Lucchi, R.G., Wåhlin, A., Viola, A., Beszczynska-Möller, A., Rubino, A., 2019. Deep flow variability offshore south-west Svalbard (Fram Strait). *Water* 11(4), 683 | doi:10.3390/w11040683
- Rui, L., Rebesco, M., Casamor, J.L., Laberg, J.S., Rydningen, T.A., Caburlotto, A., Forwick, M., Urgeles, R., Accettella, D., Lucchi, R.G., Delbono, I., Barsanti, M., Demarte, M., Ivaldi, R., 2019. Geomorphology and development of a high-latitude channel system: the INBIS channel case (NW Barents Sea, Arctic). *arktos - The Journal of Arctic Geosciences* 5(1), 15–29 | doi.org/10.1007/s41063-019-00065-9
- Petrini, M., Colleoni, F., Kirchner, N., Hughes, A.L.C., Camerlenghi, A., Rebesco, M., Lucchi, R.G., Forte, E., Colucci, R.R., Noormets, R., 2018. Interplay of grounding-line dynamics and sub-shelf melting during retreat of the Bjørnøyrenna Ice Stream. *Nature Scientific Reports* 8:7196 | DOI:10.1038/s41598-018-25664-6
- Melis, R., Carbonara, K., Villa, G., Morigi, C., Bárcena, M.A., Giorgetti, G., Caburlotto, A., Rebesco, M., and Lucchi, R.G., 2018. A new multi-proxy investigation of the Late Quaternary palaeoenvironments along the northwestern Barents Sea (Storfjorden Trough Mouth Fan). *Journal of Quaternary Science* 33, 662-676 | DOI: 10.1002/jqs.3043
- Caricchi, C., Lucchi, R.G., Sagnotti, L., Macrì, P., Morigi, C., Melis, R., Caffau, M., Rebesco, M., Hanebuth, T.J.J., 2018. Paleomagnetism and rock magnetism from sediments along a continental shelf-to-slope transect in the NW Barents Sea: implications for geomagnetic and depositional changes during the past 15 thousand years. *Global and Planetary Change* 160, 10-27. | DOI: 10.1016/j.gloplacha.2017.11.007
- Rigual Hernández, A.S.S., Colmenero-Hidalgo, E., Martrat, B., Bárcena, M.A., de Vernal, A., Sierro, F.J., Flores, J.A., Grimalt, J.O., Henry, M., Lucchi, R.G., 2017. Svalbard ice-sheet decay after the Last Glacial Maximum: new insights from micropalaeontological and organic biomarker paleoceanographical reconstructions. *Palaeogeography, Palaeoclimatology, Palaeoecology* 465, 225-236. | DOI: 10.1016/j.palaeo.2016.10.034
- Zecchin, M., Rebesco, M., Lucchi, R.G., Caffau, M., Lantsch, H., Hanebuth, T.J.J., 2016. Buried iceberg-keel scouring on the southern Spitsbergenbanken, NW Barents Sea. *Marine Geology* 382, 68-79. | DOI: 10.1016/j.margeo.2016.10.005
- Carbonara, K., Mezgec, K., Varagona, G., Musco M.E., Lucchi, R.G., Villa, G., Morigi, C., Melis, R., Caffau, M., 2016. Palaeoclimatic changes in Kveithola, Svalbard, during the Late Pleistocene deglaciation and Holocene: Evidences from microfossil and sedimentary records. *Palaeogeography, Palaeoclimatology, Palaeoecology* 463, 136-149. | https://doi.org/10.1016/j.palaeo.2016.10.003
- O’Cofaigh, C., Briner, J.P., Kirchner N., Lucchi, R.G., Meyer, H., Kaufman, D.S., 2016. PAST Gateways (Palaeo-Arctic Spatial and Temporal Gateways): Introduction and overview. *Quaternary Science Review* 147, 1–4. | https://doi.org/10.1016/j.quascirev.2016.07.006
- Rebesco M., Özmaral A., Urgeles R., Accettella D., Lucchi R.G., Rütther D., Winsborrow M., Llopart J., Caburlotto A., Lantsch H., Hanebuth T.J., 2016. Evolution of a high-latitude sediment drift inside a glacially-carved trough based on high-resolution seismic stratigraphy (Kveithola, NW Barents Sea). *Quaternary Science Reviews* 147, 178–193. | DOI: 10.1016/j.quascirev.2016.02.007
- Sagnotti, L., Macrì, P., Lucchi, R.G., 2016. Geomagnetic palaeosecular variation around 15 ka ago from NW Barents Sea cores (south of Svalbard). *Geophysical Journal International* 204, 784–797. | DOI: 10.1093/gji/ggv485

- Rebesco, M., Urgeles, R., Özmaral, A., Hanebuth, T.J.J., Lantzsich, H., Caburlotto, A., Hörner, T., Llopart, J., Lucchi, R.G., Nicolaisen, L.S., Osti, G., Sabbatini, A., 2016. Grounding Zone Wedges, Kveithola Trough (NW Barents Sea). Grounding-zone wedges and mega-scale glacial lineations in Kveithola Trough, Barents. In: Dowdeswell J.A., Canals M., Jakobsson M., Todd B.J., Dowdeswell E.K., Hogan K.A. (Eds.) Atlas of Submarine Glacial Landforms. Geological Society of London Memoir 46, 231-232. | DOI: 10.1144/M46.32
- Lucchi, R.G., Sagnotti, L., Camerlenghi, A., Macrì, P., Rebesco, M., Pedrosa, M.T., Giorgetti, G., 2015. Marine sedimentary record of Meltwater Pulse 1a in the NW Barents Sea continental margin. *Quaternary Science Reviews* 1, 7. <https://doi.org/10.1007/s41063-015-0008-6>
- Llopart, J., Urgeles, R., Camerlenghi, A., Lucchi, R.G., Rebesco, M., De Mol, B., 2015. Late Quaternary development of the Storfjorden and Kveithola Trough Mouth Fans, North - Western Barents Sea. *Quaternary Science Reviews*, 129, 68–84. | <https://doi.org/10.1016/j.quascirev.2015.10.002>