



Mauro Guglielmin

 UNIVERSITY OF INSUBRIA



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Contact data

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Biography

Mauro Guglielmin was born on April 20, 1965. Received Masters degree in Geological Sciences in Milan University, Ph.D. in Earth Sciences in Parma University with the topic: "Methods of permafrost mapping and periglacial geomorphology" on July 1994. The Ph.D. was focused on different techniques to detect mountain permafrost occurrence and monitor changes in the thickness of the active layer such as BTS (Bottom Temperature of winter Snow cover), STG (Shallow Temperature of Ground in summer time), geoelectrical prospection and remote sensing techniques.

He participated to the X, XII, XIV, XV, XVI, XVII, XVIII, XX, XXI Italian expedition in Antarctica working in Northern and Southern Victoria Land and in Maritime Antarctica (King George Island, J. Ross Island, Signy Island). He participated also to 2 scientific expedition in High Arctic (Ellesmere Island, Canada and Svalbard Island, Norway), in cooperation also with Istituto Antartico Argentino, British Antarctic Survey, Ottawa University and Waikato University.

He is project leader of the Italian Antarctic project named "Permafrost and Climate Change in Antarctica since 2002. He is Deputy President of the EEGG "Permafrost and Periglacial Processes" of the SCAR and responsible of the working group on active layer and permafrost monitoring of the EOI "ANTPAS". He is also responsible for Antarctica of the EOI "TSP" (Thermal state of permafrost) leaded by J. Brown. He was involved in the EU funded project named on PACE (Permafrost and Climate Change in Europe) between 1998 and 2001 and he is member of standing committee of the European Science Foundation Project "PACE21".

He is member of the Italian Glaciological Committee and of Italian Geomorphologist Association.

He has been co-chairman of the Periglacial Geomorphology Session of the VI International Conference on Permafrost (Beijing, July 1993), of the Antarctic Permafrost session of the 1th European Permafrost Conference (Rome, march 2001), of the Antarctic Geomorphology session of the VI International Conference of Geomorphology (Zaragoza, September 2005).

Mauro Guglielmin is Professor of Geomorphology and Physical Geography of the Sciences Faculty of University of Insubria in Varese Italy since 2004.

Qualifications and awards

Associate Professor of Geomorphology and Physical Geography since 2004.

Research interests

Research activities are mainly developed in the mountain environment of the Italian alps and in the polar environment. In these environments different research topics are developing:

Permafrost and climate change; Relationships between permafrost and ecosystems; Permafrost and slope stability, Periglacial processes and landforms; Weathering processes (especially in criotic or polar conditions), Permafrost modelling and mapping.

Some research on quaternary geology of the Italian Alps and paleoclimate reconstruction during Holocene and Pleistocene are also in progress.

Teaching experience and appointments

Associate Professor of Geomorphology and Physical Geography since 2004.

Lecturer of Geology, Geography, Physical Geography, Geomorphology and Glaciology in different Universities (Roma 3, Ferrara, Insubria Varese) since 2000

Representative publications

Calderoni, G., Guglielmin, M. and Tellini, C. 1998.: Radiocarbon dating and postglacial evolution, Upper Valtellina and Livignese area Sondrio, Central Italian Alps. *Permafrost Periglacial Processes*, 9: 275-284.

Cannone N., Guglielmin M., 2003: "Vegetation and permafrost: sensitive systems for the development of a monitoring program of climate change along an Antarctic transect". In: Huiskes, A.H.L., Gieskes, W.W.C., Rozema, J., Schorno, R.M.L., Van der Vies, S.M., Wolff, W.J. (Editors): *Antarctic Biology in a Global Context*. Backhuys Publishers, Leiden: 31 – 36.

Cannone N., Guglielmin M., Hauck C., Vonder Muhll D, 2003, The impact of recent glacier fluctuation and human activities on permafrost distribution, Stelvio Pass (Italian Central-Eastern Alps) In: Phillips M, Springman S.M, Arenson L. (Eds). *Proceedings of the 8th International Conference on Permafrost*, Zurich, Switzerland, 21 – 25 July 2003, Balkema Publishers, Lisse, 137-143.

Dramis F., Govi M., Guglielmin M. & Mortara G. 1995. Mountain permafrost and slope instability in the Italian Alps. The Val Pola Landslide. *Permafrost and Periglacial Processes* 6: 73-81.

French HM, Guglielmin M. 1999. Observations on the icemarginal periglacial geomorphology of Terra Nova Bay, Northern Victoria Land, Antarctica. *Permafrost and Periglacial Processes* 10: 331-348.

French HM, Guglielmin M. 2000a. Cryogenic weathering of granite, Northern Victoria Land, Antarctica. *Permafrost and Periglacial Processes* 11: 305-314.

French HM, Guglielmin M. 2000b. Frozen ground phenomena in the vicinity of Terra Nova Bay, Northern Victoria Land, Antarctica: A preliminary report. *Geografiska Annaler* 82A: 513-526.

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Gagnani R, Guglielmin M, Dramis F, Longinelli A, Stenni B, Smiraglia C, Cimino L. 1998. Origins of ground ice in the ice-free lands of the Northern Foothills (Northern Victoria Land, Antarctica). In: Lewkowicz, A. G., Allard, M. (eds.), Permafrost, Seventh International Conference, June 23-27, 1998, Proceedings, Université Laval, Nordicana 57: 335-340.

Guglielmin M. 2004. Observations on permafrost ground thermal regimes from Antarctica and the Italian Alps, and their relevance to global climate change. Global and Planetary Change 40: 159-167.
Guglielmin M., Aldighieri B., Testa B.- PERMACLIM- a model for the distribution of mountain permafrost, based on climatic observations, Geomorphology, (2003), 51, 245-257

Guglielmin M, Balks M, Paetzold R. 2003 Towards an antarctic active layer and permafrost monitoring network, In: Phillips M, Springman S.M, Arenson L. (Eds). Proceedings of the 8th International Conference on Permafrost, Zurich, Switzerland, 21 – 25 July 2003, Balkema Publishers, Lisse 367-372.

Guglielmin M., Biasini A. & Smiraglia C. (1997) Buried ice landforms in the Northern Foothills (Northern Victoria Land, Antarctica). Some results from electrical soundings. Geographiska Annaler, 79a, 1-2, 17-24.

Guglielmin M., Camusso M, Polesello S., Valsecchi S and Teruzzi M. 2002. A note on the ice crystallography and geochemistry of a debris cone, Northern Foothills, Antarctica. Permafrost and Periglacial Processes, 13 (1),77-82.

Guglielmin M, Camusso M., Polesello S., Valsecchi S. 2004: An old relict glacier body preserved in permafrost environment: The Foscagno rock glacier ice core (Upper Valtellina, Italian Central Alps). Arctic, Antarctic and Alpine Research, 36,1, 108-116.

Guglielmin M. Cannone N. and Dramis F. (2001). Permafrost-glacial evolution during the Holocene in the Italian Central Alps. Permafrost and Periglacial Processes, 12, 111-124.

Guglielmin M, Cannone N, Strini A, Lewkowicz A. G. 2005. Biotic and Abiotic processes of the granite weathering landforms in a cryotic environment in Northern Victoria Land, Antarctica. Permafrost and Periglacial Processes, 19:69-85.

Guglielmin M., Dramis F. (1999): Permafrost as a climatic indicator in northern Victoria Land, Antarctica. Annals of Glaciology, 29,131-135.

Guglielmin M, French H.M. 2005: Ground ice in the Northern Foothills, northern Victoria Land, Antarctica, *Annals of Glaciology*, 39: x+6.

Guglielmin M., Lozej A. & Tellini C. 1994. Permafrost distribution and rock glaciers in the Livigno area (Northern Italy). *Permafrost and Periglacial Processes* 5: 1-12.

Harris C., Vonder Muhl D., Isaksen K, Haeberlid W., Sollid J.L., King L., Holmlund P., Dramis F., Guglielmin M., Palacios D., 2003 Warming permafrost in European mountains, *Global and Planetary Change* 39, 215–225.

Hauck, C., Guglielmin, M., Isaksen, K. and Vonder Mühl, D. - Applicability of frequency- and time-domain electromagnetic methods for mountain permafrost studies. *Permafrost and Periglacial Processes*, (2001)12, 39-52.