

Public lectures of Prof. Acad. Edouard Bard (France) on Paleoclimate, 05 and 06 June 2019

Prof. Acad. [Edouard Bard](#) from Collège de France will visit Space Climate Research Unit of the University of Oulu and give two public lectures during 05 and 06 June 2019 (see information below). The first lecture will be given at a general level, while the second one will be more detailed.

All are welcome!

The climate of the last millennia and its impacts on humans

(lecture hall **AT115A**, 05-June-2019, time 10-11 am)

It is imperative to put the warming of the last century back into broader temporal context to determine its singularity and distinguish the underlying causes, both natural and anthropogenic. Climatic variations are never repeated identically, but the same physical, chemical and biological mechanisms are at work and can be studied with the same numerical models used to predict possible futures. Studying climate changes over the last millennia also makes it possible to consider the impacts on human societies and follow their reactions. These lessons from history can enlighten us in our current choices, even though our global society is obviously different in its global demographics and connectivity.

Radiocarbon as a tracer and chronometer of the environment

(showroom: **Tellus Stage**, 06-June-2019, time 11-12)

Carbon 14 is an isotope widely used to date various ancient objects. Simple in its principle, this geochronological method must also consider changes in ^{14}C production by cosmic ray particles due to astronomical and geophysical causes. Other complications are related to exchanges of the atmosphere with other reservoirs of the global carbon cycle. In turn, ^{14}C can be used as a tracer to study CO_2 on global and regional scales, both for the modern period characterized by anthropogenic disturbances and for the last fifty thousand years, a period characterized by major changes in the Earth's climate, oceans and biosphere.

Brief biography

Edouard Bard has the Professor Chair in Climate and Ocean Evolution at the Collège de France and his laboratory is located in Aix-en-Provence. He is a member of the French Academy of Sciences, the Academia Europaea, foreign member of the US National Academy of Sciences, honorary fellow of AGU, GSA and EGU.

Edouard Bard earned his master degree in 1985 from the geological engineering school at Nancy (ENSG) and his doctoral degree in 1987 from the University of Paris 11-Orsay. He then conducted research in Columbia University's Lamont Doherty Earth Observatory until 1990 when he then returned to France. He joined first the Commissariat à l'Energie Atomique (CEA), and then started teaching as a professor at the University of Aix-Marseille in 1991 and at the Collège de France since 2001.

His various studies are at the interface of climatology, oceanography and geology. The essential objective is to understand the natural functioning of the ocean-atmosphere system on time scales ranging from a few decades to several million years. For his research, he has used techniques of analytical chemistry to determine the extent and the timing of climatic variations. New quantitative methods have enabled him and his team to reconstruct past climates using varied archives such as oceanic sediments, lake sediments, corals, stalagmites and polar ice.