

Funded MSc Opportunity

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Modelling loess deposition in Western Europe

Call for applications for one MSc position in modelling loess deposition in Western Europe at the last glacial maximum directed through the Department of Geography, Université de Montréal, Canada.

Project: The MSc graduate position is part of a broader FRQSC-funded project under the Hominin Dispersals Research Group (PI: A. Burke, Anthropologie, UdeM) which studies the interaction between hominids and their environment in the goal to understand the impact of environmental variability in the evolution of both the culture and biology of humans. The results of this research programme will help fill significant gaps in our understanding of the fate of Neanderthals and the history of human colonisation of Europe as well as contributing to a better understanding of the range of reactions human societies display in the face of climate change with implications for the future. The specific objectives of the project are:

- 1) to use high-resolution climate simulations (14 km²) to create detailed, dynamic spatial models of the geographic distribution of modern human and Neanderthal populations in Western Europe during the last glacial period to track the responses of Neanderthal and modern human populations to environmental change at a critical period in their biological and cultural evolution, and;
- 2) to evaluate the relative importance of two hypothetical dispersal routes for modern humans entering Western Europe: 1) the Middle Danube and the Rhône valley corridor; 2) the Mediterranean route, which connects coastal Italy (Liguria) to France and the Iberian Peninsula.

Requirements: The ideal candidate should have strong analytical skills, including knowledge of cartographic analysis tools (e.g. ArcGIS, GRASS/QGIS, PCI geomatica, ENVI/IDL, etc) and statistical analyses (e.g. R, Matlab, etc). The project involves intensive cartographic / analytical components in coordination with empirical and field site verifications.

The selected candidate will work with Dr. James King (Geography) and will receive a funding package for the two years of their graduate degree, comprising of a mix of bursaries and teaching / research assistantships (minimum of \$10,000 per year). **The preferred start date is January 2019.**

Application: If interested, please send **(1)** your CV, **(2)** your grade point averages for your previous programs (transcripts) and **(3)** a brief statement of qualifications for this position to: js.king@umontreal.ca. Please consult the department website, the HDRG website, and that of Dr. King, to learn more about the departments and the project.