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**2022 Loess Early Career Researchers Workshop**

**Call for Applications**

**15th-19th, August, Online**

**Overview:**

Aeolian dust is actively involved in Earth’s climate and environmental systems. Extensive dust could be accumulated in various geologic archives, such as loess, marine sediments, lake sediments, ice sheets, etc. These archives are valuable for paleoclimate and paleoenvironment reconstructions. In August of 2022, the International LoessFest Conference, organized by INQUA Loess and Pedostratigraphy Working Group, will be held online. This event will bring the international communities together to discuss several contentious issues involving all aspects of modern and past aeolian deposits. The 2022 Loess Early Career Researchers Workshop, dedicated to early-career researchers (ECRs) of loess studies, will be held online from August 15th to 19th as a professional development workshop, right before the main Loessfest conference. This loess ECR workshop is supported by INQUA and Chinese Association for Quaternary Research (CHIQUA).

**Workshop aims:**

Loess has been widely used for paleoclimate reconstruction. In recent years, both observations and modeling of dust cycles as well as climatic proxy indicators have been developed greatly. To date, most of paleoclimatic records are qualitative and hard to integrate with climate models, though. To better understand the dynamics of climate system, quantitative paleoclimate reconstructions are urgently needed. Integrating process-based investigations and new proxy indicators into loess studies will help to improve the proxy interpretation and quantitative reconstructions of loess records.

This workshop will include five lectures given by senior scientists, and thus it will be a unique opportunity for ECRs to learn recent advances in aeolian processes and loess studies. It will also include interactive discussions, which can be a good chance for ECRs to exchange ideas about various aspects of loess studies such as stratigraphy, geochronology, archaeology and climate change in different regions.

**Topics:**

The workshop will last for five days. Each day will be dedicated to one topic, including one keynote speech (about 40 mins) given by senior scientists and another session (about 40 mins) of interactive discussions. In the session of interactive discussions, the ECR participants are encouraged to bring their own research questions related to the topic, and discuss with the senior scientist and other ECRs (5-10 mins for each participant).

The topics and keynote speakers are:

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| Date\* | Topic session | Keynote speaker | Chair |
| August 15th | Recent advances in geochronological methods | Dr. Jan-Pieter Buylaert | Dr. Aditi K. Dave |
| August 16th | Recent advances in provenance studies | Dr. Pieter Vermeesch | Dr. Kaja Fenn |
| August 17th | Recent advances in paleoclimate proxy indicators | Dr. Gabor Ujvari | Natalia Taratunina |
| August 18th | Recent advances in dust modeling | Dr. Samuel Albani | Dr. Zhiwei Xu |
| August 19th | Quantitative paleoclimatic reconstructions | Dr. Huayu Lu | Dr. Shixia Yang |

\*Note that the lecture in each day will start at 4:00 p.m. CST, Beijing Time (08:00 GMT, Greenwich Mean Time).

By interactive discussions among keynote speakers and ECRs, this workshop has the following objectives:

1. Discuss recent advances in dust and loess studies, including innovative techniques, modern method developments and multidisciplinary approaches.

2. Exchange ideas and explore quantitative approaches to reconstruct paleoclimate from loess records.

3. Use a series of high-resolution loess records to examine the synchronicity in climate change among different regions.

4. Intergrade process-based investigations of modern dust emission and transportation as well as new climatic proxy indicators into loess studies.

**Logistics and funding support:**

This workshop will be held online. Considering the time differences, the online virtual session for each day will be in one and a half hours, including ~40 mins keynote speech and ~40 mins interactive discussions. It will start at 4:00 p.m. CST, Beijing Time (08:00 GMT, Greenwich Mean Time). The virtual sessions are free, but all attendees should register first by filling the application form, and the link for ZOOM meeting will be sent separately by emails. The attendees are presumed to participate in at least one session of interactive discussions. Please also note that the sessions may be recorded and be made available online for a while.

The workshop attendees are also encouraged to attend the main Loessfest conference. INQUA and CHIQUA can provide supports for a number of ECRs who intend to attend the main conference. Post-graduate students and ECRs graduated within eight years are strongly encouraged to attend the whole workshop and main conference. Please specify if you would like to be considered for this support on the application form.

**Applications:**

All participants are asked to apply by 31 July 2022. Please send the application form to Dr. Zhiwei Xu (zhiweixu@nju.edu.cn). If there is any question, please contact Dr. Xu for more information.

**Application form**

Name:

Affiliation:

Email:

Career stage (Master/PhD student or year of PhD completion):

Would you like to be considered for funding support to attend the Loessfest?

Please summarize in the form about your research interests, expertise and experience of relevance to the workshop, and/or regional professionals that you could contribute. Please specify explicitly which one or more sessions of interactive discussions you want to participate. Please also explain the reason if you would like to apply for the funding support.

To better understand the demographic of our community, please also fill the following form (link: <https://www.surveymonkey.co.uk/r/JSCSSQD>). Note that it is anonymous and voluntary, and it will only be used in a diversity report and to inform future offers for ECR members.

(300-500 words)