Call for applications for a full-time doctoral or post-doctoral scholarship on

The history of mathematics in relation to astral sciences — ancient and medieval Indian sources

European Research Council (ERC) project

"Mathematical **S**ciences in the **A**ncient **W**orld (**SAW**): New Theoretical Approaches to the Sources and Socio-Political Issues of the Present Day"

Karine Chemla (Principal Investigator)
Agathe Keller & Christine Proust (Co-directors)

The European Research Council Project "Mathematical Sciences in the Ancient World (SAW)" is calling for applications for a full-time doctoral or post-doctoral scholarship.

General aims of the project. The SAW project is dedicated to sources that have come down to us from the ancient world and attest to mathematical activities, specifically, though not exclusively, to sources produced in **Mesopotamia**, **China**, and the **Indian sub-continent**. The ambition of SAW is to develop **new theoretical approaches to the history of ancient mathematics** in order to highlight a motley of practices within what at the present day too often are presented as homogeneous wholes, as shown by the frequent use of terms such as "Mesopotamian mathematics", "Chinese mathematics", and "Indian mathematics". To this end, SAW intends to concentrate systematically on the sources produced in relation to two core sectors of activity in the ancient world: the practice of the astral sciences and the administrations in charge of managerial and financial matters. One of the goals of the project is to shape methods that ground our approach to ancient sources in the critical awareness that a history of mathematical practices as well as a material and social history of the archives, libraries, and collections of sources provide. SAW also intends to carry out a reflection on the history of historiography of mathematics. The main focus of SAW in that direction will be on the key general operations which are at play in the making of the historiography of ancient sciences, such as the shaping of critical editions.

Description of the topic attached to the present scholarship. The primary aim of this doctoral/post-doctoral scholarship will be to do research on the history of mathematics in relation to astral sciences based on ancient and medieval Indian sources.

The great majority of mathematical texts known from the ancient and medieval Indian subcontinent are chapters in theoretical treatises on astral sciences written in Sanskrit. Are these mathematics different from the mathematics found elsewhere in the Indian subcontinent and not related to astral science? What was the relation between the chapters on mathematics and the computations and algorithms expounded in other chapters of the same treatise? How were these mathematics related to mathematical tools used in the wider realm of the astral corpus (in horoscopy, astrology...). For example a research proposal could aim at tracing and characterizing the use of similar algorithms, like the Rule of Three, the Pythagorean theorem, rules to derive and interpolate Sines, algorithms to solve indeterminate problems, or others, in different parts of a treatise, or else across different texts by a same author. Were there mathematical practices that were standard in astral science and not found in mathematical chapters and vice-versa?

More generally, any research project that would help understand the specificities of mathematical activities adhering in one way or another to astral sciences, by contrast to other mathematical practices attested to in the Indian subcontinent, and/or involve sources in Indian languages that are not Sanskrit would be welcomed.

Applicants are expected to mention specific sources and topics on the basis of which they intend to explore these questions.

Applicants for the doctoral scholarship must hold an MA degree or equivalent in history, history of science, Indian studies or Mathematics. **Applicants for the post-doctoral scholarship** must have obtained a PhD degree in one of these disciplines before the beginning of the scholarship. It is strongly recommended that applicants possess relevant knowledge in mathematics and philology (Sanskrit, Pali, Prakrt, or other Indic languages). If they don't, they should be able to demonstrate their ability to acquire such knowledge rather quickly. They must be fluent in English. Researchers of all nationalities are welcome to apply.

Applications should include the following:
- a full CV (including a list of publications where appropriate);
- an outline (2 pages maximum) of the research project showing clearly its relevance for SAW objectives;
- one or more recent samples of academic writings (publications, master or PhD thesis);
- a copy of the most recent diploma;
- transcripts of the master degree and, for applicants for the post-doctoral scholarship, the transcript of the PhD thesis defence;
- name and email address of two referees who could assess the application.

The **deadline** for applications is: **June 21, 2013** (for the position to be taken up as of September 1, 2013 or as early as possible thereafter). Short-listed candidates will be informed at the beginning of July 2013 and phone or Skype interviews are expected to take place during the first week of July 2013.

The scholarship is granted for one year. Pending positive evaluation, the doctoral scholarship is renewable for two additional years and the post-doctoral scholarship is renewable for one additional year. The monthly stipend amounts to about 1400 euros for the doctoral scholarship and to about 2000 euros for the post-doctoral scholarship (amounts to be updated at the contract signing). It includes social security benefits and retirement provisions. In the case of a doctoral scholarship, the recipient, under the supervision of Agathe Keller, will have to achieve a degree of the academic institution the SAW project is affiliated to. He/she will need to complete all requirements of this institution graduate school.

Applications should be sent to the SAW Project Director **Karine Chemla** by **email only**: chemla@univ-paris-diderot.fr. It is recommended to request an email acknowledgement of receipt.

Information on the SAW project is available online at http://www.sphere.univ-paris-diderot.fr/?-ERC-Project-SAW-&lang=en

For any questions on the scholarship please contact Agathe Keller (kellera@univ-paris-diderot.fr).