

## SAW Conference on Writing histories of ancient mathematics – Reflecting on past practices and opening the future, 18th-21st centuries

24-28 Octobre, 2016

organized by Karine Chemla, Agathe Keller, Christine Proust and the SAW group  
Université Paris Diderot, Condorcet Building room 366A Klimt- 9:30 am to 5:30 pm

### Varieties of mathematical knowledge and practices used to read ancient texts

Tuesday October 25<sup>th</sup>, 2016

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*A Historiographical Exploration of Āryabhaṭa's verses on Indeterminate Problems of the First Degree*

**Abstract** – In 1874, H. Kern (1833-1917) published an edition of the *Āryabhaṭīya* with Parameśvara's commentary on it, providing a source-text for the oldest known testimony of indeterminate problems of the first degree in the Indian subcontinent. Léon Rodet (1832?-1895) followed by G. R. Kaye (1866-1929) subsequently discussed Āryabhaṭa's contributions to the *kuṭṭaka* ("pulveriser" a method of resolution of problems of indeterminate analysis of the first degree) which soon became the object of a debate. Sarada Kanta Ganguli (b. 1881) and Bibhutibhusan Datta (1881-1958) in their wider endeavor to show that India had an authentic valuable mathematical past, also wrote articles to explain how they understood Āryabhaṭa's rules. This paper will compare the mathematical tools employed to describe Āryabhaṭa's *kuṭṭaka*, how each author inserted this topic within wider narratives of history of mathematics and specific conceptions of what a mathematical text should be. Finally, how these points of view impacted the research on this topic in the 20<sup>th</sup> century will also be discussed.