

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

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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

### Uses of histories of mathematics

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*History of mathematics in the service of modernization in 20<sup>th</sup> century China*

**Abstract** – Throughout the twentieth century, Chinese elites strived to establish a new culture suitable for the modern age. Radical Westernizers and cultural conservatives had different visions of what this new culture should be like, but everyone agreed on the central role of mathematization and mathematics as a defining feature of modernization. History of mathematics was to the Chinese consequently always much more than just an account of the development of a discipline and its internal structure. It was at the same time a narrative of modernization, a gauge of the relative merits and deficiencies of Chinese traditional society and culture, and a link connecting modernization and these said traditions, to name but a few types of appropriation of history of mathematics. This paper exemplifies these strategies of appropriation on the cases of the historian of mathematics Qian Baocong (1892-1974), and mathematicians Hua Loo-Keng (1910-1985) and Wu Wen-Tsun (1919-). Qian Baocong was one of the creators of history of Chinese mathematics, which he linked with the strength and fortunes of Chinese civilization as a whole. In the 1930s 40s, he became especially interested in comparative history, which underscored China's mathematical creativity and questioned the thesis that China only ever prospered due to cultural transmission from abroad. Hua Loo-Keng, for more than thirty years the Director of the Institute of Mathematics, Chinese Academy of Sciences, used history of Chinese mathematics

to promote confidence of Chinese youth in their ability to excel in mathematics, and thus to promote its popularization as a key part of Chinese modernization. His commitment to popularization first surfaced in late 1950s and early 1960 through his involvement in the establishment of a mathematical competition for secondary schools, for which he wrote several brochures laying out important branches of mathematics as expansion of problems historically treated by Chinese mathematics. Finally, the erstwhile algebraic topologist Wu Wen-Tsun combined Qian Baocong's comparative approach with Hua's way of starting from Chinese mathematical history to develop a modern mathematical theory when designing and, crucially, defending his "mechanization of mathematics" in the late 1970s and 1980s. The juxtaposition of these three stories, spanning almost six decades, highlights how modernization, in various forms and through various channels, informed the interests of Chinese professional historians of mathematics and elite mathematicians looking at their discipline in particular historical circumstances.