

Seminar SAW

Seminar Exploring 19th and 20th centuries historiographies of mathematics in the ancient world 2015-2016

organized by

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Université Paris Diderot, Condorcet Building

room 483A - 9:30 am to 5:30 pm

<http://sawerc.hypotheses.org/seminars/internal-seminar-historiography-2015>

Programme

November 13th, 2015 – Historical approaches to ancient mathematics and astral sciences in the early modern period

Presentation: Historical interest in ancient mathematics and astral sciences, and more specifically, when from different parts of the world, is noticeable in different contexts of the early modern period. This session aims to understand the various motivations that prompted this interest, and also how those who wrote about this topic carried out historical treatments of ancient mathematics. We further want to explore the type of sources on which these early practitioners of history of mathematics and astral sciences relied, and how they treated them. Did they explore sources coming from different parts of the world? In case they did, we want to understand why they did so, and how they accommodated their variety.

Speakers

Christopher Minkowski, *The sense of history in Indian astronomical texts*

David Rabouin, *Wallis as an historian of Algebra*

Antoni Malet, *Milliet Dechaes's history of mathematics*

Florence Hsia, *Reconstructing science in sinographic archives*

Christopher Minkowski (Boden Professor of Sanskrit, University of Oxford)

The sense of history in Indian astronomical texts

Abstract – Until recently, the usual story that has been told about premodern Indian historiography is one of failure, of the lack of an independent genre that corresponded to what one finds in Greek or in Chinese. Recent work has suggested that there are, nevertheless, Indian texts that display a recognizably historiographical orientation, especially in the early modern period.

When it comes to the Indian astral sciences, the pluralist and interpenetrated profile of the discipline - aware of its connection to astral sciences outside India; not tied to a single human founder and his 'root' text; and in competition in the later period with a rival tradition expressed in Arabic and Persian - appears to have given rise to a distinctive use of historical writing.

I shall examine an early (6th Century) doxographical work, Varāhamihira's account of five astronomical schools of thought that preceded him, and consider the nature of the historiographical dimension that is present there. I shall then turn to a number of relatively less known works by early modern authors, among them Nityānanda's Sarvasiddhāntarāja, where an historical account is used to justify borrowing principles and techniques from the rival, Persianate astronomers.

David Rabouin (SPHERE)

Wallis as an historian of Algebra

Abstract – In this talk, I will present Wallis's views on the history of Algebra, as they appear in his treatises of 1657: *Mathesis universalis*, and of 1685: *A Treatise of algebra, both historical and practical*. The original mixture of history and conceptual presentation given by Wallis will be analyzed and I will detail the original conception of Algebra, which arise from this approach. I will also emphasize the contextual elements leading to the project of an "English" Algebra at the end of the XVIIth century.

Antoni Malet (Universitat Pompeu Fabra, Barcelone)

Dechaes's history of mathematics

Abstract – The Jesuit C.F. Milliet Dechaes (1621-1678) is the author of one of the most famous and popular early modern mathematical encyclopedias, *Cursus seu mundus mathematicus* (1674, enlarged edition 1690). It opens with a substantial, over a hundred-folio-page long „Proemial Treatise“ (*Tractatus proemialis*) devoted to the „progress of mathematics“. Likely one of the most comprehensive histories of mathematics antedating Montucla's 18th-century masterpiece, it is organized by subfields and covers the gamut of mixed mathematics—astronomy, geometry, arithmetic, mechanics, optics, music, geography and navigation, and architecture. The many early modern historical narratives about the mathematical sciences, from Regiomontanus's *Oratio* (1464) onwards, have been aptly characterized stressing their literary form and goals rather than their historical content. Rhetoric, humanistic topoi, and philosophical filiations turned the histories of mathematics into powerful tools for different purposes. They provided legitimation to the mathematical sciences as well as to their teachers and authors, but also contributed to define the role and boundaries of the discipline. Using Dechaes's account we will analyze the role mathematics played in the 17th-century Jesuit educational agenda.

Florence Hsia (University of Wisconsin)

Reconstructing science in sinographic archives

Abstract – This seminar addresses some critical methodological issues in addressing European approaches to Chinese scientific traditions prior to the nineteenth-century institutional emergence of sinology as an academic discipline. A series of early modern case studies focusing on mathematical sciences illustrates how the production of such expert knowledge in this period can be usefully analyzed by reconstructing historically contingent processes of constituting and structuring sinographic (textual, visual, and material) corpora.
