

SAW Seminar: Mathematical practices in the context of the astral sciences

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Interpolation techniques in mathematics and astronomy: traces from Han to Yuan dynasty China

Abstract: In this talk I will explore the possible relationships between "interpolation" techniques applied in mathematical and astronomical settings in China between the first and the early fourteenth century AD. Traces of such relationships are not only of algorithmic nature, they sometimes are identifiable by terminological loans and confirmed by the professional status of the author. The most elaborate mathematical text in terms of (implicitly used) elements of Yuan dynasty astronomical interpolation techniques that has come down to us is Zhu Shijie's *Jade Mirror of Four Unknowns* (1303), where a commentary to solve an inverse problem of finite series is particularly revealing about Zhu's conceptual framework and raises many questions about his knowledge of calendrical astronomy.