

SAW Three-Month Workshop:

Mathematical Practices in relation to the Astral Sciences

Abstract

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Conjunction problems in John of Murs's Quadripartitum numerorum and syzygy computations

Abstract: As a part of his encyclopaedic work on numbers, the *Quadripartitum numerorum*, John of Murs devoted several chapters to what he called “conjunction” problems. These problems raise the question of how to find the meeting times and positions of two mobiles moving at constant speed on a circumference. We will examine these problems and relate them to their mathematical traditions. At the same time, John of Murs wrote extensively on syzygies, which present, at least in the first part of the computation, similar mathematical issues. We will describe John's syzygy methods and analyse the various steps leading to the production of the *Tabule permanentes* in the context of the works on the same question of other important Parisian astronomer of the period (John of Lignières, John Vimond and John of Saxony). Finally we contrast the approaches of the astral sciences sources to those found in the *Quadripartitum numerorum*.