

Submission for an invited session, organized by Luís Saraiva

On Archimedes' mechanical method in mathematics: a new way of practicing mathematics or just another stroke of mathematical genius?

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Thanks to the (re)discovery of Archimedes' *Palimpsest*, many aspects of Archimedes' mathematical practice have been subject to fresh analysis by historians of mathematics. One of these aspects, which is particularly important in the context of the treatise *Method Concerning Mechanical Theorems*, concerns the use made by Archimedes of mechanical considerations in mathematics. In this talk I shall focus on this aspect of Archimedes' work. Drawing on an examination of Proposition 1 of the *Method*, which states that any segment of a parabola is four-thirds of the triangle which has the same base and equal height, I shall address the following questions: Does Archimedes really use mechanics in his mathematical practice? Should we identify in Archimedes' *Method* the foundations of a way of practicing mathematics by using non-mathematical considerations?