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Title: “*Jost Bürgi’s Artificium of 1586 in modern view, an ingenious algorithm for calculating tables of the sine function.*”

Abstract. In the years of 1586 to 1592 the Swiss instrument maker and mathematician Jost Bürgi devised and documented an ingenious algorithm for efficiently and precisely calculating tables of the sine function. The manuscript *Fundamentum Astronomiæ* explaining this method and Bürgi’s tables had been considered as lost, but have been rediscovered in 2013 by Menso Folkerts in the University Library of Wroclaw (Poland). In this presentation we explain and discuss Bürgi’s algorithm, referred to as *Artificium* or *Kunstweg*, with the tools of modern Linear Algebra. By considering the difference table of the sine function and by using matrices and eigenvalue problems, we develop a theory of the algorithm and discuss the rate of convergence.