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KCHR PUBLIC TALK

# KANAKKATIKĀRAM

## A HISTORY OF PREMODERN MALAYALAM MATHEMATICS

**Dr. ARUN ASHOKAN**

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**TUESDAY | 06 AUGUST 2024 | 3:00 PM (IST)**

**Venue: Online**

**Zoom Meeting ID : 96497 404 283**

**KERALA COUNCIL FOR HISTORICAL RESEARCH**

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## Abstract

*Kaṇakṭatikāram* is a genre of elementary mathematical treatises in Tamilized Malayalam, available today in such forms as palm-leaf manuscript, paper transcript, as well as print. The genre also exists in Tamil. These treatises have enjoyed substantial circulation in medieval and colonial Kerala and Tamil Nadu. The style of the composition of the Malayalam *Kaṇakṭatikāram* is in medieval *pāṭṭu* verses that are followed by prose commentary. From internal evidence, we can presume that the preliminary composition of verses in these treatises probably happened in the 14-16 c, although it did continue till the 19th century. These treatises mainly comprise the mathematical operations of counting, adding, multiplying, dividing and subtracting. Its content follows a loose order starting with invocations to deities, followed by the table of contents, lists of fractions and large decimal powers, measurement units, explanations of some mathematical operations like multiplication of fractions and summation of some finite series, and word problems dealing with calculation of land, gold, paddy, rice, wood, etc. It is difficult to know anything accurate about the author(s) or the period of composition of Malayalam *Kaṇakṭatikāram* treatises. But it is almost certain that these treatises consist of contributions by people from a non-elite and lower caste background. The references in the text indicate that the knowledge contained in these treatises emerged in and disseminated through interconnected historical contexts such as those of production and distribution, trade and utilization, nature and ecology, governance and performance, pedagogy and erudition, etc.

## About the speaker

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Dr. Arun Ashokan is a researcher who has completed his post-doctorate from the Chair of History and Philosophy of Mathematical Sciences, ETH Zurich. He has been working on the history of vernacular mathematics in medieval south India (Kerala and Tamil Nadu, 9th-16th Centuries) since 2019.

This programme will be hosted online through Zoom. Please use the following link to join online: [zoom.us/j/96497404283](https://zoom.us/j/96497404283)

# Kerala Council for Historical Research

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