

BSHM Christmas Meeting: Programme & Book of Abstracts

Saturday 6th December 2025

Online

- 10.30 Welcome
- 10.40 Eleonora Sammarchi (University of Bern)
"Another method is..." Alternative procedures in medieval mathematical texts: examples from the MediMath corpus
- 11.20 Senthil Babu (French Institute of Pondicherry)
Measure, Calculation and Value: Standardization in colonial south India in the early nineteenth century
- 12.00 Comfort Break
- 12.10 AGM (for BSHM members only)
- 13.40 Jesse Garrison (UCL)
Mathematicians in the Field: British Eclipse Expeditions in the Nineteenth Century
- 14.20 Erica Meszaros (Brown University)
The Algorithmic Lens in Babylonian Astronomy and Mathematics
- 15.00 Break
- 15.15 Jessica Otis (George Mason University)
Popular Numeracy and Quantifying the Dead in Early Modern London
- 15.55 Closing remarks
- 16.00 End of Meeting

Abstracts

Senthil Babu D., French Institute of Pondicherry

Measure, Calculation and Value: Standardization in colonial south India in the early nineteenth century

In the historical struggle between the heterodox local and the standardizing universal, 'calculation', both as a process and as an agency, assumes a crucial place. If measurements are prone to manipulation, making justice and fairness elusive in practice, mathematical arguments are often mobilized to deliver that promise. In particular, the mediation between the mathematical and the political shaped the relation between measure, calculation and value in different modes and sites of exchange. Socialization of mathematical knowledge, both in school and at places of work carried this tension, making it pervasive to cultures of calculation. How did mathematics of exchange contribute to the possibility of justice, in the language of standardization? We shall follow the debates around standardization of weights and measures in the Madras Presidency under the rule of the East India Company during the period 1798 to 1856, when elaborate surveys and treatises marked these debates, resulting in a flow of measures between London and Madras.

Jesse Garrison, UCL

Mathematicians in the Field: British Eclipse Expeditions in the Nineteenth Century

Reports of unusual phenomena visible only during solar eclipses sparked huge interest and debate in the nineteenth century. The subsequent rise of state-supported eclipse expeditions in Britain, motivated, in part, by large numbers of individuals wishing to travel to see these features for themselves, was also aided by an increased mathematical precision in calculating eclipse paths, advancements in instrument design and new technologies, improved global transport links, skilled scientific administrators, generous Admiralty support, as well as an extensive network of colonial possessions. British astronomers sought to use the few minutes of eclipse totality to examine features of the Sun which were usually hidden from view, namely Baily's beads, the red prominences, and the solar corona.

However, in addition to astronomy, solar eclipses represented a unique intersection of many scientific and public interests. These events brought together diverse groups of supporters, such as politicians and journalists keen to keep Britain at the forefront of solar science, as well as observers who generally worked in other fields including physicists, naturalists, instrument makers, artists, chemists, hydrographers, and mathematicians. Looking beyond the astronomical research interests in these eclipses, this paper examines the motivation and planning behind several expeditions launched throughout the nineteenth century, highlighting a community of mathematicians who joined or made these journeys possible. The interest of this community in supporting eclipse research went beyond seeking novel scientific results: government funding for prestigious astronomical pursuits—and the extensive mathematics necessary for their success—served to also sustain and elevate their own field.

Erica Meszaros, Brown University

The Algorithmic Lens in Babylonian Astronomy and Mathematics

Late Babylonian astronomical procedure texts document advanced methods for predicting the phenomena of the moon and planets. Phrased as sets of instructions, these texts have often been treated like modern algorithms in subsequent studies. Research on how Babylonian mathematical texts fit into a modern understanding of algorithms has already suggested promising new ways to understand these astronomical ones. Diving into algorithmic interpretations of the astronomical texts uncovers characteristics of a uniquely Babylonian “algorithmic culture” that can speak to aspects of their scientific cultures and the practice of astronomy.

This talk will discuss one novel way that “algorithms” apply to ancient Babylonian material: as a lens for investigating distinctions between generic forms. By analyzing traditionally algorithmic components like variable use and the flow of logic through a procedure, this lens provides new insight into how standard scholarly textual forms changed over time. By paying particular attention to distinctions between texts that have been traditionally categorized as “mathematical” and those that have been labelled “astronomical,” this new algorithmic lens highlights unique features of nonlinearity and language use. In turn, these features can help modern scholars better understand characteristics of Babylonian scholarly knowledge production and cultures from the perspective of these practitioners.

Jessica M. Otis, George Mason University

Popular Numeracy and Quantifying the Dead in Early Modern London

One of the most dreaded diseases in early modern Europe was plague. The city of London alone lost an estimated 225,000 people to plague in the century between 1563 and 1665. Beginning in the sixteenth century, government officials coopted the city's existing religious infrastructure of parish clerks to collect data about plague mortality—data that was, for the first time, quantified not qualitative. At the turn of the seventeenth century, during another epidemic of plague, the audience for this data expanded dramatically with the introduction of a weekly broadside for the general public. London's population rapidly embraced these bills of mortality as a tool for evaluating their risk of imminent death, which led to the bills' continuous weekly publication from 1603. These public bills also came to include all-inclusive christening and burial counts by gender, numbers for dozens of other causes of death, and eventually age at time of death, ensuring their ongoing publication for almost two centuries after the final outbreak of plague in England. This talk will contextualize the London bills of mortality in the changing numerical landscape of the late sixteenth and seventeenth centuries, and argue that popular understandings of quantified chance and mortality statistics form an important strand of the increasing quantification of everyday life in early modern Britain.

Eleonora Sammarchi, University of Bern

"Another method is..." Alternative procedures in medieval mathematical texts: examples from the MediMath corpus

Medieval writings on algebra and arithmetic frequently present alternative or complementary procedures for solving problems or demonstrating propositions. The analysis of such procedures offers valuable insights for historians of mathematics, including the sources consulted by authors, their conception of what constitutes a rigorous proof, and new methods and strategies they elected to adopt. This study examines selected case studies from Arabic and Latin texts contained in the MediMath corpus, with the aim of illuminating the circulation and transformation of mathematical knowledge across the Mediterranean world.