Report on the Workshop

How much? Global Histories and Material Cultures of Accountancy and Metrology

International Centre for Mathematical Sciences

7–10 July 2026

The workshop *How much? Global Histories and Material Cultures of Accountancy and Metrology* took place at the Edinburgh Futures Institute, University of Edinburgh, from 7 to 10 July 2026. It was organized by Eleonora Sammarchi (University of Bern), Rebekah Higgitt (National Museums Scotland), and Carlos Gonçalves (University of São Paulo).

The workshop was hosted by the International Centre for Mathematical Sciences (ICMS), which also provided the principal financial support for the event. Additional financial and institutional support was received from the British Society for the History of Science (BSHS), the British Society for the History of Mathematics (BSHM), and the Glasgow Mathematical Journal Trust. Separate travel support from the International Commission on the History of Mathematics (ICHM) enabled the participation of three scholars.

The workshop brought together approximately forty-five participants, including speakers, commentators, organizers, and attendees. Most speakers and commentators remained in Edinburgh for the full duration of the meeting, creating excellent opportunities for exchange both during the formal sessions and in the intervals between them. The programme combined in-person and online participation, with Daniel Margócsy (University of Cambridge) and Laurent Mazliak (Sorbonne Université) presenting remotely from Cambridge and Paris, respectively. Although they did not give presentations, the attendees nevertheless enriched the workshop discussions through their questions and comments.

The scientific programme consisted of fifteen research presentations covering a broad chronological and geographical range, from ancient Mesopotamia and Egypt to medieval and early modern Europe, India, China, colonial Peru, and the modern history of mathematics. Twelve of these presentations were followed by formal commentaries by invited specialists, while three shorter presentations were intentionally designed without commentators. The programme concluded with a roundtable on accounting ideas in modern mathematics. Organized by Michael Barany (University od Edinburgh), the roundtable proved to be one of the highlights of the meeting. A final session was then devoted to identifying and discussing the main themes that emerged from the workshop.

The workshop explored the history of mathematics through topics and activities that have traditionally occupied the margins of the discipline's historiography. Rather than studying mathematics in isolation, participants examined mathematical practices as they appeared in accountancy, administration, commerce, metrology, instrument making, and education. Collectively, the presentations demonstrated the richness of these neighbouring domains and underscored the importance of studying mathematical knowledge within the broader contexts in which it was produced and used.

One of the strengths of the workshop was the diversity of its participants, both geographically and intellectually. Specialists working on different historical periods, cultural traditions, and methodological approaches were brought together in a common forum. This created valuable opportunities for dialogue across the traditional boundaries of the history of mathematics. Throughout the workshop, participants compared sources, methods, and conceptual

approaches, discovering numerous points of contact despite the diversity of their research objects.

As became clear during the concluding discussion, several themes recurred throughout the presentations. Many papers emphasized the material dimensions of mathematical activity, drawing attention to the role of documents, instruments, weights, measuring devices, and other artefacts in shaping quantitative practices. Other presentations highlighted the collective character of mathematical work, examining the social environments in which accounting, measurement, and calculation were performed. Questions concerning value, money, administration, and historical processes of transmission and transformation also appeared repeatedly across the programme. Particularly lively discussions emerged whenever issues of justice, fairness, legal practice, or moral evaluation became part of the analysis, suggesting that quantitative practices cannot be understood solely in technical or economic terms but must also be considered within their broader social and ethical contexts.

An important component of the workshop was the visit to the National Museums Scotland Collection Centre, organized by Rebekah Higgitt. Approximately thirty participants took part in the visit. To facilitate close engagement with the collections, the participants were divided into two groups that followed the same itinerary in opposite directions.

The visit covered the collections of the Department of Global Arts, Cultures and Design and the Department of Science and Technology. In the Department of Global Arts, Cultures and Design, participants examined cuneiform tablets together with Egyptian sets of weights and a balance. Participants also viewed Japanese and Chinese abacuses, Chinese weights, an instrument designed for counting coins in batches, and a bowl decorated with a magic square. The Department of Science and Technology displayed a range of calculating instruments, including Napier's bones, linear and circular slide rules, and a hypsometer—the subject of Jane Wess's workshop presentation—as well as a set of nineteenth-century standards made by Charles Piazzi Smyth to reproduce ancient Egyptian cubits, hands, and pyramid inches, illustrating one dimension of nineteenth-century ideas about antiquity. Participants further explored preserved components of the *Atlas* supercomputer, a collection of telescopes, and several large industrial objects, including the flare tip of a decommissioned offshore oil platform, a machine used in the production of aluminium beverage cans, and the lenses of a lighthouse. Although not all of these objects related directly to the workshop's theme, they illustrated the museum's broader commitment to preserving the material history of science, technology, and society. The visit complemented the scientific programme by allowing participants to engage directly with historical objects connected to many of the themes discussed during the workshop. It also provided further opportunities for informal conversation and interdisciplinary exchange in a setting that emphasized the material dimensions of scientific and mathematical practices.

After the event, the ICMS provided the organizers with detailed feedback from the participants, offering an opportunity to assess how different aspects of the workshop were received. Participants expressed enthusiasm about the way the workshop was structured, particularly the diversity of its themes and the range of career stages represented among speakers and commentators. One participant noted that they would have welcomed more contributions dealing directly with measurement and with later historical periods. These could indeed provide promising avenues for future events of this kind.

Still on the thematic dimension, the idea of bringing the history of mathematics into dialogue with the history of measurement and aspects of economic and social history proved successful. Participants reported that this combination generated important insights and contributed to rich and productive discussions.

The combination of different elements was also reflected in the visit to the National Museums Scotland Collection Centre. The participants' feedback confirmed the organizers' intention that the visit should be not simply a recreational activity but an integral part of the intellectual investigation pursued during the workshop.

Participants also appreciated the format in which presentations were followed by formal commentaries and then by questions and discussion. According to the feedback, this worked particularly well in opening new perspectives for both speakers and the audience. Several speakers reported that the comments and questions they received helped them envisage new directions for their research. In some cases, participants referred more broadly to the workshop as a whole, suggesting a productive cross-fertilization among different areas of specialization.

The event also proved valuable for networking. Precisely because the workshop did not focus on a single traditional theme or established area of research, many of the participants had not interacted previously. The meeting therefore created opportunities for new scholarly connections across different fields, periods, and research traditions.

Overall, the workshop successfully fulfilled its objectives of bringing together historians working across different chronological periods, geographical regions, and disciplinary traditions to explore the historical study of accountancy, metrology, and related quantitative practices. The discussions demonstrated the value of approaching mathematics not as an isolated body of knowledge but as a set of practices embedded in broader social, material, administrative, commercial, and intellectual contexts. By encouraging dialogue across these different perspectives, the workshop opened promising avenues for future comparative research and strengthened an international network of scholars working on the global history of quantitative practices.