

## Contribution Proposal for ICHME 7

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### Title. The Mathematical Education of Practitioners and Its Sources (16<sup>th</sup>-19<sup>th</sup> century)

**Axe 3.** To explore new methods of research, interpretation, and evaluation of sources.

**Abstract.** The two-voice communication we propose addresses the collection and use of sources for the mathematical training of professional practitioners between the 16<sup>th</sup> and 19<sup>th</sup> centuries. Our aim is to focus over the long period of time that preceded and overlapped with the foundation of brick-and mortar-teaching institutions (technical and professional schools).

At that time, without the presence of duly established schools, the training of practitioners was mostly fragmented and based on an interweaving of processes resulting from the production, dissemination, transmission and actual use of various sources: professional journals, readers' letters, manuals for self-teaching, handwritten courses, correspondence courses, contracts, manuscripts, lists of instruments, travel reports... What were these documents and how were they used and produced by practitioners? How were they passed on between generations of practitioners? Were they modified in contact with the field? Who were their authors and how were they trained? Were they average practitioners with a concrete experience of the profession they addressed, or sympathetic academics?

The period covered by the study gives thus access to the dynamics of historical processes in the mathematical education of professionals. It also leads us to consider the transition period that gradually led, in many cases, to the standardization of mathematical training of practitioners. How have the new curricula been implemented and did they articulate with older forms of mathematics education? Were the contents or the relationship between theory and practice affected by the establishment of formal training institutions? What role did universities play in this educational landscape? Did they take over the training of practitioners and with what degree of integration of the needs and practices of the field?

These methodological, epistemological, and historiographical questions will be illustrated with the help of two case studies. Comparing the mathematical training of underground surveyors and draftsmen in carriages, we will try to bring out a general scope.

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