Introduction

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Abstract
This Focus section explores how knowledge and skill emerged in direct dialogue with practice, from the late Middle Ages to the early modern period. It seeks to create a space in which historians of science and economic historians can recognise common research questions and establish a conversation. The contributions in this section share an interest in how practitioners' works, their knowledge, and craft expertise contributed to both socio-technical and scientific change. To do so, they explore how the expertise of artisans, artists, engineers, instrument makers, surgeons, and other skilled workers took form "in use." These pages introduce the first papers published under this 'Knowledge in Use' label. Other papers will be published in the Focus section published in the forthcoming volume of Galileana. Early drafts of these studies were discussed in a workshop held in February 2026 at the Sant'Anna School of Advanced Studies in Pisa, within the research activities of the FIS WorKnow project. Taken together, this and the forthcoming Focus section show how taking practitioners' own words seriously is to see knowledge developing hand in hand with material practice.

Keywords
practical knowledge, practitioners, historiographical approaches

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This Focus section brings together contributions exploring the emergence of knowledge and skill in direct dialogue with practice, from the late middle ages to the early modern period. Historians of science have long recognised the role of so-called "practitioners" in the making of early modern science, at least since Edgar Zilsel's pioneering work of 1942; yet a sustained engagement with sources written by practitioners themselves – rather than about them – is a comparatively recent development in the field. At the same time, economic historians have grown increasingly attentive to knowledge and skill as key drivers of long-run economic change, stressing the role of labour and craft expertise in the development, application, and transfer of innovation and technology. The papers gathered here sit at the crossing point of these two strands of scholarship, asking how the knowledge and skill of artisans, artists, practically-minded humanists, engineers, instrument makers, surgeons, and other skilled workers developed through their very application – that is, how knowledge took shape "in use."

Under this framework, contributors were invited to reflect on the practices, channels, and constraints that shaped the production and circulation of practical knowledge across physical and social spaces. The resulting essays published in this volume examine: how we can approach sources that emerged from the world of late medieval and early modern practitioners; the circulation of practical knowledge across institutional and social borders, focusing on the extent to which abacus mathematics circulated beyond the abacus school; the role of writing as both a tool of practice and a medium for medical theory in the day-to-day activity of surgeons and barbers; how a close examination of an unpublished abacus manual reveals practical texts as active sites of knowledge production rather than passive repositories of technique; the relationships between artesanal experience, technical practice, and written knowledge through the writings of mathematical practitioners engaged with surveying and military techniques at a crucial moment of change in European warfare technology; the emergence and politics of technical expertise through a comparative analysis of handbooks of water management and hydraulics in early modern Europe; the entwinement of theory and technology through an analysis of the uses and conceptualisations of the *camera obscura*.

Owing to the number and length of the contributions, the papers of this Focus section will appear across two issues of *Galilæana*: the present issue and the forthcoming one, which will present a wide range of further themes and cases. Earlier versions of these papers were first presented and discussed at a workshop held in February 2026 at the Sant'Anna School of Advanced Studies in Pisa, organised within the framework of the project *WorKnow – Working Knowledge: the Emergence of Practitioners in Late Medieval and Early Modern Europe*, funded by a FIS (Fondo Italiano per la Scienza) Starting Grant of the Italian Ministry of University and Research, with the collaboration of the Museo Galileo in Florence. We are grateful to the workshop's participants and discussants, and to the Museo Galileo, for their generous contribution to the discussions from which these papers have benefited.

We hope that, taken together, these essays will offer readers a fresh sense of the fascinating diversity and richness of these sources, and show how taking practitioners' own words seriously lets us see how knowledge developed hand in hand with material practice – thereby contributing to the broader transformations of science, technique, and the economy in the Renaissance and early modern period.