Matteo Valleriani. *Galileo Engineer.* (Boston Studies in the Philosophy of Science, 269.) xxii + 320 pp., illus., bibl., index. Berlin: Springer, 2010. $139 (cloth).

In the book under review, Matteo Valleriani convincingly portrays Galileo in a new light. He presents him as an expert in practical mathematics (*mathematica practica sive applicata*) in northern Italy at the turn of the sixteenth century—an expert comparable to figures such as Girolamo Cardano, Niccolò Tartaglia, and Federico Commandino, who worked earlier in the sixteenth century. These men were experts in the employment of certain mathematical tools in practical mechanics, which at that time flourished in particular in the field of machinery and architecture, both civil and military, thereby reviving and developing mechanics in the tradition of Archimedes, Heron, and Jordanus and that of the comments on Pseudo-Aristotle's *Problemata mechanicae* (Ch. 6).

This view of Galileo is significant in two respects. First, it rejects the categorization of Galileo as a natural philosopher in the tradition of Aristotle's *De physica*, where interest in practical issues was not at all central. Just the contrary seems to have been the case—that is, Galileo was one of those practical mathematicians who at certain times showed an interest in natural philosophy as discussed by philosophers at the universities, in particular during his time as a lecturer at the University of Pisa (1589–1592), before he was settled professionally. Second, the mechanical problems that arose in connection with new contemporary technologies—from shipbuilding and structural engineering to the manufacture of mathematical instruments, telescopes, and lenses—formed the core of his theoretical agenda, from *Delle macchine* (1592) up to his chief work on mechanics, the *Discorsi* (1638). The only exception in this respect is his engagement in the struggle concerning the world systems, though this too was connected with his mechanical research (circular inertia) and practical endeavors (telescopes and lenses).

One may object that this view of Galileo is not really new and refer to the pertinent studies of Galileo by Leonardo Olschki, Tom Settle, Mario Biagioli, and, for that matter, the author of this review. While this may be a legitimate objection, what distinguishes Valleriani's book and constitutes a new view of Galileo is the systematic and exhaustive examination and discussion of all extant documents concerning his education and training (Ch. 1), his workshop for mathematical instruments in Padua (Ch. 2), the private tuition he gave on fortification and other matters for gentleman military officers (Ch. 3), his involvement as an expert advisor on certain shipbuilding issues faced by the Venetian Arsenal when redesigning the fleet for the encounter with the Turks (Ch. 4), and, finally, his investigations and trials concerning pneumatics and the thermoscope (Ch. 5). It is this systematic investigation of the entire spectrum of Galileo's practical endeavors that makes the difference: it shifts the focus and emphasis, making Galileo recognizable as the practical mathematician he actually was and, at the same time, placing him in the context of the social and cultural development of the Renaissance states of northern Italy in which this new kind of professional emerged.

Valleriani adds to his investigation some extremely valuable documentation—namely, an English translation of the most relevant letters and documents. This is a great gift to the scholarly community. Although this documentary material was published in Italian by Antonio Favaro more than a century ago, the state of affairs was such that scholars with an insufficient command of Italian could only reconfirm quotations; they were unable to enter into investigations of these rich sources.

Galileo Engineer has the potential to change not only our perception of Galileo, but also our understanding of the personae at center stage during the Scientific Revolution of the early modern period: the experts in the most advanced technologies of their time, who employed (and thereby developed) the theoretical tools for reflecting the intricacies of their professional ventures.

WOLFGANG LEFÈVRE

Živa Vesel; Sergeï Tourkin; Yves Porter (Editors). **A. Beschaouch** (Coordinator). *Images of Islamic Science.* Volume 1: *Illustrated Manuscripts from the Iranian World.* (Bibliothèque Iranienne, 67.) 323 pp., illus., bibls., index. Tehran: Institut Français de Recherches en Iran/UNESCO/La Fondation Max van Berchem/L'Université Islamique Azad, 2009. $120 (cloth).

Images of Islamic Science is a beautifully produced volume on the scientific and technical illustrations in manuscripts from the premodern Iranian world. It is the result of a truly multinational and multi-institutional venture and a great start to UNESCO's ambitious, but much needed and worthwhile, series "Images of Science in the Islamic World." As the involvement of UNESCO and the Islamic Azad Uni-