



Dipartimento di Matematica.
Università di Roma "Tor Vergata"

Martedì 27 ottobre, ore 16, aula A0 (piano terra)
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*Elements X in the Liber abbaci and in the abacus
tradition – a long fight to get out of Euclid's shadow.*



Irrationality was apparently discovered as incommensurability between lines by Pythagorean mathematikói, and at first argued arithmetically. With Theodoros, however, proofs in this domain were based on geometry, which they still are in Euclid's classification of quadratic irrationals in the notoriously difficult book X of the Elements. As it has been shown before, already medieval Arabic commentators and users of the text often introduced arithmetical interpretations or explanations. The present lecture looks at how Leonardo Fibonacci (1202/1228), the Florentine "abbacus encyclopedias" (around 1460) and Luca Pacioli (1494) struggled with the topic – Fibonacci followed creatively by Pacioli mainly interpreting it arithmetically while being unable to free themselves from Euclid's geometry, and the encyclopedias reproducing a vernacular translation of Campanus's version of the Elements but illustrating with number examples. Only mathematicians of the following century, first Michael Stifel in 1544 and then, definitively, Simon Stevin in 1585, finally managed to get out of Euclid's shadow.