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A DIGITAL SYNTHETIC METHOD
Federico Fallavollita, Marta Salvatore

ABSTRACT

This paper aims to highlight the utility of the synthetic approach in solving geometry problems thanks to the contribution of new digital technologies. The synthetic approach, as is known, addresses geometry problems without recourse to analytical methods; especially for architects, the synthetic approach relies on drawing and models, 2D graphics yesterday, 3D digital graphics today. The digital revolution has brought significant changes to the study of geometry both in education, and in research. If, for a long time, the instruments were rulers and compasses, today the main tools are computers. Currently, we can draw directly into space with an accuracy never before achieved, and we can use, in geometric constructions, forms far more complex than those represented by ruler and compass. This has enhanced the heuristic capabilities of the synthetic approach. There is a vast repertoire of geometry problems belonging to the Monge school that, for several years now is no longer studied in engineering and architecture schools: however, in the light of new digital tools, it is still a precursor to new ideas for research. This contribution aims to show how this heritage can be updated and expanded through the digital synthetic method.

Federico FALLAVOLLITA Assistant Professor, Univerity of Bologna, Italy (federico.fallavollita@unbo.it)
Marta SALVATORE Ph.D. Architect, Sapienza University of Rome, Italy (marta.salvatore@uniroma1.it)