

Preface

The Graphic Horizons motto captures the profound meaning of research in the field of architectural graphics, symbolizing, in that horizontal line that is never fully reached, a task of continuous exploration that propels us into the future with the hope of expanding the boundaries of knowledge. This metaphorical horizon, closely linked to the tradition of adventure and discovery in two Atlantic cities like A Coruña and Porto, inspires us to look beyond the immediate and face new challenges creatively, opening the doors of exploration in the *Expresión Gráfica Arquitectónica* (EGA; Architectural Graphics) area to a wide range of specific topics. Graphic Horizons implies not only a commitment to architectural graphics research but also a willingness to engage in debates and critical reflections on the challenges and opportunities that continuous changes pose in the realm of visual representation in architecture.

Acknowledging the swift pace of change in our contemporary society, where events unfold with urgency, the graphic expression in architecture is depicted as intimately connected to this dynamic reality, highlighting the necessity to creatively respond to current situations. The future trajectory of our discipline hinges on our collective ability to adapt with flexibility and innovation, underscoring the pivotal role of graphic expression in navigating and shaping the architectural landscape.

This edition contributes to the dissemination of our research and teaching experiences that originated from the first *Jornadas EGA* in 1984 in A Coruña. It reflects a continuous and renewed commitment to discussion, spanning the 19 biennial editions that have unfolded without interruption since the 1986 Congress in Seville. Starting from the III EGA Congress in Valencia in 1990, these gatherings have acquired an international character.

This special edition takes place in the historic city of Porto, thanks to the collaborative efforts of the EGA department at the Universidade da Coruña and the Faculdade de Arquitectura da Universidade do Porto. It is a proof to the enduring commitment to fostering dialogue and exchanging ideas.

This volume emerges as a result of the 20th International Congress on Architectural Graphics, held in Porto in May 2024. The scholarly contributions within are aligned with the objectives of the *Sociedad Científica EGA (Asociación de profesores de Expresión Gráfica Arquitectónica)*. Each author or group of authors contributed an abstract in their native language, which has been incorporated into the Congress proceedings published by the Universidade da Coruña.

As an independent and external activity, and with the intention of contributing to a broader dissemination of research and advances in the field, the Scientific Committee selected a series of authors who were invited to contribute to a collective work with a distinct and more comprehensive text on various topics related to the main issues in architectural graphics included in this volume. The Organizing Committee proposed to continue using the key topics raised in the 19th edition as a reference: Analysis, Thought, Education, Production, and Knowledge.

More than 280 researchers actively participated in the selection process, submitting a total of 163 research works with the intent of being included in this publication. The featured works underwent a rigorous selection procedure, involving a double-blind peer-review of the full papers. A carefully chosen panel of 74 reviewers, esteemed experts in the discipline of architectural graphics and representing diverse countries, played a pivotal role in this process. After this extensive review, 136 papers were ultimately accepted and systematically categorized according to research topics: 36 chapters for Analysis, 40 chapters for Knowledge, 16 chapters for Production, 33 chapters for Education, and 11 chapters for Thought. Consequently, this publication consists of three volumes distributed as follows. *Volume 1: Graphics for Analysis and Thought* with 47 chapters, *Volume 2: Graphics for Education and Production* with 49 chapters, and *Volume 3: Graphics for Knowledge* with 40 chapters.

Graphics for Knowledge

This section unravels as an illuminated map delineating the diverse pathways of architectural knowledge through the lens of graphic expression. From the development of physical simulations with artificial intelligence for BIM methodology to playful and didactic experimentation within a cultural landscape, each chapter embarks on an educational journey exploring the boundless possibilities of visual expression in the architectural realm. Delving into the teaching of surfaces bridging geometry and stereotomy, to the application of augmented reality in graphic motivation and communication, a convergence of varied pedagogical approaches takes center stage. Whether examining conic curves in portraiture or contemplating the persistence of the tradition of hand drawing amidst emerging digital technologies, each article acts as a window into the creative and evolving teachings that breathe life into the very essence of architecture. This section extends an invitation to researchers alike, encouraging exploration of the richness inherent in the learning process. Embracing both traditional methods and digital frontiers, it fosters an inspiring dialogue between the traditions of the past and the innovations shaping the future of architectural education.

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