

Digitizing Demonstrations of Ancient Egyptian Heritage in the Fourth Pyramid

Dr. Eman Lofty Elbably

Abstract:

Interior architecture is the product of thought and technological progress of the world and it is an important measure in the progress of nations, and since the world is in continuous movement and permanent development, this has been reflected tremendously on several aspects, including the field of interior architecture. The field of interior architecture has become rapidly changing, much more than many other fields, as it plays the role of innovation, creation and creativity, and we find it in a new look different from the previous stages.

Several applications, various materials, and huge number of processors enter the field of internal blindness day after day, which led to the existence of several currents, trends and paths that appeared in the third millennium characterized by diversity, expansion and innovation in finding various solutions.

Interior architecture is a field that occupies a “special” place in the world of science and the world of arts, as it changes in a double way, so we find it keeps pace with science in its technological progress in an artistic form that is subject to the talent of the founder or the adopter of the trend or the trend, and he brings out to the world a different innovative product that is completely different from the outputs of other sciences and arts.

Multiple directions and paths that may sometimes be an accumulation of previous trends and may sometimes be a result of the scientific and global progress that we are living in now.

After the visitor's journey through the historical monuments of the greatest civilization in history, a leisure trip begins for the visitor between shops, cinemas, indoor and outdoor entertainment areas (gardens) and various fast and classic restaurants.

This was the journey of the project of the century that the world has been waiting for. Museum and educational beacon for the whole world. From

the beginning of the first phase in May 2005 until the time of the expected opening in the last quarter of 2020, it was a journey that did not promise easy and easy, but rather a journey that faced many political and economic obstacles, but it was a challenge for the government and people of Egypt to complete the project and present it to the world. The museum is expected to attract about five million visitors annually from all over the world. The Grand Egyptian Museum project is one of the largest modern Egyptian projects, as it includes approximately 1,700 workers and about 300 engineers and supervisors, representing 33 Egyptian companies out of a total of 65 companies that complete the work. The museum is expected to achieve an annual revenue of about one hundred and fifty million Egyptian pounds, in addition to providing 500 permanent jobs, 1500 jobs in the service sector, and 5800 jobs in the economic projects sector.

Despite the economic importance of the Grand Egyptian Museum to Egypt, the civilizational and cultural importance is considered the real treasure of the Arab Republic of Egypt.

Keywords:

The New Egyptian Museum; Modernity in Museums; Contemporary Egypt Architecture

Digital preservation and accessibility systems of documents in art archives museums: Theatre Archive Museum case study

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Abstract:

This scientific paper aims to clarify the importance of international standards in documenting and displaying the documents of art archives museums, as they are the legitimate channels for broadcasting and availing the heritage memory from the past to the present in a systematic and technical approach without distortion. The international standards provide regional and international protection for artistic theatrical documents through museum exhibitions. Museum exhibitions are among the most important tools that put people in the circle of interest of the rich and diverse cultural heritage to support cultural tourism. The paper uses the descriptive analytical methodology and the case study approach to examine, understand and explain the phenomenon in detail and deal with it deeply in order to identify museum exhibitions and their archival importance. Additionally, the paper looks at the role of the theater archive museum in preserving and developing theatrical holdings. The study reached to a set of results which are: the ability to document and describe the documents of the Theater Archive Museum in a systematic manner and make them available in a safe and legitimate manner that guarantees their protection from looting. Also, mastering the skills of preserving and preserving documents for longer periods in an environment good archival was a core result. In light of these results, the study recommended a set of recommendations, the most important of which are: finding a mechanism for communication with institutions concerned with preserving artistic heritage as a supreme reference for the Theater Archive Museum, applying the necessary policies and standards that ensure protection for the museum's heritage collections, working to promote artistic holdings and transforming them from a heritage memory into a living memory, The museum is not a storehouse of heritage, while it is a tool for reviving the

past, and the most important means of visual communication that spreads the values of art, beauty and culture among civilizations.

Keywords:

Archival museums; exhibitions of heritage documents; international standards; digital accessibility; art archives; theatre museum

Digital design concept strategy for interior architecture using fractal style

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Abstract:

Nature is considered as a source of inspiration for artists and designers, as well as for the field of design, as it includes an infinite number of design elements that are characterized by persistent and continuous changes in their shapes. Man, by nature, prefers order and arrangement, as these offer a sense of reassurance. Several concepts, such as the "Fractal", have emerged through the geometric and mathematical relationship across the elements of the environment. The geometric organization and self-formation in nature follow the concept of space, growth, breadth and relationships between the existing forms, and also reflects an integrated system from which designers inspire to express it with their own vision, as it is easy to follow the structural systems and their basic elements.

Designers use their various innovative ways to understand the different relationships of the cosmic phenomena around them. Designers are as well interested in the geometric arrangement, classification, and coordination between the assets in a mathematical way.

The research sheds light on the "Fractal concept" which is one of the design methods. It presents some concepts and ideas in an attempt to explore the foundations of design by applying one of the branches of mathematics in the fractal geometry.

This research presents definitions, history, properties and classification of the fractal geometry. It then addresses some illustrative examples of the fractal geometry in nature. Some examples and models in interior design are illustrated. In addition to other applications on the determinants of interior spaces and different furniture units based on the same concept using digital technology.

Keywords:

fractal; fractional geometry; digital design; interior architecture; self-similarity.

Integrating Sustainability and Digital Transformation into Applied Arts Student Projects

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Abstract:

With the development of the global environmental awareness of the importance of natural resources and raw materials, there has been an increased interest in directing product designs to become eco-friendly. Thus, resource sustainability has become one of the most basic philosophical concepts in product design. Also, technology emerged with the trend towards digital transformation it contributed towards an intellectual change in design. In this study, we explore considerations for integrating sustainable design basics and digital transformation into student projects of Applied Arts. This study targets the category of art students and their projects to extract a proposed framework for integrating the global sustainability trend and digital transformation in their students' projects. The study identifies the students' most important problems related to the resources in their projects with surveys of their views in developing the students' projects. By studying the methods of implementing sustainability in projects and digital technology and identifying the most important challenges they face. As such online questionnaires were conducted on the environmental, social and economic impact of the

sustainability application on students' projects and the other questionnaire was about analyzing digital transformation in student projects. Based on the results of these surveys, a proposed framework was developed to integrate sustainability and digital transformation into student projects. Also, proposals product designs were designed by the researcher and presented as models for integrating sustainability into student projects.

Keywords:

Sustainability; Digitalization; Interior Design; Furniture Design; Applied Arts

Algorithmic Design and its Impact on Interior Design Elements

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Abstract:

An algorithm is a computational procedure for addressing a problem in a finite number of steps. It involves deduction, induction, abstraction, generalization, and structured logic. It is the systematic extraction of logical principles and the development of a generic solution plan. Algorithmic strategies utilize the search for repetitive patterns, universal principles, interchangeable modules, and inductive links. The intellectual power of an algorithm lies in its ability to infer new knowledge and to extend certain limits of the human intellect.

Despite the proliferation of computers in architecture today, the use of algorithms in architectural design is generally limited. Instead, the dominant mode of utilizing computers in architecture today can be identified as that of computerization, i.e. that where entities or processes that are already conceptualized in the designer's mind are entered, presented, or stored on a computer system. In contrast, algorithms, as process of creating design solutions by the use of mathematical or logical methods, are generally limited. While the research and development of software itself involves extensive algorithmic techniques, mouse-based manipulations of 3D computer models on a computer screen are not necessarily algorithmic processes.

As mentioned before, AD allows the generation of forms and shapes through algorithms. In particular, a category of algorithms aimed at producing unpredictable results quickly triggered designers' interest, allowing them to explore new uncharted formal territories in architecture. Shape grammars, mathematical models, topological properties, genetic systems, mappings, and morphisms are a few examples of algorithmic processes explored for their unpredictability.

By combining this flexibility of AD with analysis and simulation softwares, design alternatives can then be analyzed and compared with relative simplicity to select a solution that offers optimal performance. This allows the designer to prioritize performance early in the design process, or even let it lead the process, and presents a massive shift from traditional design methodologies, where performance evaluations are typically done at the end of the process, making it rarely a priority. These optimization procedures are not only restricted to technical aspects of the design performance such as structure, thermal behavior, acoustics, and aerodynamics; they can also include other aspects such as material usage, spatial distribution, among others.

Finally, AD also enables the automation of repetitive, time-consuming tasks that had to be manually executed before, such as repetitive modelling or fabrication processes. This relieves architects from tedious and error prone work, allowing them to save a lot of time and effort during the design process.

Keywords:

Algorithms ; Algorithmic architecture ; Algorithmic design AD ; Generative design ; Digital fabrication.

Raising the efficiency of the Perspective drawing course for the interior design students by using digital programmes

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Abstract:

The cause of covid 19 in a digital revolution in E-learning and There is a growing interest in curriculum development with the most important steps that were taken by the researcher in teaching the the perspective course online.

The study examines the steps for developing the perspective course.

Through a questionnaire about the opinions of faculty staff in the field of interior design to develop teaching and learning methods. Researching methods for applying computer programs and integrating digital technology and the most important challenges and difficulties facing the faculty staff. Analysis of students' work in the perspective course, andIdentify the most important problems and analyze the most important proposals to solve problems. Explain the most important steps to be followed, Also the tools and appropriate learning environment.

Keywords:

Perspective; Interior design; courseware; digital programs