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Engineering and Its Application in World Life and Construction

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Abstract

The tendency of human life to engineering and technology and advanced technologies is undoubtedly taking shape. Many people tend to use useful and efficient technologies, electronic technologies and engineering structures that are evolving and advancing day by day. How good it is for different human societies to become acquainted with the technological achievements and ideas of different societies. If a suitable environment leads to the aggregation of ideas internationally, this will create scientific organization, which is very clear that this action should be The sooner it happens.

Therefore, the establishment of an international headquarters or headquarters under the auspices of international organizations and forums such as the United Nations, it seems very necessary. It is good that the respected professors of universities, research institutes and institutions of higher education are taking steps in this direction. I hope that one day this happy event will happen and that the technical and engineering elite community will reach a global consensus.

There are many discussions and articles about engineering and intelligence and the application of applications in life, reading such articles gives a new vision and worldview and a new perspective to great engineers.

Keywords: Environment, Organization, Engineering, Elite, Electronic

1-Introduction

In today's world, where every technology usually does not last more than two years, because human beings, especially engineers around the world, are improving their shortcomings and better understanding human needs. Therefore, we must improve the daily constructions of daily life, from buildings, towers and bridges to tunnels, dams and other technical devices, we must move towards intelligence and use new artificial intelligence technologies. Artificial intelligence and basic computer science are available for use by the general public, especially elite engineers, and must be acted upon. One way for engineers to become more familiar with these software and AI devices is to define AI-related courses in top schools as well as universities around the world. Because scientific centers are one of the most effective places to reform society.

In the mentioned source[1], the importance and position of the university and the seminary in the transformation and reform and scientific and cultural revolution of the society have been mentioned in a completely scientific way. I would like to say that if we reach the university,

Let's start, we will definitely achieve more.
Standardization and retrofitting of buildings and in general land and sea structures, bridges, tunnels, overpasses, etc., requires serious determination and transformation. Better than other sciences and knowledge to help build new structures.
Well, in the sections of this article, the applications of other sciences in structures are examined. But I want to draft upstream international laws and documents for construction and industrial and interior design. It is better to write the laws in such a way that the health of the environment and the land is preserved and not harmed. The earth is one of the human trusts for future generations, and reason dictates that we preserve it for those who come after us. It seems necessary to establish an international legislative headquarters in the fields of technology and engineering and construction and production, and especially in the field of construction. Suppose, for example, that a building does not respect the river and is built a short distance from the river without obtaining a permit. It can ruin the beautiful landscape of nature, so if we have a global headquarters or association in these cases that under the auspices of the United Nations can enter into the illegal constructions of the countries of the world and use diplomatic capacities. And letters and consultations to prevent environmental degradation is a great achievement. Of course, it is necessary to have a board of directors in the headquarte
Applications and artificial intelligence are used in most jobs and occupations. For example, imagine a passenger plane flying in the air, and with intelligent aircraft programming, it is possible when one of the components of an aircraft overheats or malfunctions. It was technically shown instantly on the pilot's monitor, and he was immediately informed of the technical defect of the aircraft part and tried to fix it by his own means. See how useful AI and apps are.

2-Application of nanotechnology in civil engineering

As in the above source, the keyword green concrete (ie concrete that is environmentally friendly and does not harm it) is used. Indeed, nanotechnology is the gateway to the new world of humans.
The various applications of nanotechnology in various constructions have been mentioned, how good it is for human societies to move towards green concrete and to move towards intelligent and safe development. Naturally, starting engineering is fraught with challenges, but if we start and take the first step and then the next steps, we see that great things are going well, one of the great things is to be concerned about keeping healthy. The environment is in civil works.
Concrete is a basic requirement in most constructions, and covers at least fifty percent of the structure, and if strong concrete is made, it will strengthen and stabilize the buildings and all water and land structures. One of these things that is suggested is to use nanoparticles in concrete. Concretes sometimes reduce the life of the structure due to the presence of clumps and large and small stones and sometimes due to heterogeneity and non-standard, and there is a possibility of destroying the structure with events such as floods, earthquakes, volcanoes, etc. Therefore, concrete compositions should be homogeneous and homogeneous, the use of nanotechnology and especially nanoparticles, seems a very good suggestion. It is true that it may not be a little economically and financially economical and a little more expensive, but it is worth it and will make the structures more durable and strong. The use of nanosilica particles, nano-iron, and nanomaterials in general, for making concrete, seems necessary due to the increasing progress of science.

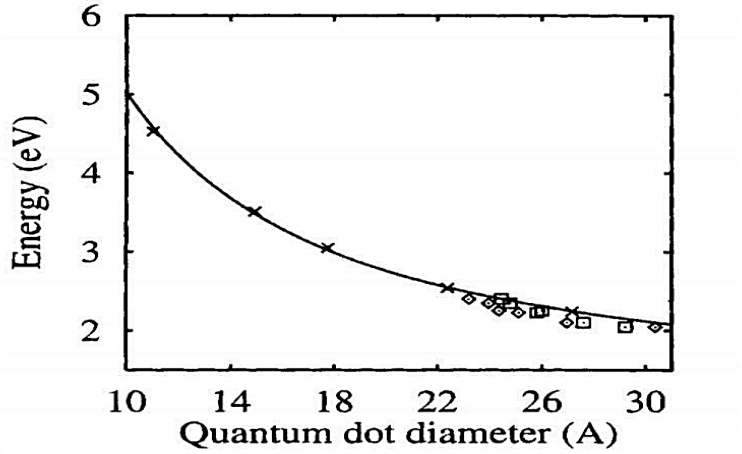

Figure 1- Relationship between energy and quantum dot diameter

Notice that as the energy of the particles decreases, the diameter of the quantum dot increases. Therefore, to reduce energy, it is better to increase the diameter of the quantum dot. So in the construction of technical and engineering instruments, we must look for ideas to achieve this important. In short, whatever we think, we realize the importance of nanotechnology and nanotechnology in mechanical and civil engineering and so on.

3- Investigating the relationship between nanotechnology and architecture and engineering

The use of sophisticated and modern technologies of nano-level and nano-layer and even nanomaterials, for the construction of bridges, tunnels, passages, buildings and structures of land and water, piers, towers and skyscrapers, necessary and essential It seams . If we bring critical and thoughtful thinking into human life and are able to grasp pure ideas, we will certainly win and attain eternal salvation. One-dimensional action and acting as an island does not seem logical at all, but with the integration of constructive and logical opinions and ideas and thoughts, progress in construction can be achieved. If engineers and architects and mechanical and civil engineers join hands and interact constructively, we will undoubtedly achieve the desired results.

Urban and rural construction and development, if done fundamentally and with nanotechnologies, can withstand more earthquakes. For example, in the use of nano-pipes in buildings and the use of nano-wires for residential and commercial buildings and sensitive buildings is recommended. The use of nanotechnology creates conductive, non-conductive and even semiconductor devices. Therefore, it is better to use nano properly, to create things beyond the human mind and unimaginable.

Assessing the potential hazards of pressure on structures is an important principle of construction, using nanotechnology can prevent hazards

$$p = F / A \qquad \text{Pressure formula} \qquad (1)$$

According to the above formula, the pressure is equal to the amount of force applied to the cross section of the body. Well, we all know that if the cross section of objects is with nanoparticle technology, then the strength and resistance of the body will increase and it will be more stable.

Finally, we must start from a time and reconsider in order to correct and improve the thoughts of human beings and the old ideas and methods of construction.

Civil and mechanical engineers and architects, with synergy and convergence and peaceful coexistence, can take steps towards scientific progress and development. Another effective suggestion is that it is better to use other engineering sciences such as computer science and programming to achieve civil and mechanical goals. Using various scientific software, for example, can simplify complex and lengthy engineering calculations and assist engineers. It

can even be used to test the possible scenarios of an accident. Humans are forced to use advanced and industrial computers, because the complex calculations of some engineering projects are time consuming and cumbersome, and easily with computer programming and the use of artificial intelligence and computers, human errors due to fatigue can be avoided. And answered the problem in less time. In addition, with advanced supercomputers, various predictions can be made, data analysis and analysis and accurate and principled study can be easily done through a computer. So how good it is to learn computer applications.
The use of the Internet of Things in modern construction and engineering can be very beneficial.
Yes, it is sometimes difficult to improve, and different structures and guidelines need to be reviewed, analyzed and changed. Well, sometimes there are pressures for not amending the rules and regulations due to people getting used to the old structures, so we have to move forward and correct the defects with the right logic and arguments.

Table 1- The height of the tallest towers in the world

RANK	NAME	CITY	HEIGHT ⓘ
1	Burj Khalifa	Dubai	828 m 2,717 ft
2	Shanghai Tower	Shanghai	632 m 2,073 ft
3	Makkah Royal Clock Tower	Mecca	601 m 1,972 ft
4	Ping An Finance Center	Shenzhen	599.1 m 1,965 ft
5	Lotte World Tower	Seoul	554.5 m 1,819 ft
6	One World Trade Center	New York City	541.3 m 1,776 ft
7	Guangzhou CTF Finance Centre	Guangzhou	530 m 1,739 ft
7	Tianjin CTF Finance Centre	Tianjin	530 m 1,739 ft
9	CITIC Tower	Beijing	527.7 m 1,731 ft
10	TAIPEI 101	Taipei	508 m 1,667 ft
11	Shanghai World Financial Center	Shanghai	492 m 1,614 ft

- ✓ **Burj Khalifa is the tallest building in the world** .

With a height of about 828 meters, this tower is the tallest skyscraper on the planet so far.

Undoubtedly, elite engineers have been used in the construction of such giant and tall towers and a lot of money has been spent on it. Well, when mechanical and civil engineers and architects and urban planners and artists and other elite engineers join hands, great projects will be created, today's world is a world of constructive interaction and teamwork, cooperation and collaboration is often useful and effective. . Temporary, island and unprincipled activities do not work in today's world, one should use the experiences of large constructions such as Burj Khalifa in Dubai and turn the planet into a prosperous place.

Figure 2- picture of Burj Khalifa in Dubai

In the end, I want to make a prediction of the bright future of engineering and create hope and motivation for other dear scientists. Transformation in the field of engineering sciences requires creative, artistic and logical thinking. If our movements are with logic, wisdom and rationalism, and if we interact with other elite scientists, engineers, and researchers from other cities, provinces, and even other countries and continents, we will indeed achieve new achievements by consolidating ideas. He knew and we will work for the upliftment and prosperity of the countries. We know that the development of the world depends on the development of the individual continents of the world, and the development of the individual continents of the world depends on the development of the individual countries of that continent, and the development of individual countries depends on the development of the states (or provinces). (H) is that country and also the development of each state (or province) depends on the development of each city and the development of each city also depends on the development of each village (or village). So to achieve the ultimate goal, which is the development of the whole planet, we must first start from the development of a small village (or village) and move forward step by step.

We knew that " rome wasn't built in a day " .

If the villages are settled, this will cause reverse migration and people will migrate to the villages from cities and metropolises, and this will reduce air pollution as well as noise pollution in metropolises, as well as staggering urban traffic. Finds. So everything starts from

the villages. As the saying goes, change must begin for change to occur. So it's better to start now.

The first steps are usually difficult and tedious. But if we start, there is a possibility of success and progress and reform and development and engineering of the society, but if we do not start, we have guaranteed failure from the beginning. We must try to follow the word of truth and logic and avoid unwarranted and unprincipled opposition. Unity is an important principle in civil and engineering works and projects. Unity and empathy are important not only in civil works but in all of life. Imagine a mechanical engineer who wants to build a crane, so if he works alone, he may be able to deliver a good product to his target community, but he cannot build the ideal device for his target community. In order to be able to build an ideal and efficient crane, it is necessary to first reverse engineer, review and analyze the previous versions and troubleshoot them and make their product distinct and different from them, and its product has At least a few more advantages than other similar examples. And also be able to gain trust and also be able to introduce its product using TV and radio and social networks and urban banners and consult a marketer and computer engineer to be better able to succeed, also better with an engineer Civil should talk and interact, so that his device can meet the needs of the civil engineer and his expectations. So we see that for a product like a crane, it is better to interact constructively with different groups in society.

Engineering societies need each other, just as people in society and the general public need engineers, engineers need each other.

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