

EDITORIAL

The Development and Creation of Intelligent Systems in the Next One Hundred Years

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Today the intelligent systems are technological implemented as advanced machines^[1] which have high perception, interaction and response to the real world being in much cases an extension of the reality, anticipating events, intertwining remote events, saving life and predicting preferences of human been^[2,3] through of robust programming and electronic systems with high performance, optimization and design in operations where are required machines with an strong and complete interacting with the environment^[2]; environment which also goes increasing until; in the very near future, to the ends of the Universe.

Likewise, much of these systemic problems and automatized process require more research in the artificial intelligence and advanced computing, even in the quantum context where all logical and praxio-logical process must be realized under M-sequences as alternative in the pseudorandomnian context, although in the quantum context are extended in the domain of the energy states.

The information security problems require increasingly the development of machine learning in security strategies^[4], where the election of information in the cloud comput-

ing computations or the remote collaborative work can establish intelligent technologies-teams that can struggle to develop adequate security strategies with the multitude of devices on ever-expanding corporate networks, for example in a technological firms^[5] or international enterprises and industry. Protecting investments is critical for business survival and growth, yet IoT security presents unique challenges^[8].

From a point of view on the technical devices and technical details in programming, the key factors that have contributed to the growth of the intelligent systems are the development of an exponential growth of processor speed and memory capacity, increasing its memory to operative sequences more complex, as well as algorithmic advances. Likewise the intelligent systems include in the expertise research the development factory automation, assistive robotics, medical care where in this case the artificial intelligence and biomedical sciences require a joint work to preservation of life^[6,7]. Also in education and academic remote work, the intelligent systems are of great importance, for example in the last pandemic situation has

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been evident this work form as an good work form and could be implemented now as an alternative more useful to collaborative work in academia, scientific research and even in ambit of medical remote treatments^[4,7] where now exist some examples in Germany, United Kingdom, for example, where is performed surgery. Newly in the security systems will be relevant the development of intelligent systems in military applications, biometrics and remote surveillance and saving^[6,8]. The speed of reaction to a sinister or dangerous events must be done in immediately and of form optimal. Here for example, integrated systems with platforms that can to reduce the average time taken by cyber security professionals to respond to cyber incidents.

The electrical and electronic world will require deep research and innovative development accord with the obtained intelligent systems in advanced sensors and transducers^[9,10], these last with unlimited energy capacity to permanent functioning in all necessary processes in anyway and anywhere. New branches and extensions of electronics and electrical sciences, as the photonics and spintronics will be necessities in the next years with the accelerated development of intelligent systems in a new dynamics where the communications will require more effectiveness and efficiency, even in quantum communication^[9], where this last is starting with new referents in information theory, (QED) quantum electrodynamics and new materials with the nanotechnology implementations^[11,12]. In the searching of the more speed computers superconducting materials will be fundamentals and also semi-conductor materials in processes of the energy interchange on the base of the spintronic devices, which will require spin interactions to move singular particles as new information objects in supercomputers to special and advanced effects in the Universe^[13].

Finally, the engineering in all fronts will be vital in the survival of the human race, having more preponderance the digital systems, electronics and electrical sciences, because we must care our natural environment with clean energies, and save the Earth.

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