Special Issue

Robotics, IoT and AI Technologies in Bioengineering

Message from the Guest Editors

Bioengineering is a discipline that blends traditional engineering fields with health care issues. The main objective is the creation of digital tools, devices and software platforms; as well as the implementation of advanced tools, from IoT, AI and robotics to Cloud computing, smart wearables and intelligent analytics. For example, AI has proven to be efficient in the medical field, from the improvement of image-based diagnostics, analysis of biological signals, recognition of human activities to the design of neuro-integrated prosthetic systems and compatible organ tissues for transplantation. Robotics is also key branch in the field of surgery, enabling for minimally invasive surgeries and for the automatic monitoring of surgical instruments to assist the operator. They are used as wearable devices for injury prevention. The biomedical applications of IoT are now present in remote patient management, the monitoring of Parkinson's and Alzheimer's patients, vital data monitoring, depression monitoring. The aim of this research topic is to improve the opportunities that different technologies can offer in improving the quality and duration of life.

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As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

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