Medical robotics.

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Editorial

Medical robotics plays a significant role in not only improving the life style of the human civilization but also to cure severe biological problems associated with various diseases. Medical robotics plays a significant role to perfect the genetic disorders in the various organs/parts of the body. It is widely used for the rehabilitation of the disabled parts of the body. The usage of medical robotics and medical automation has opened new horizons for medical diagnosis and treatments. In continuation we can also say that there are numerous fields in which excellent research can be carried out to support human welfare in terms of availability of advanced medical treatments, automatic diagnosis methods and tools with high accuracy and precision which will make the impossible, possible in the present scenario of the human surgery. It opens several new paths in medical domain like usage of medical robotics in replacement of artificial parts. Robotics is widely used in neuro-rehabilitation, psychometric treatments, child care, for learning and curing disabilities, to implant artificial joints, limbs and other robotics intelligence based movable and mechanical parts like fingers, legs, hands, arms etc. with "electron-neuron-interfaces". One of the most advanced feature in Medical Robotics is "Bionic". The term Bionic was coined by Jack E. Steele in 1958. We can define the term Bionic as the electronic mimicry of the biological methods, function, procedures and systems of the living beings. For Bionic system engineering, an excellent tradeoff of biological and electronics systems is required which can be obtained by linking artificial neural schemas with biological neural schemas. One of the brilliant examples of advancement in medical robotics is "Bionic Brain" which will play a major role in the medical betterment of the humans. The "Neuron- Command Operating Devices" are yet another aspect of medical robotics that is yet to be explored fully. By Using NCOD several artificial parts can be synchronized with Biological parts to coordinative for proper body functioning, gestures, postures, movements and interpretation. By Using this facility not only body parts can be replaced but also additional parts can be implanted to give ultra-intelligence facilities like Bionic eyes, ear, and additional artificial brain modules to human beings. Medical robotics also has expansion in life support equipment, automatic control and mobility like wheelchairs, ECG and so on. Must say that medical robotics is a very interesting and emerging research domain and the special issue entitled, "Advancement in Medical Robotics and Surgery" is taking sincere effort to provide platform to researchers to share and update their ideas, knowledge with brainstorming. As discussed already Bionic is the electronic mimicry of the biological functions, methods, systems and procedures by neuron interfacing but Cyborg is another possibility in the domain of medical robotics. A Cyborg, "Cybernetic organism" is a being with both organic and Biomechatronic body parts using which human race can increase their power in all means and branch of study is "Cyborgology". Hence, Bionic and Cyborg should not be confused with one another.

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