Embedded Self-organizing Systems

Embedded Systems and Its Application in Medical and Biomedical Field

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Call for submission. This editorial introduces the issue of *Embedded Self-organizing Systems (ESS)* journal. Main focus of this issue is application of image processing algorithms, medical image processing scenarios and usage of embedded systems in different areas.

For this journal, we also choose a modern kind of electronic publication, which provides a flexible way to discuss latest research results. The advantages of such an e-journal are multifarious. In comparison to traditional paper journals we replace the classic review and creation process with a new Sliding Issue model. Each issue starts with an initial editorial and an official call for papers. The submitted articles will be reviewed and, if accepted, published as soon as the final version is received by the committee. Based on this process, each sliding issue can be filled successive until the maximum number of article is reached. During this period, all accepted papers can already be read by other researchers while other papers are still in the reviewing process. Accordingly, the time to publish shrinks to a minimum. In Addition, multiple issues with different focus can co-exist at the same time, which provides completely new possibilities to react on latest research topics. The journal allows also the integration of discussions and other reactions on published articles in the same journal issue.

Finally, we are looking for fresh ideas and novel scientific works. We also intend to create a promising platform for creative and constructive discussions.

Embedded systems and its application in medical and biomedical field

Embedded systems are power full processors with high speed, but not recognizable to people as computer. Nevertheless, they are embedded to many objects that surround us and help our daily life. Some years before application areas of embedded systems strongly focused to industrial area. One visible example is the all type of cars. In our days, it is difficult to find car, which not included embedded system inside.

However, time is changed. Nowadays we can find embedded systems everywhere not only in technical area. One of the major application field of embedded system is medical and biomedial fields. For example: Glucose Test set, Xray, Ultrasound, Scanning equipment - MRI, CT Scan, ECG or EKG - cardiac and monitoring system patient monitoring (remote cases as well - enabled via IoT and sensors) and etc. Further important directions to use embedded systems in medical field are, clinical care, remote partient monitoring and early intervention with the help pf self-monitoring.

New type of nano materials, fast and small sensors, image processing algorithms with high speed performance, opportunity to use big and cheap memory all together enables to researcher to apply embedded systems in medical fields. Wearable devices with many embedded systems helps to improve monitoring and serving of patients in medicine. Small sized robots uses inside of human body to support treatments against different type of cancers.

To apply embedded system in medical field in medical equipment's researchers are facing to many problems. For example: human reactions may be to slower with

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comparing speed of embedded system in nano materials or in medical robots.

How will be look embedded systems in medical field in future? We can have great fantasy about this. May be every newborn baby will have some kind of little electronic stamp in scan of body and in this stamp we can include all necessary sensors to observe biometric parameters of baby. These data can see and monitor not only medical doctors it can be accessible to their parents, too. Of course here we will be use all opportunity of IoT and smartphones apps! For short in a few decades from now we can expect that nanorobots will be help to do many difficult surgical procedures by easy way. They are will be best assistant to medical doctors, in future.

Therefore, current issue of our e-journal invites all type of papers, articles relating to application of embedded systems in medical and biomedical fields.