Special Issue

Wireless Microdevices and Systems for Biomedical Applications

Message from the Guest Editor

Wireless microdevices are getting smaller and smaller, to the point where such devices may flow in our blood stream, navigate inside blood vessels, digestive system, or inside our eyes. They may even transport cells or treatment to a specific target. Despite massive advances in integration, the most recent microbots lack a full integration of the desired feature sets. Locomotion at micro/nanoscale is a current challenge; remote manipulation is another open challenge; powering and communication with small devices is also an issue, since power sources and wireless links degrade significantly with miniaturization.
The fabrication of 3D devices integrating RF chips, flexible material integration with silicon, and self-assembling technologies may allow unprecedented level of integration and miniaturization of biomedical devices. We need new assembling technologies, low-power devices, integration technologies, and efficient wireless power and communication solutions. With this Special Issue, we intend to highlight enabling technologies that will contribute to the development of smaller and smarter wireless microdevices that will make the difference in biomedical applications.

Guest Editor

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