The concept of the Internet of Things (IoT) has opened a new paradigm in the interaction between objects and human beings. In the IoT, sensors and actuators are embedded in physical objects and interconnected through wired and wireless networks, creating new opportunities from hardware, software, and applications. In this regard, sensors play a fundamental role to extract valuable information of the object and its environment. The enormous significance of sensors for developing valuable applications in the IoT makes them a hot spot in research activities, where miniaturization, performance, and power consumption are the most important lines of development. It is expected that more than 25 billion connected “Things” will be in use by 2020. Each of this IoT entities will contain at least one sensor; therefore, it is desirable to integrate cost-effective sensors. This special issue is aimed at serving as a major platform to facilitate the discussion and exchange of research ideas and technology development, encourage multidimensional knowledge sharing, and enhance research activities in investigating strategies to optimize techniques for sensor technology. In total, seven papers are included in this special issue and are summarized as follows. Three papers describe different technologies.