

2. Smart Electronics

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Summary

Since the invention of transistor in 1950s, electronics have practically influenced all aspects of our lives. Fueled by the miniaturization of electronic devices with more powerful features, consumer electronics become highly portable and have the ability to “think” and make decisions without being told, hence the emergence of “smart systems”. For examples, smart automobiles, homes, televisions and even textiles are common sight. To enable the “smartness” in electronic system, each system requires sensors that receive relevant information, processes it with a powerful microprocessor and finally make decision through an actuator. The projects under the theme of “Smart Electronics” focus on design of electronic circuits and systems. You will have a taste of learning all aspects of Electronics Engineering, including analog, mixed signal, digital and microcontroller designs; as well as algorithm development and software programming. You can easily find a role to play to suit your interest in the projects. The three flagship projects are “ECG monitoring system”, “Wireless audio system” and “Remote controlled intelligent racing car”.