Energy Efficient Circuits for IoT Devices

VLSI circuit design, especially

◆ Low-voltage (0.5V)/low-power RF circuits for wireless sensor nodes
◆ Low-voltage (0.5V) power management circuits
◆ Power management circuits for energy harvesting
◆ Sub-0.5V low-voltage/low-power logic circuits
◆ Magnetically resonant wireless power transmission
◆ Large area and flexible electronics with organic transistors

Low-voltage (sub-0.5V) and extremely low-power LSI's

Extremely low-power LSI for wireless sensor nodes

Energy harvesting from thermoelectric generator (left) and Wireless power transmission (right)