Abstract

This paper describes the approach towards signal processing characteristics of temperature fluctuations from a fast thermocouple located above fuel subassemblies of fast reactor. Simulated temperature profile denoting various power levels was fed to the FPGA and the RMS value at each power level was calculated in real time. The technique mentioned in the paper
helps in the analysis of reactor power and also fluctuation in it due to subassembly blockage. Altera Cyclone III FPGA was used as target device for Terasic DE0 board.

**Reference**


**Index Terms**

- Computer Science
- Signal Processing

**Key words**

- Temperature fluctuations
- Root mean square
- Subassembly
- Fast reactor