

South Eastern University Arts Research Session 2014

## **Embedded System: Enhancement of performance with new challenges and Solutions**

**Mansoor, CMM\***  
**Roshan G Ragel\*\***  
**Swarnalatha Radhakrishnan\*\*\***

Due to the rapid development of electronic technology and requirements of electronic markets, electronic products tend to become smaller, faster, and more popular. Embedded systems have become increasingly widespread in many areas including industrial areas and our daily life. Their extensive use and integration in everyday products marks a significant evolution in information science and technology. A main trend is the proliferation of embedded systems that should work in seamless interaction while respecting real-world constraints. Technology advances and a growing field of applications have been a constant driving factor for embedded systems over the past years. However, the increasing complexity of embedded systems and the emerging trend to interconnections between them lead to new challenges. Intelligent solutions are necessary to solve these challenges and to provide reliable and secure systems to the customer under a strict time and financial budget. In this paper details the overview of the technology trends, reasons of significant change in application implementation philosophy, outlines new challenges, issues and finally presents a methodology to deal with solutions.

**Keywords:** Embedded System, Performance, FPGAs, Processor, ASIP.

---

To whom correspondence should be addressed: [cmm.mansoor@gmail.com](mailto:cmm.mansoor@gmail.com)

\*Lecturer, IT Unit, Faculty of Arts and Culture, South Eastern University of Sri Lanka

\*\* Department of Computer Engineering, Faculty of Engineering, University of Peradeniya

\*\*\* Department of Computer Engineering, Faculty of Engineering, University of Peradeniya