The Institute for Technical Informatics (ITI), TU Graz offers two PhD positions in the framework of the FIT-IT project META[SEC]: Mobile Energy-efficient Trustworthy Authentication Systems with Elliptic Curve based Security. The consortium consists of Infineon Technologies Austria AG, RF-iT Solutions GmbH and ITI-TU Graz.

Aim of the project is to enable power and security evaluation on a system level within a trusted system development process, yielding the following advantages: 1) Comprehensive methodologies for power and fault aware hardware/software partitioning at design time for mobile security reader/card systems; 2) Investigation, optimization and implementation of ECC-based security applications hardware/software partitioning (e.g., ePassport, eID), and 3) Development of runtime dynamic power management policies to prolong battery lifetime of the reader/card system (e.g., dynamic adaption of contactless communication channel).

**Start date:** April 2011  
**Duration:** 30 months

**PhD student duties**
- Specification/Design of the higher-order Fault Attacks Emulation platform  
- Implementation of the fault attacks emulation platform and evaluation/optimization (Dynamic power management for secure reader/card systems)  
- Perform dissemination/exploitation of project results on international conferences and in journals  
- Collaboration with project partners

**PhD student profile**
- Master's degree in Electrical Engineering, Computer Science or Telematik  
- Experience in VLSI design (VHDL)  
- Experience in programming microcontrollers (C assembler)  
- Experience in power-aware computing and/or FPGAs  
- Knowledge of German and English

**Apply with**
- A brief reasoning about your interest in the project  
- A detailed CV  
- The names of 2 references for applicants outside TU Graz

**Apply to**
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