

MRAM-based non-volatile integrated circuit functional test and characterization

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PhD may follow: No

Summary :

Spintec Laboratory is a mixed research laboratory from CEA/CNRS/UJF/INP. Within the framework of research projects, several integrated circuits have been fabricated, using Magnetic Tunnel Junctions, which are the basis elements of non-volatile MRAM memories. The objective of this training is to test these circuits, that can be logical circuits or memories, in terms of functionality and also to extract all possible electrical parameters, such as the power consumption, the speed, the range of functionality for instance. These tests will be performed on an industrial tester: LTX Credence. Programming will be done using predefined functions in a C language. Several examples of tests already done will be provided to help the student.

Requested skills :

Digital integrated circuit design; C language; Electronic test