



Embedded Electrical and Computer Engineering

MASTER ORAL DEFENSE

**TITLE: Tutorial for Test and Characterization using Cascade 11000B
and Agilent B1500A**

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ABSTRACT

As the size of chips i.e. Device Under Test (DUT) is reducing drastically it becomes important to test with Automated Test Equipment (ATE) which are fast, accurate and reliable. Testing the characteristics is important part in any chip manufacturing. Agilent B1500A and Cascade 11000B are the main equipment in the Probe Station Lab. Important benefits of the equipment are the following: (i) Ability to offer large voltage swing range (ii) Ability for temperature control (iii) Experiments performed in chamber free from moisture (iv) Free from external vibrations (v) Optical zooming capability. The goal of this project is to set up a lab manual to introduce the functionality of equipment in the lab, and perform certain experiments, which are critical in measuring the characteristics of the DUT. These experiments include I-V characterization and measuring the reliability characteristics of the DUT.