1. Equipment: **SUMMIT 11000 Series Manual Probe Station**
2. Indentor: **Dr Shiv Govind Singh/ Dr Ashudeb Dutta**
3. Past users (departments):

**Department of Electrical Engineering**

**Department of Chemical**

**Department of Physics**

**Department of Chemistry**

**Department of Material Science**

1. Preference of slot types (mention minimum time required for one time use):
2. Hours: **2 hours**
3. Samples: **Variable**

(2 hours slot with user fee of 500 Rs.)

1. Target groups: **PhD Students**
2. Number of minimum students need to be trained: **one student from each user department**
3. How would you like to train the students/staffs?

(Please mention the approximate training duration too)

**Dedicated training sessions can be conducted by already trained users for training the new perspective users. The sessions can be conducted in slots of 2 hours per session, for a total duration of 8-10 hours.**

1. Samples/materials allowed in the equipment:

* **Solid samples (Si/Glass/Plastic etc.) with proper electrical contact pads (For proper probing, square bond pads with minimum dimension 100 µm is advised)**
* **Samples with contact pads on one surface are preferred (For 2-probe IV/CV measurements)**
* **Allowed sample sizes: 2”/4” wafers, and small pieces of wafer depending on user requirement**

1. Restricted materials/samples in the equipment:

**Samples with improper electrical contacts/ samples that require probing on both top and bottom surfaces/ Samples involving any toxic or harmful materials not meeting proper safety precautions**

1. Tentative cost per slot/sample:

(Please give a reasonable estimate comparing the instrument costs with other facilities at other IITs/Research centers)

Rules and guidelines:

* The probe system is equipped with DC positioners with pointed tungsten probes (Probe tip diameter: 12 µm). The device is currently not equipped with probers having crocodile clips. It is advised that the users should fabricate their devices with proper contact pads for probing.
* Only trained researchers are allowed to use the probe station.
* It is to be noted that the probe station is not equipped with in-situ heating/cooling facilities to be utilized during the measurement. The system is currently being upgraded for facilitating 4-probe measurement.

For additional information regarding the system, please refer to the following documents:

<https://www.cascademicrotech.com/files/Summit_SS.pdf>

<https://www.cascademicrotech.com/files/Summit_DD.pdf>

<https://www.cascademicrotech.com/files/153-119-Summit11000-12000FPG.pdf>

<https://www.cascademicrotech.com/files/Summit_SS.pdf>