

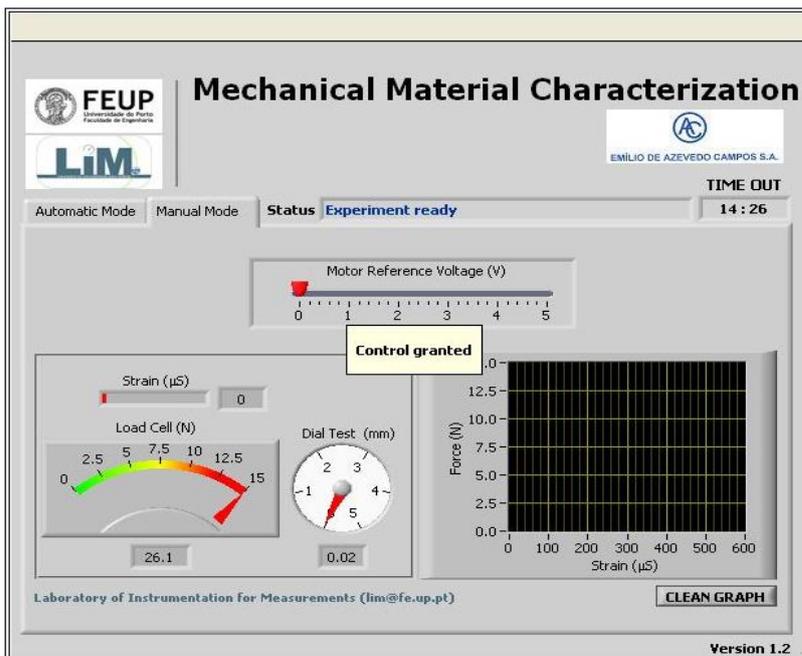
Mechanical Material Characterization

How to use

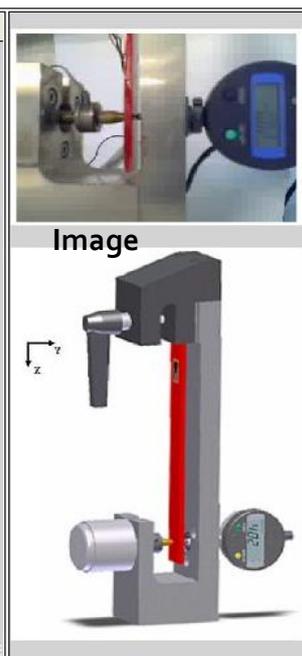
This application requires the Internet Explorer 6.0 browser, or the use of the "compatibility mode" for further versions, to access the experiment and LabVIEW 7.1 or LabVIEW 7.1 Run-Time. To download LabVIEW 7.1 Run-Time click on the following link: <https://remotelab.fe.up.pt/LVRunTimeEng.exe> (only for Windows).

After making your reservation for this experiment through the booking application, your browser should present the **User Interface**, an **Image** of the system and the **Real-time video**.

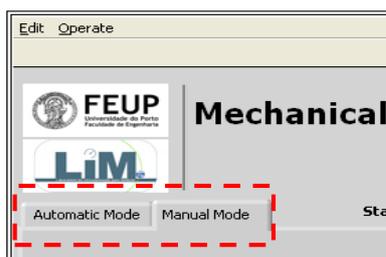
User Interface



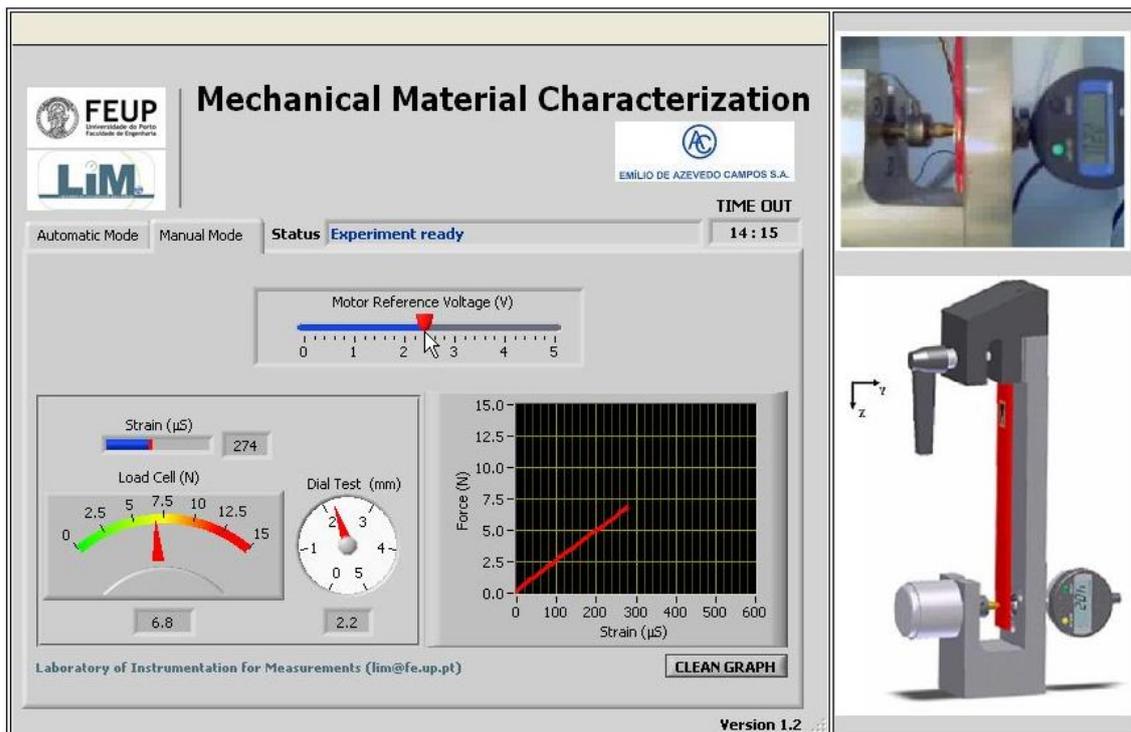
Real-time video



The **Control granted** message confirms that you have control of the experiment. You may now start by selecting either the **Manual Mode** or the **Automatic Mode**.



If you select **Manual Mode**, you will get the control of the linear motor of voice coil type by moving the **Motor Reference Voltage (V)** horizontal slider. This will vary the load applied to the cantilever metallic beam. The user interface provides the numerical values of the **Load (N)**, **Strain (μS)** and prescribed displacement (in mm), the **Force (N)** vs. **Strain (μS)** curve, a representation of the real system, as well as a real-time video on the upper right corner.



If you select **Automatic Mode**, a set of measurements is recorded along a pre-defined load range: three load levels (4, 9 and 14 N) are sequentially applied to the beam. For each load level the automatic system records the load, strain and deformation values. Graphical representations of force vs. strain and beam deflection are available at the end of the test. In the **Automatic Mode**, before pressing the **Start** button, you may introduce your **email** address in order to receive the results for later processing.

On the **Status** window, you will be notified when the automatic experiment procedure is completed.

Status Experiment finished

If you have introduced your email address, the **Status** window will also display the following message:

Status Email has been sent successfully