





# Metrology and Industrial Quality Laboratory

**Field of Study** 

### Metrology and Industrial Quality Laboratory



- Teaching;
- Research and extension;
- Assistance to university competition teams;
- Teachers assistance;
- Extracurricular courses.



#### **Teaching**

- Tutoring;
- Practical Activities;
- Maintenance;
- Classes assistance.





#### **Available Structure**

- Measuring equipment;
- Area for student service;
- Space for practical activities;
- Place for conducting research.







**Available Structure** 

- Measuring equipments;
- A laboratory to student service;
- Space for practical activities;
- A place to conduct reasearches.









#### Research and Extension

- Interlaboratory comparison;
- Laboratory management;
- Calibration guidelines;
- Roughness parameters study;
- Repetability study (standard deviation of topographic instruments);
- Measurement Systems Analysis according to MSA 4° Ed.,
   VDA 5 (2010) and ISO 22514-7 (2011).

Roughness measurement - 2014 Evaluated parameters: Ra, Rz





Roughness measurement Participants



















Instituto de Estudos Avançados da Universidade de São Paulo **QVILLARES METALS** 





Roughness measurement Participants















Tape Measure Calibration

Evaluation of error indication in different lengths







Tape Measure Calibration
Participants















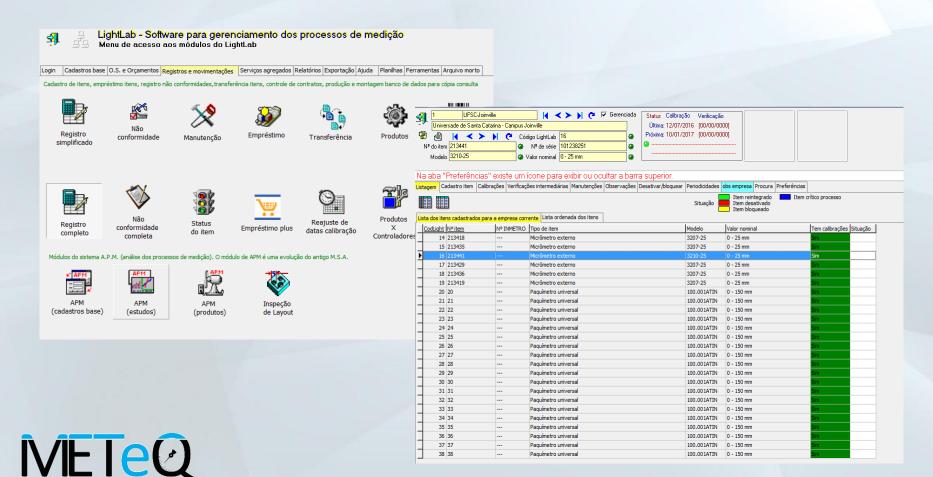








### Software Management of Measuring Equipments



Metrologia e Qualidade Industria

## Assistance to University Competition Teams





#### Extracurricular courses

- Interpretation and Analysis of Calibration Certificates;
- Measurement Systems Analysis;
- Measurement Uncertainty.



#### Teachers assistance



 Support to students, assisting in the handling of measurement instruments.



#### Contact

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