

## **Report on a Technical Training Course (TCC) Supported by IUVSTA and Offered by the Brazilian Vacuum Society**

The IUVSTA Technical Training Course (TCC) entitled “**Vacuum, Plasma, Surfaces, and Thin Films**” was offered in conjunction with the XXXIX Brazilian Congress of Vacuum Applications in Industry and Science (CBrAVIC), and occurred in Joinville, Santa Catarina, Brazil, in October 07<sup>th</sup>-11<sup>th</sup>, 2018.

The TCC comprised of four classes with a total of 82 students:

1. Introduction to Vacuum Science and Technology, taught by Dr. Marcelo Juni Ferreira (European Spallation Source, Lund Sweden), Prof. Evaldo J. Corat (Brazilian Institute of Space Research, Sao Jose dos Campos, SP, Brazil), and Prof. Joao R. Moro (Federal Institute of Education, Science, and Technology of Sao Paulo, Bragança Paulista, SP, Brazil), with 16 students.
2. Plasma Surface Treatments, taught by Prof. Rodrigo S. Pessoa (Technological Institute of Aeronautics, Sao Jose dos Campos, SP, Brazil), with 25 students.
3. Thin Films: Deposition Methods and Surface Characterization, taught by Prof. Nazir Monteiro dos Santos (Brazilian Institute of Space Research, Sao Jose dos Campos, SP, Brazil) and Prof. Pedro A. P. Nascente (Federal University of Sao Carlos, Sao Carlos, SP, Brazil), with 9 students.
4. Surface Analysis by XPS, taught by Prof. Peter Hammer (State University of Sao Paulo, Araraquara, SP, Brazil), with 32 students.





Some of the students attended more than one class. The theoretical classes occurred at the Federal University of Santa Catarina, while the practical classes in vacuum instrumentation and materials characterization occurred at the State University of Santa Catarina, both located in Joinville.

The IUVSTA grant of 2,000 Euros covered a substantial part of the expenses, and the students' fees were waived for approximately half of them (40 out of 82 students).

### **Balance Sheet**

Income: € 2,000.00 (IUVSTA) + € 1,500.00 (Brazilian Vacuum Society and Brazilian Research Agencies)

Accommodation (speakers): € 1,800.00

Travel expenses (speakers): € 600.00

Meals (per diem expenses): € 600.00

Coffee break for all participants: € 200.00

Material: € 200.00

Total expenditure: € 3,500.00

A handwritten signature in blue ink, which appears to read 'Pedro Nascente'.

Pedro Nascente, SBV's councillor to IUVSTA.