# Application for IUVSTA sponsorship of a Short Course organized during the 12<sup>th</sup> International LEEM PEEM Conference, 'LEEM PEEM 12'

The conference will be held in Córdoba, Spain, September 28<sup>th</sup> to October 2<sup>nd</sup>, 2020.,

The International LEEM PEEM Conference on is celebrated every two years, generally rotating from Europe to America to Asia, and will be held for the first time in Spain in 2020. It is the main forum for scientists and instrument developers from around the world to share the latest results and instrumental advances in Low Energy Electron Microscopy (LEEM) and related techniques such as PhotoEmission Electron Microscopy (PEEM). Scientific topics covered range from nanomagnetism to surface dynamics, catalysis, two-dimensional materials, multiferroics or organic/inorganic interfaces. In addition, a significant part of the conference and adjacent course is dedicated to advances in the design and functionalities of microscopes and related instrumentation.

We plan to start the conference with a half day Short Course in order to present an overview of the possibilities of LEEM and PEEM, including their combination with synchrotron X-rays for the study of complex surfaces and nanostructures, for the benefit of PhD students or young scientists who are new to the field. The course will take place on September 28<sup>th</sup> from 13:00 to 17:00 plus a student mixer in the evening (19:00-21:00) in order to foster discussion among participants.

Two expert experimental scientists will teach details of operation of the techniques, state of the art instrumentation, and hottest research trends. We plan to organize two tutorials devoted to:

- LEEM, Spin Polarized LEEM, vectorial magnetometry of magnetic thin films and nanostructures. Lecturer candidate: Gong Chen, (USA)
- X-Ray PEEM and SpectroMicroscopy, electronic structure of two-dimensional systems. Theory and Modeling Lecturer candidate: Onur T. Mentes, Elettra-Sincrotrone Trieste (Italy)

Ample discussion time and a coffee break will be provided to stimulate active interaction between lectures and participants.

All course participants are expected to stay for the full conference, as it will greatly enhance their understanding of the field and possibilities to play an active role in the discussions. A very reduced conference fee is planned for students in order to encourage young attendance.

We would like to apply to IUVSTA for financial support that would allow reducing the costs for participants who attend this course.

# Application Form for the Organisation of a SC

NATIONAL VACUUM SOCIETY: ASEVA (Spain)

COURSE TITLE: Low Energy and PhotoEmission Electron Microscopy

LOCATION: Córdoba, Spain

DATE OF COURSE: September 28th, 2020

INCLUDED IN WHICH CONFERENCE: LEEM PEEM 12

#### **OBJECT OF THE COURSE:**

The object of the course is to give an overview of the possibilities of LEEM and PEEM, including their combination with synchrotron X-rays for the study of complex surfaces and nanostructures.

LANGUAGE: English

## COURSE OUTLINE ATTACHED:

The course will consist on two tutorials, one dedicated to Spin Polarized Low Energy Electron Microscopy and another to X-ray PhotoEmission Electron Microscopy and Spectromicroscopy.

#### EXPECTED EDUCATIONAL AND JOB LEVEL OF PARTICIPANTS:

Participants are expected to be mostly PhD students or postdocs who are new to the field.

#### EXPECTED AVERAGE NUMBER OF PARTICIPANTS PER COURSE:

40 to 50 participants are expected.

## FINANCES:

Cost per course in Euros, CHF, or US\$;

The cost of the course is associated to the LEEM PEEM 12 conference fee, with a reduction in this case down to 150 € for PhD students. We expect to have more than 20 PhD students attending the course, so that IUVSTA contribution would be used to reduce their fees.

#### Sources and total amount of support;

We have so far secured about 4000 Euro for the course from different sources such as research institutions and associations as well as private companies (ALBA Synchrotron, Elmitec, Specs, Focus, Omicron Scienta, Universidad de Córdoba, IMDEA Nanociencia, SME, AUSE)

## IUVSTA contribution requested and how will it be used.

We request 1000 Euro from IUVSTA in order to cover the registration fees of 20 undergraduate students, being the travel costs of the two lecturers covered by the hosting conference. (20 students x  $50\epsilon$ / student =  $1000 \epsilon$  IUVSTA contribution).

#### PRELIMINARY BUDGET:

Expense	Cost (€)	Count	TOTAL (€)
28/09/2020			
Coffee, Snacks before tutorial	12	50	600
Room (Tutorials)	200	1	200
Students mixer	20	50	1000
Lecturer travel grants	800	2	1600
Lecturer accommodation (2 nights each)	150	4	600
Discount for 20 undergraduate students	50	20	1000
			5000
Income	Cost (€)	Count	TOTAL (€)
28/09/2020			
LEEM PEEM Conf contribution	4000	1	4000
IUVSTA contribution	1000	1	1000
			5000
NET			0

#### **REPORT:**

The Society (the recipient of the grant) is required (within 1 month after the SC completion) to send a Report to the IUVSTA Scientific Secretary, which should include the following information:

- Title, location, and date of the SC
- Intent of the course, language of the course
- List of teachers and attendants (with affiliations)
- Names of beneficiaries of the IUVSTA support, with spending specifications

I agree to fulfil all the points of the above

On behalf of the organisers

On behalf of ASEVA

Lucía AballeJosé Angel Martín GagoALBA SynchrotronASEVA President

Date and Signature: 16/01/2020

## RRELIMINARY BUDGET:

Expense	Cost (€)	Count	TOTAL (€)
28/09/2020			
Coffee, Snacks before tutorial	12	50	600
Room (Tutorials)	200	1	200
Students mixer	20	50	1000
Lecturer travel grants	800	2	1600
Lecturer accommodation (2 nights each)	150	4	600
Waiver for 20 undergraduate students	100	20	2000
			6000
Income	Cost (€)	Count	TOTAL (€)
28/09/2020			
LEEM PEEM Conf contribution	4000	1	4000
IUVSTA contribution	2000	1	2000
			6000
NET			0

#### REPORT:

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I agree to fulfil all the points of the above

On behalf of the organisers

ALBA Synchrotron

On behalf of ASEVA

José Angel Martín Gago ASEVA President

Date and Signature: 20/09/2019