

Spanish TEM Digital Microscopy School & TEM Tomography

Workshop

OUTLINE

The TEM Imaging School introduces all levels of TEM users to digital microscopy using Gatan's CCD cameras and software imaging products. The course will explore the parameters necessary to optimise TEM image acquisition, processing, and analysis for biological and materials science applications. The course is suitable for anyone with a serious interest in TEM digital imaging and will be valuable training for users of Gatan cameras.

The TEM Tomography Workshop makes particular use of the local expertise and facilities of Autònoma University, to provide the opportunity for experienced TEM users to learn about automated TEM tomography and to see data acquisition and analysis procedures.

Based in the Autònoma University of Barcelona, the course will make use of the Jeol 2011-FASTEM with Gatan UltraScan 1000 camera (plus tomography), the Jeol 1400 with Gatan Erlangshen 1000W and Gatan MultiScan 600HP camera (plus tomography). The good mix of equipment will allow participants to gain experience with both top and bottom-mounted cameras.

The number of participants is limited to 20 for the Imaging School and to 12 for the Tomography Workshop, to ensure the best quality hands-on work for everyone.

Top cs – TEM Imaging School

- Concepts of Digital Imaging using CCD cameras.
- Optimising image acquisition using UltraScan™, MultiScan™, and Erlangshen™ CCD cameras.
- Manipulation and processing to maximise image content and quality.
- Image presentation, formats and output.
- Image measurement, analysis and morphology.
- Automated Microscope control and auto-tuning.

Topics – Tomography Workshop

- 3-D imaging in TEM, applications
- Hardware and software requirements for TEM tomography
- Set up and operation for Gatan Tomography
- Reconstruction and Visualisation

Format

- Each day's activities will consist of lectures, TEM microscope and offline sessions. These practical periods will be supervised by Gatan specialists and will provide participants with the opportunity for hands-on practice with a choice of cameras, microscopes and digital-imaging techniques.
- Off-line computers are available for students to process and review data collected from the Microscope sessions and pre-recorded data.
- Applications oriented, small group microscope sessions are encouraged with group and instructor discussion to benefit ideas and techniques exchanges.
- Students are strongly encouraged to bring their own well documented TEM specimens for this purpose.

Participants are encouraged to make a short presentation of their work or intended work to promote discussion and exchange of information.

Schedule

TEM Digital Microscopy School: Monday 3rd, afternoon
Tuesday 4th, full day
Wednesday 5th, morning

TEM Tomography Workshop: Wednesday 5th, afternoon
Thursday 6th, full day

Morning: from 9:00h to 13:00h
Afternoon: from 13:00h to 17:00h

Costs and registration

The cost for participation is (camera school) 500 Euros & (tomography workshop) 150 Euros. Lunches and refreshments will be included, plus a "course dinner" but participants will be responsible for their own hotel and travel costs.

For registration from Spain and Portugal, please contact of Izasa SA :
Mrs. Pilar Jordana
T. + 902 20 30 80
e-mail: dac2@izasa.es

For registration from all other countries, please contact Paul Spellward pspellward@gatan.com