

Microscopy Autumn School 2022

November 7-11

Target attendees: PhD students, Postdocs and technicians

Scope: Advanced methods in Microscopy

Aim: Gain knowledge and training on advanced methods in light and electron microscopy

Organizer: Microscopy CORE Lab

Venue: MCL – UNS50 FHML/UM

Monday 7	Tuesday 8	Wednesday 9	Thursday 10	Friday 11
<p>Morning 9-11</p> <p>Introductory Lectures:</p> <p>1. <i>“General introduction”</i> Carmen López-Iglesias</p> <p>2. <i>“Advanced Light Microscopy”</i> Dimitris Kapsokalyvas</p>	<p>Morning 9-11</p> <p>Introductory Lectures:</p> <p><i>“Transmission Electron Microscopy”</i></p> <p>1. <i>“Conventional methods”</i></p> <p>2. <i>“Cryo-preparation methods”</i> Carmen López-Iglesias</p>	<p>Morning 9-11</p> <p>Introductory Lectures:</p> <p><i>“Scanning Electron Microscopy”</i></p> <p>1. <i>“Principle and applications”</i> Daniel de Melo Pereira</p> <p>2. <i>“Volume & correlative SEM”</i> Kèvin Knoop</p>	<p>Morning 9-11</p> <p>Introductory Lectures:</p> <p><i>“cryo-EM”</i></p> <p>1. <i>“Vitrification & Cryo-Electron Tomography”</i> Peter Peters</p> <p>2. <i>“Single Particle Analysis”</i> Raimond Ravelli</p>	<p>Morning 9-11</p> <p>Introductory Lectures:</p> <p><i>“Image processing”</i> Kèvin Knoop</p>
<p>Afternoon Workshops</p> <p>1, 2, 3, 4</p>	<p>Afternoon Workshops</p> <p>1, 2, 3, 4</p>	<p>Afternoon Workshops</p> <p>1, 2, 3, 4</p>	<p>Afternoon Workshops</p> <p>1, 2, 3, 4</p>	<p>Afternoon Workshop 5</p>

Workshop number	Title/Instruments and workflows	Teachers and Tutors
Workshop 1	Light Microscopy: Confocal STED superresolution, Two-Photon, Spinning disk	Helma Kuijpers Anne Gemink
Workshop 2	TEM: Conventional, Cryo-methods (HPF, freeze/substitution, cryo/sectioning), RT-TEM RT-Tomography, immunolabeling	Willine van de Wetering Elly van Donselaar Carmen López-Iglesias
Workshop 3	SEM: Conventional SEM (+EDX), High Resolution-SEM, FIB-SEM, Slice and view	Hans Duimel Daniel Pereira
Workshop 4	Cryo-EM: Vitrification, Cryo-SEM, FIB-SEM (cryo-lamella), cryo-TEM for single particle and cryo-electron tomography	Kèvin Knoops Chris Lewis
Workshop 5	Image processing Image properties, manipulation, quantification & visualization. Microscopy data quality control	Chris Lewis Rodrigo Rosas Kèvin Knoops