

Instruction Lectures (HSRF 400)					
Date	Time	Name	Speaker	Topic	
Monday -- 08/3	9:00 - 9:30	Introduction	Teresa Ruiz	Welcome, Overview of the course	
Monday -- 08/3	9:30 - 11:00	Image processing I	Michael Radermacher	Digitization, Fourier transforms, Convolutions, Correlation, Alignment	
Tuesday -- 08/4	9:00 - 11:00	Image processing II	Michael Radermacher	Correspondence analysis, Neural networks, Classification, Multireference alignment, Introduction to 2D Radon transforms	
Wednesday -- 08/5	9:00 - 10:15	Image processing III	Michael Radermacher	Three-dimensional Reconstruction Techniques	
Wednesday -- 08/5	10:15 - 11:15	Image processing IV	Michael Radermacher	A priori information (POCS, Radon filters)	
Thursday -- 08/6	9:00 - 10:00	Experimental techniques I	Teresa Ruiz	Electron microscope and optimal illumination conditions	
Friday -- 08/7	9:00 - 10:00	Experimental techniques II	Teresa Ruiz	Random Conical data collection. Double layer negative staining, deep staining and cryo-negative staining techniques	
Saturday -- 08/8	9:00 - 9:45	Experimental techniques III	Jean-François Ménétret	Cryo specimen handling (round table)	
Saturday -- 08/9	9:45 - 10:30	Experimental techniques IV	Ingeborg Schmidt-Krey	Studying small membrane proteins by two-dimensional crystallization and electron crystallography	
Sunday -- 08/9	11:15 - 12:00	Experimental techniques V	Montserrat Bárcena	Tomography	
Sunday -- 08/9	13:00 - 13:45	Demo I	Stefan Birmanns	Fitting of X-ray models into electron microscopy data	
Sunday -- 08/8	13:45 - 14:30	Demo II	Tanvir Shaikh	Current Version of SPIDER and SPIRE	
Research Lectures					
Date	Time	Room	Speaker	Topic	
Monday -- 08/3	20:30-21:10	HSRF 400	Jean-François Ménétret	Comparison of mammalian and Ecoli ribosome channel complexes	
Tuesday -- 08/4	20:30-21:10	HSRF 400	Ingeborg Schmidt-Krey	Structural studies of leukotriene C4 synthase by cryo-EM	
Wednesday -- 08/5	20:30-21:10	HSRF 400	Montserrat Bárcena	Structural study of coronaviruses by cryo-electron tomography	
Thursday -- 08/6	13:00 - 14:00	Held in HSRF 200	Stefan Birmanns	Interactive and Algorithmic Strategies for Multi-Resolution Fitting of Biophysical Data - The Sculptor Software Package	
Thursday -- 08/6	20:30-21:10	HSRF 400	Tanvir Shaikh	Association of ribosomal subunits as studied by time-resolved cryo-EM	
Friday -- 08/7	13:00 - 14:00	Held in HSRF 200	David DeRosier	3D Reconstruction: a Personal Perspective	
Friday -- 08/7	19:30-20:10	HSRF 400	Michael Radermacher	Structure of Complex I	
Friday -- 08/7	20:10-20:50	HSRF 400	Teresa Ruiz	Structure of Yeast Phosphofructokinase	