

Program for the 2024 CAS - Introduction to Accelerator Physics

	Sun 22/09	Mon 23/09	Tue 24/09	Wed 25/09	Thu 26/09	Fri 27/09	Sat 28/09	Sun 29/09	Mon 30/09	Tue 01/10	Wed 02/10	Thu 03/10	Fri 04/10	Sat 05/10	
08:30		Opening / ALBA presentation Tecker et al.	Transverse Linear Beam Dynamics II Hillert	Transverse Linear Beam Dynamics III Hillert	ALBA visit	Linear Imperfections - corrections Ziemann	Electron Beam Dynamics II Rivkin		Cyclotrons Seidel	Beam Diagnostics I Forck		Time and Frequency domain signals I Schmickler	Synchrotron light circular machines & FELs I Prat		
09:30															
09:35		Electromagnetic Theory Shreyber	Warm Magnets de Rijk	Linear Accelerators I Alesini			Longitudinal BD in Circular Machines II Tecker	Collective Effects III Li		RF systems I Völlinger	Introduction to Non-Linear longitudinal Beam Dynamics Damerau	Free	A first taste of Non-Linear Beam Dynamics I Bartosik	Synchrotron light circular machines & FELs II Prat	
10:35		Coffee					Coffee			Coffee				Coffee	
11:05		History of particle acceleration Sheehy	Sources Faircloth	Transverse Linear Beam Dynamics IV Hillert		Collective Effects I Li	Injection and Extraction Arrutia		Sustainability for Accelerators Seidel	Beam Diagnostics II Forck		Time and Frequency domain signals II Schmickler	Particle motion in Hamiltonian Formalism II Papaphilippou		
12:05					Lunch										
12:10		Kinematics of Particle Beams - Relativity Shreyber	Secondary beams and targets Faircloth	Linear Accelerators II Alesini			Electron Beam Dynamics I Rivkin	Collective Effects IV Li		RF systems II Völlinger	Advanced accelerator concepts I Ferrario	Lunch	A first taste of Non-Linear Beam Dynamics II Bartosik	Putting it all together Schmickler	
13:10		Lunch				Lunch			Lunch				Lunch		
13:45											Transverse Linear Beam Dynamics VI Hillert				
14:45															
14:50		Transverse Linear Beam Dynamics I Hillert	Superconducting Magnets de Rijk	Transverse Linear Beam Dynamics V Hillert	Linear Imperfections I Ziemann	Collective Effects II Li	Vacuum Seidel		Hands-ON calculations (longitudinal) - Intro Damerau et al.	Hands-ON calculations (longitudinal) - III Damerau et al.	Advanced accelerator concepts II Ferrario	Particle motion in Hamiltonian Formalism I Papaphilippou	Designing a synchrotron - a real life example Papaphilippou		
15:50		Coffee							Coffee						
16:20		Accelerator Applications Sheehy	Hands-ON Lattice calculations I Gamba et al.	Hands-ON Lattice calculations III Gamba et al.	Longitudinal BD in Circular Machines I Tecker	Hands-ON Lattice calculations V Gamba et al.	Discussion session		Hands-ON calculations (longitudinal) - I Damerau et al.	Hands-ON calculations (longitudinal) - IV Damerau et al.	Computational tools II Latina	Discussion session	Closing	Tecker	
17:20															
17:25		1 slide 1 minute	Hands-ON Lattice calculations II Gamba et al.	Hands-ON Lattice calculations IV Gamba et al.	Linear Imperfections II Ziemann	Hands-ON Lattice calculations VI Gamba et al.	Study time all		Hands-ON calculations (longitudinal) - II Damerau et al.	Hands-ON calculations (longitudinal) - V Damerau et al.	Colliders and luminosity Schmickler	Study time all			
18:25															
18:45		Welcome reception	Poster session		Discussion session	** Seminar **									
19:25															
19:45															
20:15		Dinner at Hotel											Banquet		
21:00										Cinema event			Show		

Arrival day and registration

Excursion

Departure day