

## Program for the 2023 CAS - Introduction to Accelerator Physics

	Mon 25/09	Tue 26/09	Wed 27/09	Thu 28/09	Fri 29/09	Sat 30/09	Sun 01/10	Mon 02/10	Tue 03/10	Wed 04/10	Thu 05/10	Fri 06/10	Sat 07/10	Sun 08/10					
08:30	Arrival day and registration	Opening Tecker	Kinematics of Particle Beams - Relativity Shreyber	Transverse Linear Beam Dynamics IV Hillert	Free	Beam Instrumentation Forck	Electron Beam Dynamics I Rivkin	Excursion	Cyclotrons I Seidel	Vacuum Seidel	Free	A first taste of Non-Linear Beam Dynamics I Bartosik	Advanced accelerator concepts II Ferrario	Departure day					
09:30																			
09:45		Electromagnetic Theory I Shreyber	Warm Magnets de Rijk	Computational tools I Latina		Computational tools II Latina	Electron Beam Dynamics II Rivkin		RF systems I Damerau	Collective Effects I Li		Injection and Extraction Tecker	Particle motion in Hamiltonian Formalism II Papaphilippou						
10:45		Coffee				Coffee			Coffee			Coffee							
11:15		History of particle acceleration Sheehy	Transverse Linear Beam Dynamics II Hillert	Transverse Linear Beam Dynamics V Hillert		Beam Diagnostics Forck	Discussion electron beam dynamics Rivkin		Cyclotrons II/FFAs Seidel	Introduction to Non-Linear longitudinal Beam Dynamics Damerau		A first taste of Non-Linear Beam Dynamics II Bartosik	Synchrotron light circular machines Prat						
12:15		Lunch																	
13:45		Electromagnetic Theory II Shreyber	Linear Accelerators I Alesini	Longitudinal BD in Circular Machines I Tecker		Longitudinal BD in Circular Machines II Tecker	Sources Knie (Faircloth)		Machine & People Protection Issues Forck	RF systems II Damerau		Collective Effects II Li	Collective Effects III Li		Advanced accelerator concepts I Ferrario	FELs Prat			
14:45																			
15:00		Transverse Linear Beam Dynamics I Hillert	Transverse Linear Beam Dynamics III Hillert	Time and Frequency domain signals I Schmickler		Linear Imperfections I Ziemann	Linear Imperfections - corrections Ziemann		Secondary beams and targets Knie (Faircloth)	Hands-ON calculations (longitudinal) - Intro Damerau et al.		Hands-ON calculations (longitudinal) - III Damerau et al.	Colliders and luminosity Schmickler		Particle motion in Hamiltonian Formalism I Papaphilippou	Designing a synchrotron - a real life example Papaphilippou			
16:00		Coffee																	
16:30	Accelerator Applications Sheehy	Linear Accelerators II Alesini	Hands-ON Lattice calculations I Sterbini et al.	Time and Frequency domain signals II Schmickler	Hands-ON Lattice calculations III Sterbini et al.	Hands-ON Lattice calculations V Sterbini et al.	Hands-ON calculations (longitudinal) - I Damerau et al.	Hands-ON calculations (longitudinal) - IV Damerau et al.	Collective Effects IV Li	Q&A/study time	Closing Tecker								
17:30																			
17:45	1 slide 1 minute	Superconducting Magnets de Rijk	Hands-ON Lattice calculations II Sterbini et al.	Linear Imperfections II Ziemann	Hands-ON Lattice calculations IV Sterbini et al.	Hands-ON Lattice calculations VI Sterbini et al.	Hands-ON calculations (longitudinal) - II Damerau et al.	Hands-ON calculations (longitudinal) - V Damerau et al.	Discussion collective effects Li										
18:45	Welcome reception			Discussion session								Poster session ** Seminar ** tbd							
20:00	Dinner at Hotel												Banquet						
21:00										Cinema event									