

Program for the 2021 CAS - Introduction to Accelerator Physics

	Sat 25/09	Sun 26/09	Mon 27/09	Tue 28/09	Wed 29/09	Thu 30/09	Fri 01/10	Sat 02/10	Sun 03/10	Mon 04/10	Tue 05/10	Wed 06/10	Thu 07/10	Fri 08/10				
08:30	Arrival day and registration	Opening Schmickler	Transverse Linear Beam Dynamics I Hillert	Longitudinal BD in Circular Machines II Tecker	Superconducting Magnets de Rijk	Free	Collective Effects I Li	Excursion	Collective Effects III Li	Electron Beam Dynamics I Rivkin	Free	Machine & People Protection Issues Forck	Injection and Extraction Tecker	Departure day				
09:30																		
09:45		Electromagnetic Theory I Shreyber	Transverse Linear Beam Dynamics II Hillert	Transverse Linear Beam Dynamics III Hillert	Transverse Linear Beam Dynamics V Hillert				Collective Effects II Li	Collective Effects IV Li		Electron Beam Dynamics II Rivkin			A first taste of Non-Linear Beam Dynamics I Bartosik	Particle motion in Hamiltonian Formalism II Papaphilippou		
10:45		Coffee							Coffee	Coffee			Coffee					
11:15		History of particle acceleration Sheehy	Cyclotrons I Seidel	Warm Magnets / power converters de Rijk	Time and Frequency domain signals I Schmickler				Sources Knie/Faircloth	Discussion collective effects Li		Discussion electron beam dynamics Rivkin			Beam Diagnostics Forck	Synchrotron light circular machines Prat		
12:15		Lunch																
13:45		Electromagnetic Theory II Shreyber	Cyclotrons II/FFAs Seidel	Transverse Linear Beam Dynamics IV Hillert	Time and Frequency domain signals II Schmickler		Linear Imperfections I Ziemann		Linear Imperfections - corrections Ziemann				RF systems I Damerau		RF systems II Damerau	Colliders and luminosity Schmickler	A first taste of Non-Linear Beam Dynamics II Bartosik	FELs Prat
14:45																		
15:00		Accelerator Applications Sheehy	Linear Accelerators I Alesini	Vacuum Seidel	Advanced accelerator concepts I Ferrario		Linear Imperfections II Ziemann		Secondary beams and targets Knie/Faircloth			Hands-ON calculations (longitudinal) - Intro Damerau et al.	Introduction to Non-Linear longitudinal Beam Dynamics Damerau		Beam Instrumentation Forck	Particle motion in Hamiltonian Formalism I Papaphilippou	Designing a synchrotron - a real life example Papaphilippou	
16:00		Coffee																
16:30	Kinematics of Particle Beams - Relativity Gianfelice	Longitudinal BD in Circular Machines I Tecker	Computational tools I Latina	Computational tools II Latina	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) - III Damerau et al.	Q&A/study time I all	Q&A/study time II all	Closing Schmickler						
17:30	1 slide 1 minute	Linear Accelerators II Alesini	Hands-ON Lattice calculations I Sterbini et al.	Advanced accelerator concepts II Ferrario	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) - IV Damerau et al.	Q&A/study time I all	Q&A/study time II all							
18:30	Welcome reception		Hands-ON Lattice calculations II Sterbini et al.	Discussion session							Poster session	** Seminar ** tbd						
19:30	Dinner at Hotel												Banquet					
21:00									Cinema event									