

# 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			
8:30	<b>Arrival day and registration</b>	Opening Schmickler	Transverse Linear Beam Dynamics I Hillert	Longitudinal BD in Circular Machines II Tecker	Beam Instrumentation Forck	<b>Excursion</b>	Collective Effects I Li	<b>Excursion</b>	Collective Effects III Li	Electron Beam Dynamics I Rivkin	<b>Excursion</b>	Cyclotrons II/FFAs Seidel	Injection and Extraction Tecker	<b>Departure day</b>			
9:30		Electromagnetic Theory I Shreyber	Time and Frequency domain signals I Schmickler	Transverse Linear Beam Dynamics III Hillert	Transverse Linear Beam Dynamics V Hillert		Free		Collective Effects II Li	Collective Effects IV Li		Electron Beam Dynamics II Rivkin	Free		A first taste of Non-Linear Beam Dynamics I Bartosik	Particle motion in Hamiltonian Formalism II Papaphilippou	
9:45			Coffee COVID test	Coffee					Coffee								Coffee
10:45		History of particle acceleration Sheehy	Transverse Linear Beam Dynamics II Hillert	Warm Magnets / power converters de Rijk	Beam Diagnostics Forck		Sources Knie		Discussion collective effects Li	Discussion electron beam dynamics Rivkin		Vacuum Seidel	Synchrotron light circular machines Prat				
11:15		Lunch					Lunch 13:15 COVID test		Lunch	Lunch							
12:15		Electromagnetic Theory II Shreyber	Linear Accelerators I Alesini	Transverse Linear Beam Dynamics IV Hillert	Advanced accelerator concepts I Ferrario		Machine & People Protection Issues Forck		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	
13:45		Accelerator Applications Sheehy	Time and Frequency domain signals II Schmickler	Superconducting Magnets de Rijk	Linear Imperfections I Ziemann		Linear Imperfections II Ziemann		Secondary beams and targets Knie	Hands-ON calculations (longitudinal) - Intro Damerau et al.		Introduction to Non-Linear longitudinal Beam Dynamics Damerau	Cyclotrons I Seidel		Particle motion in Hamiltonian Formalism I Papaphilippou	Designing a synchrotron - a real life example Papaphilippou	
14:45		Coffee															
15:00		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	
16:00		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.	Tasting event		Q&A/study time II all		
16:30		Welcome reception		Hands-ON Lattice calculations II Sterbini et al.	Discussion session					Hands-ON calculations (longitudinal) - V Damerau et al.		Poster session	** Seminar ** tbd				
17:30		Dinner at Hotel															
18:30		Banquet															
19:30		Cinema event															
21:00																	