

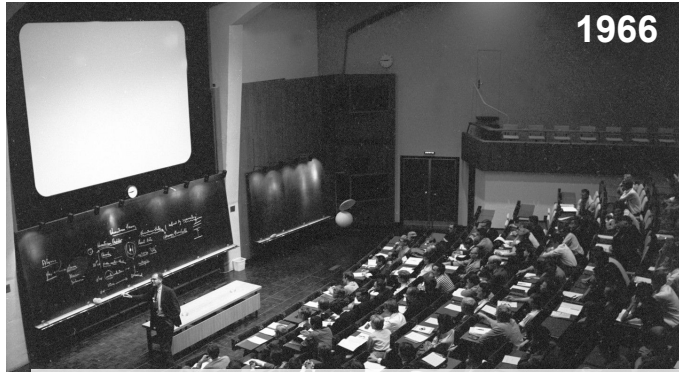
CERN Summer Student Lecture Programme 2023

Eva Sicking, Matthew McCullough
for the [SSLP committee](#)

CERN
July 27, 2023

Eva Sicking (EP)
Matthew McCullough (TH)
Francesco Cerutti (SY)
Andrea Valassi (IT)
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Ana Dordevic (IR)
Barbara Binder (HR)
Anastasija Preobrazenska (HR)
Caroline Debetaz (HR)
Kristina Gunne (IT)

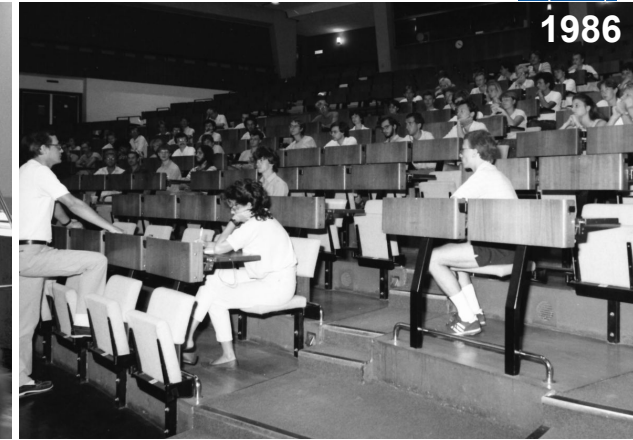
CERN summer student programme since 1962



1966



1968



1986

- Long tradition of CERN summer student lectures
- Lectures by world experts in their fields



1994



2019

First in-person lecture programme since 2019

Lecture concept

- Introduction to all areas of CERN's research mission
- Targets students in Physics, Engineering, and Computer Science
- Prerequisite: basic background in Physics and Math
- Coverage: from basic foundations to highly specialised topics

Key data for 2023

- 500/1-001 - Main Auditorium
- 27 June - 28 July, 9h15 - 12h30
- 3 lectures per day
 - 45 min lecture
 - 10 min questions
 - 15 min coffee break between lectures



[Time table in indicio](#)

25 topics in 5 weeks

		Monday	Tuesday	Wednesday	Thursday	Friday
		26/6	27/6	28/6	29/6	30/6
Week 1	09h15-10h10		Introduction	Particle World	Raw Data to Physics Results	Detectors
	10h25-11h20		Particle World	Detectors	Particle World	Raw Data to Physics Results
	11h35-12h30		Detectors	Raw Data to Physics Results	Detectors	Particle World

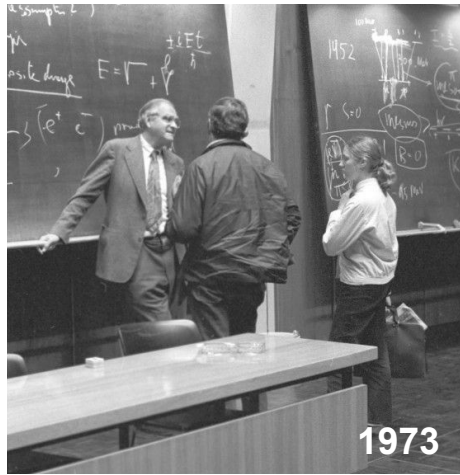
		3/7	4/7	5/7	6/7	7/7
Week 2	09h15-10h10	Accelerator Challenges 1	Statistics	Standard Model	Statistics	Accelerators + Beam Dynamics
	10h25-11h20	Detectors	Standard Model	Statistics	Accelerators + Beam Dynamics	Standard Model
	11h35-12h30	Standard Model	Accelerator Challenges 1	Accelerators + Beam Dynamics	Standard Model	Statistics

		10/7	11/7	12/7	13/7	14/7
Week 3	09h15-10h10	Nuclear Physics	Future Colliders	Cosmology	Heavy Ion Physics	Theoretical Particle Physics
	10h25-11h20	Theoretical Particle Physics	Nuclear Physics	Heavy Ion Physics	Theoretical Particle Physics	Cosmology
	11h35-12h30	Future Colliders	Theoretical Particle Physics	Theoretical Particle Physics	Cosmology	Heavy Ion Physics

		17/7	18/7	19/7	20/7	21/7
Week 4	09h15-10h10	Accelerator Challenges 2	Flavour Physics	Astroparticle Physics	Accelerator Challenges 3	Physics at Hadron Colliders
	10h25-11h20	Physics at Hadron Colliders	Accelerator Challenges 2	Flavour Physics	Physics at Hadron Colliders	Accelerator Challenges 3
	11h35-12h30	Flavour Physics	Physics at Hadron Colliders	Medical Applications	Astroparticle Physics	Medical Applications

		24/7	25/7	26/7	27/7	28/7
Week 5	09h15-10h10	Predictions at Hadron Colliders	Antimatter	Electronics, DAQ and Triggers	Beyond the Standard Model	Electronics, DAQ and Triggers
	10h25-11h20	Physics at Lepton Colliders	Beyond the Standard Model	Predictions at Hadron Colliders	String Theory	Beyond the Standard Model
	11h35-12h30	Antimatter	Physics at Lepton Colliders	Beyond the Standard Model	Electronics, DAQ and Triggers	Closing

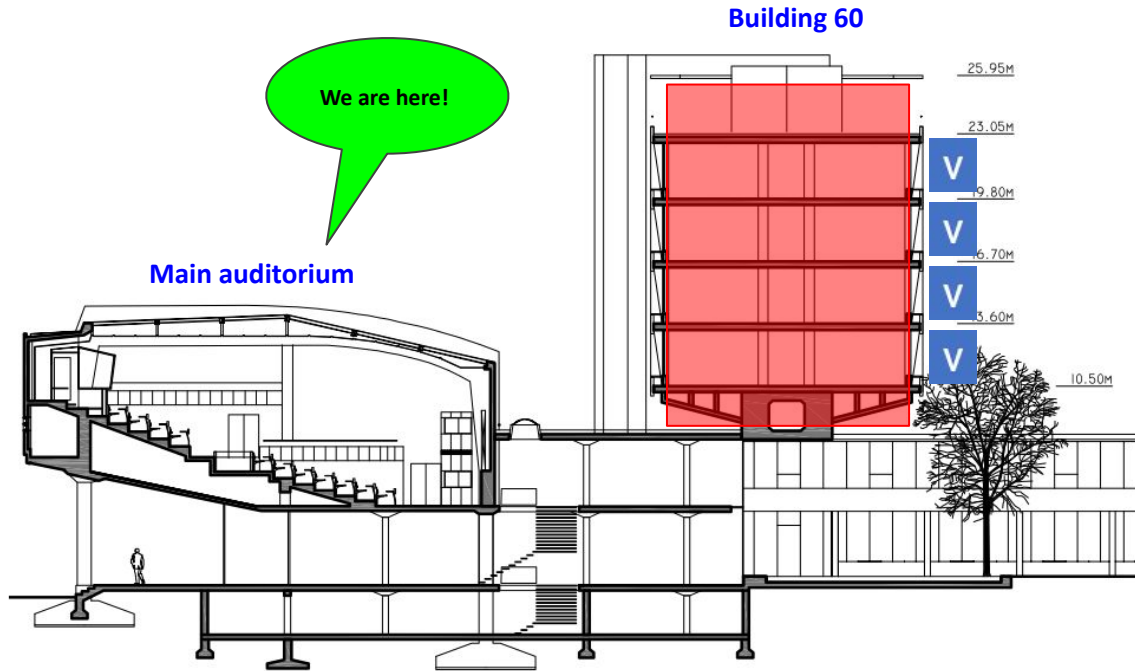
Invitation to actively participate



- Follow the lectures actively
 - Think of one question to ask in each lecture
 - Discuss with lecturers and fellow students
- Explore full scope of topics
 - Attend also lectures far from your main field of interest
- Remark:
 - Zoom connection available for students who could not come to CERN for exceptional circumstances
 - Lectures also accessible to the public (Webcast, recordings)



Ongoing renovation of building 60



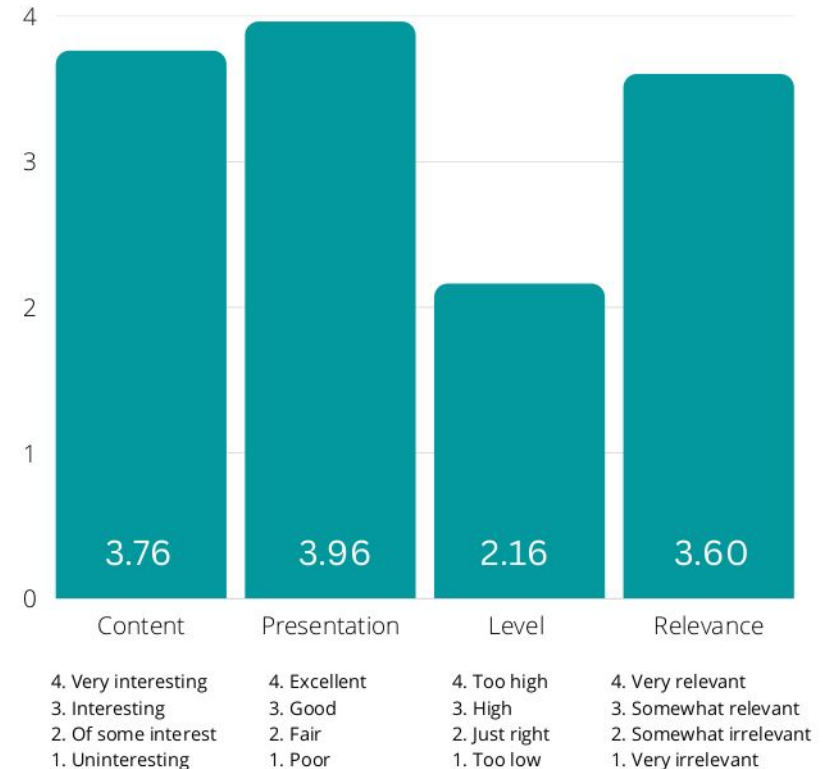
- Demolition phase from May to September 2023
- Expect some level of noise from
 - Remediation & demolition work (red zone)
 - Extractors (V)

- Noise propagation into main auditorium difficult to estimate
- SSLP team in contact with responsables for renovation in case noise starts impacting lectures

Lecture survey

- You will be asked to fill one (anonymous) questionnaire for each course
- Evaluation will be reviewed by the lecture programme committee
- Used as input to improve the programme

Example evaluation of lecture in 2022



Just a reminder...

This is the last lecture of the speaker.


Please fill out the feedback survey if not yet done.

Thank you! 😊

CERN organisers behind the SSLP



- Lecture programme coordinated by representatives from several CERN departments:
 - Eva Sicking (Experimental Physics): co-chair (eva.sicking@cern.ch)
 - Matthew McCullough (Theoretical Physics): co-chair (matthew.mccullough@cern.ch)
 - Francesco Cerutti (Accelerator Systems)
 - Andrea Valassi (Information Technology)
 - Giovanni Petrucciani (Experimental Physics)
 - Bernhard Holzer (Beams)
 - Wilke Van Der Schee (Theoretical Physics)
 - Ana Dordevic (International Relations)
 - Barbara Binder (Human Resources)
 - Anastasija Preobrazenska (Human Resources)
 - Caroline Debetaz (Human Resources)
 - Kristina Gunne (Information Technology)
- For administrative questions: summer.student.info@cern.ch



**We wish you a great
summer student programme!**