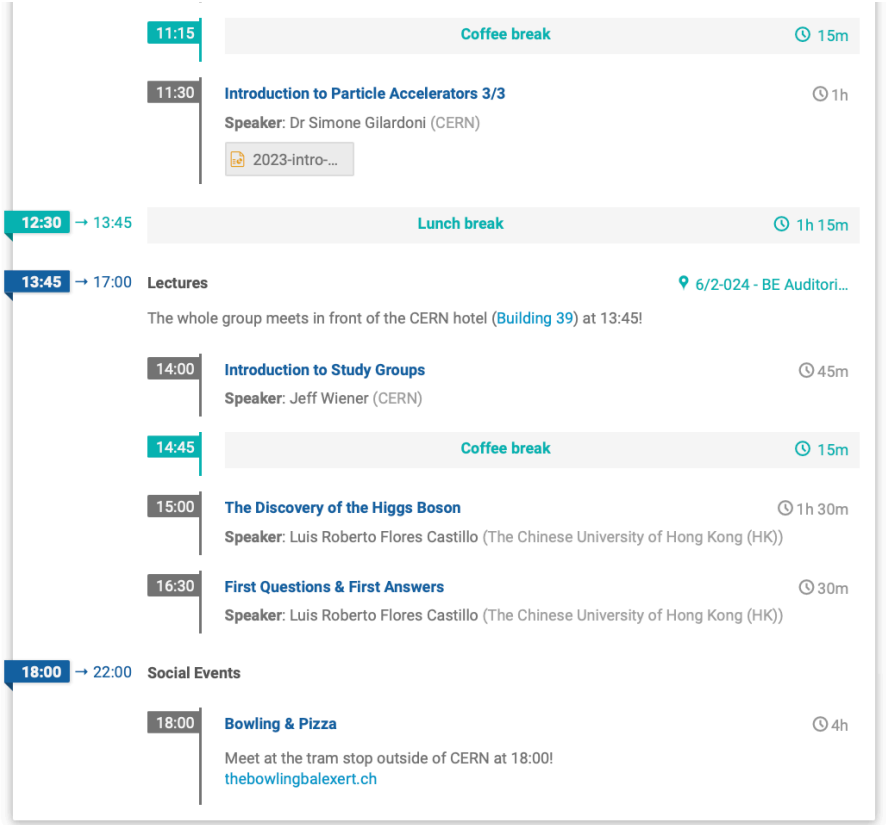
Introduction to Study Groups

International High School Teacher Programme 2023

How and when?



11:15 Coffee break 15m

11:30 **Introduction to Particle Accelerators 3/3** 1h

Speaker: Dr Simone Gilardoni (CERN)

2023-intro-...

12:30 → 13:45 Lunch break 1h 15m

13:45 → 17:00 **Lectures** 6/2-024 - BE Auditori...

The whole group meets in front of the CERN hotel (Building 39) at 13:45!

14:00 **Introduction to Study Groups** 45m

Speaker: Jeff Wiener (CERN)

14:45 Coffee break 15m

15:00 **The Discovery of the Higgs Boson** 1h 30m

Speaker: Luis Roberto Flores Castillo (The Chinese University of Hong Kong (HK))

16:30 **First Questions & First Answers** 30m

Speaker: Luis Roberto Flores Castillo (The Chinese University of Hong Kong (HK))

18:00 → 22:00 **Social Events**

18:00 **Bowling & Pizza** 4h

Meet at the tram stop outside of CERN at 18:00!
thebowlingbalexert.ch

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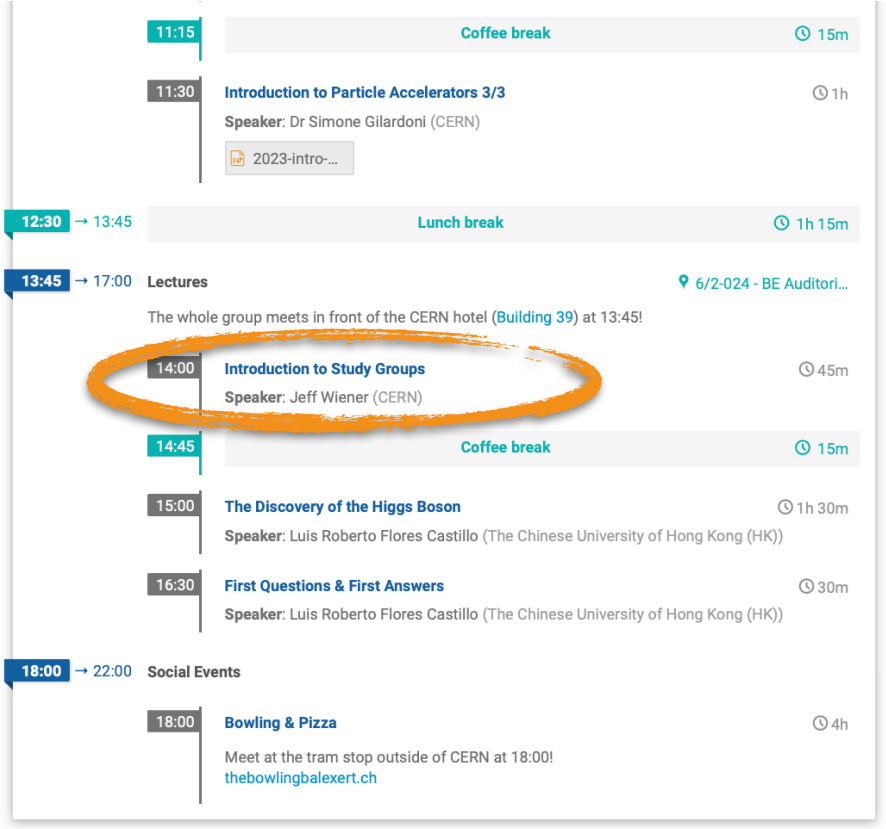

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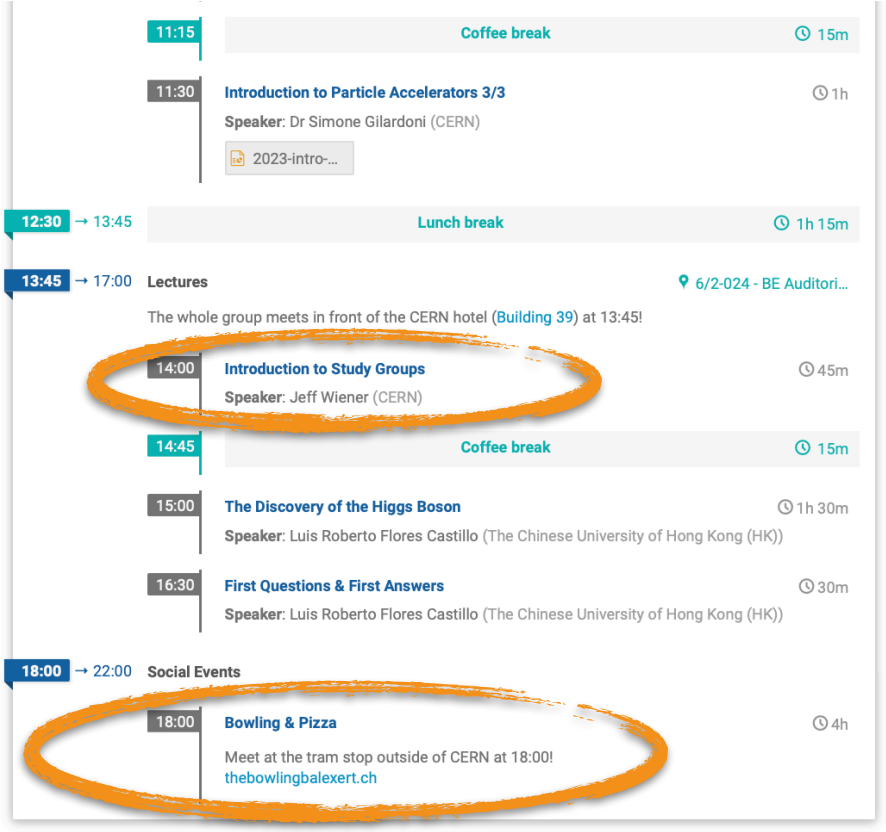
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Which topics?

1 Particle Accelerators
2 Particle Detectors
3 Engineering at CERN
4 Medical Applications of Particle Physics
5 Theoretical Physics & Higgs Physics
6 Computing & Data Analysis
7 Neutrino Physics
8 Antimatter Research
9 Future Accelerators

Aims and goals?

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Be creative

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Collaborate

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Share your experiences

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Learn from your colleagues

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Independently & self-organised!

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Present the results and outcomes of your study group through a detailed and entertaining presentation

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5x2mins + 5mins

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Share the results with your students and your colleagues

Independently & self-organised!

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Send us feedback!

Process

Guiding research questions about the SG topics
A) To what extent is the topic featured in your curriculum?
B) Which students' conceptions about the topic do you know?
C) What is your experience with teaching the topic in your classroom?
D) Which words and phrases can cause difficulties and misunderstandings?
E) Which aspects of the topic do you consider challenging to teach to students?
F) Which aspects of the topic do you think can be appropriately introduced in the classroom?

How and when?

WEEK 1

SG Session 1
Wednesday, 5 July
16:00-17:30

SG Session 2
Thursday, 6 July
14:00-15:30 or 15:30-17:00

WEEK 2

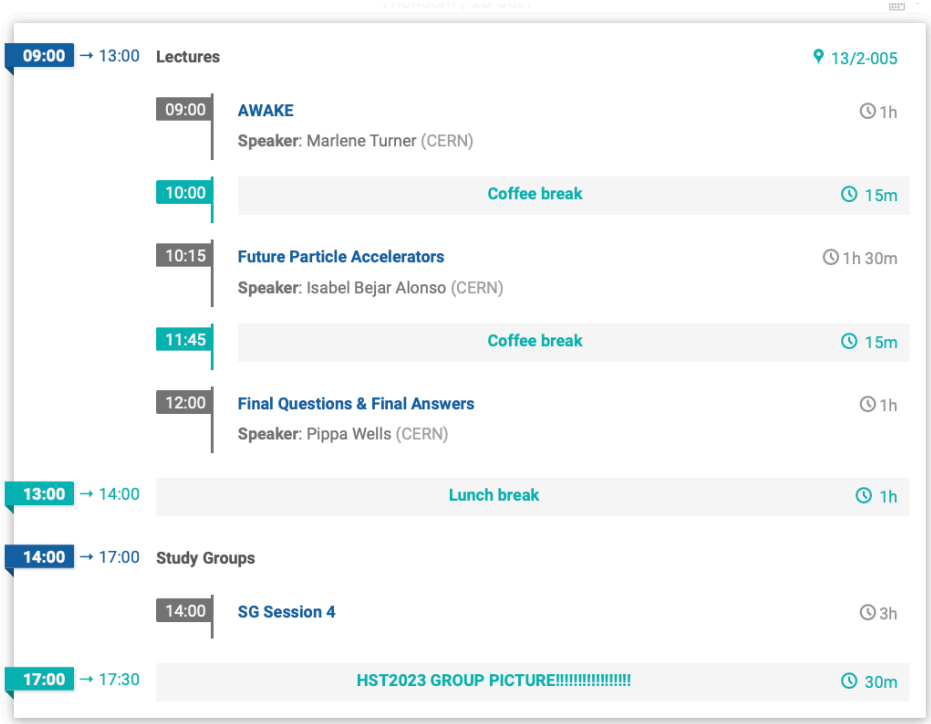
SG Session 3
Monday, 10 July
16:00-17:30

SG Session 4
Thursday, 13 July
14:00-17:00

Last day of HST2023

SG Presentations
Friday, 14 July
9:00-12:30

Deadline



09:00 → 13:00 Lectures — 13/2-005

- 09:00 **AWAKE** — 1h
  Speaker: Marlene Turner (CERN)
- 10:00 **Coffee break** — 15m
- 10:15 **Future Particle Accelerators** — 1h 30m
  Speaker: Isabel Bejar Alonso (CERN)
- 11:45 **Coffee break** — 15m
- 12:00 **Final Questions & Final Answers** — 1h
  Speaker: Pippa Wells (CERN)

13:00 → 14:00 **Lunch break** — 1h

14:00 → 17:00 Study Groups

- 14:00 **SG Session 4** — 3h

17:00 → 17:30 **HST2023 GROUP PICTURE!!!!!!!!!!!!!!!!** — 30m

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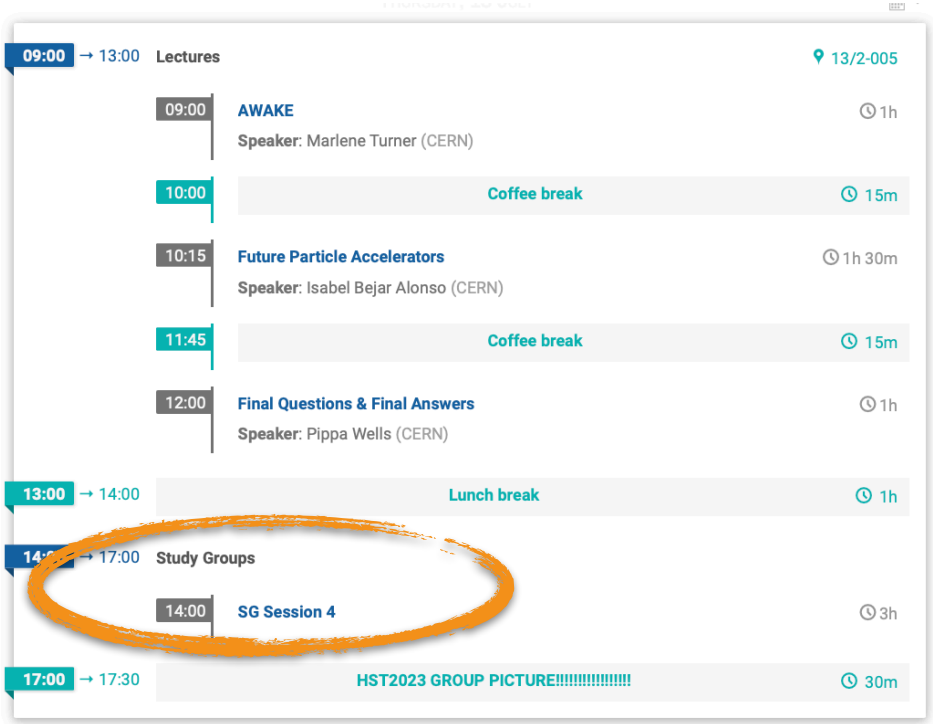
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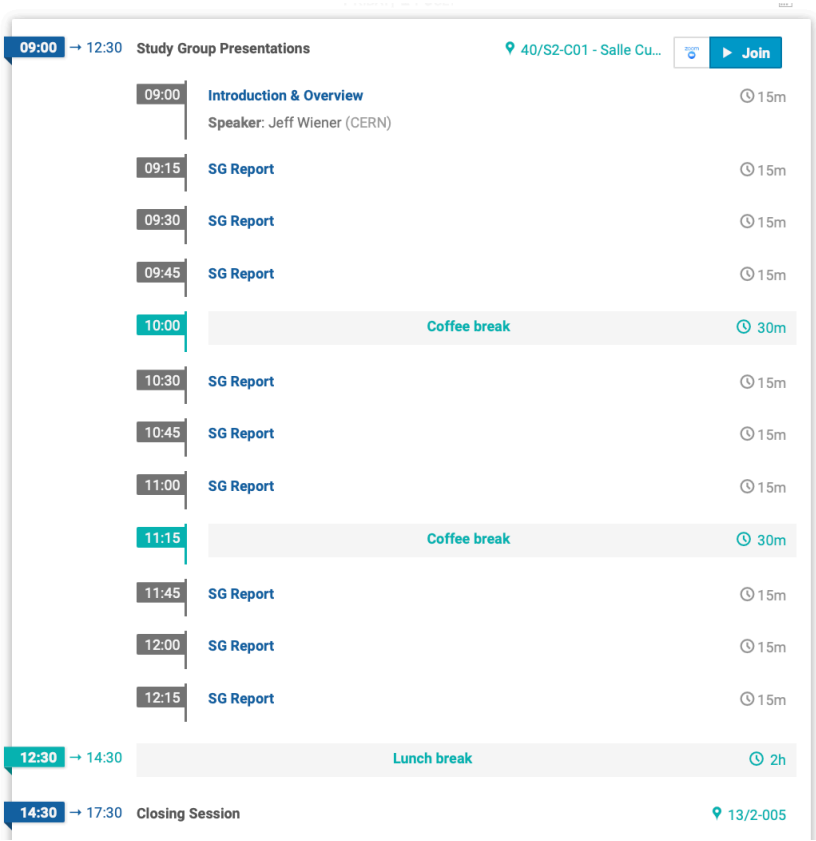
Presentations



Output

Guidelines for the study group presentations

1) Curriculum & classroom connections
Highlight potential connections to the various curriculums and your individual teaching practises

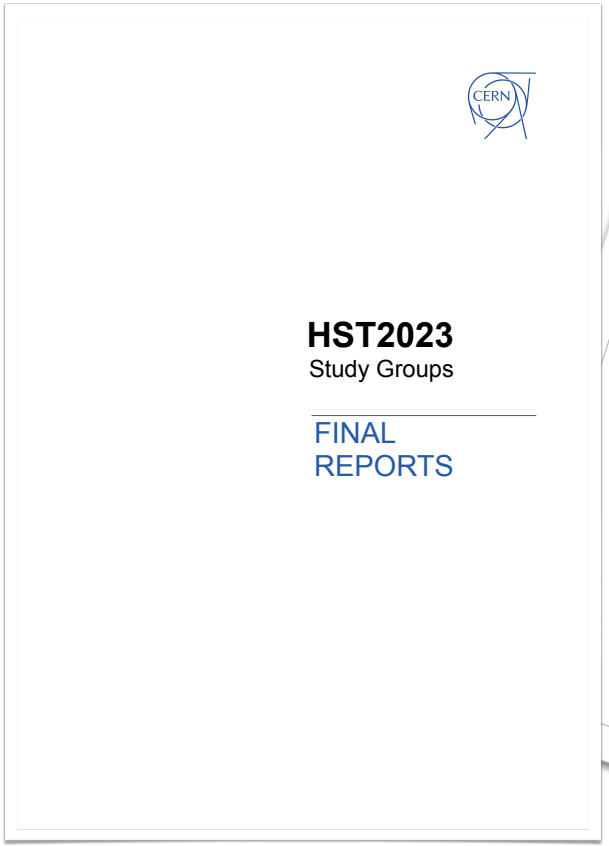
2) Key ideas
Showcase the most important aspects of the topic that you consider to be key for a meaningful instruction

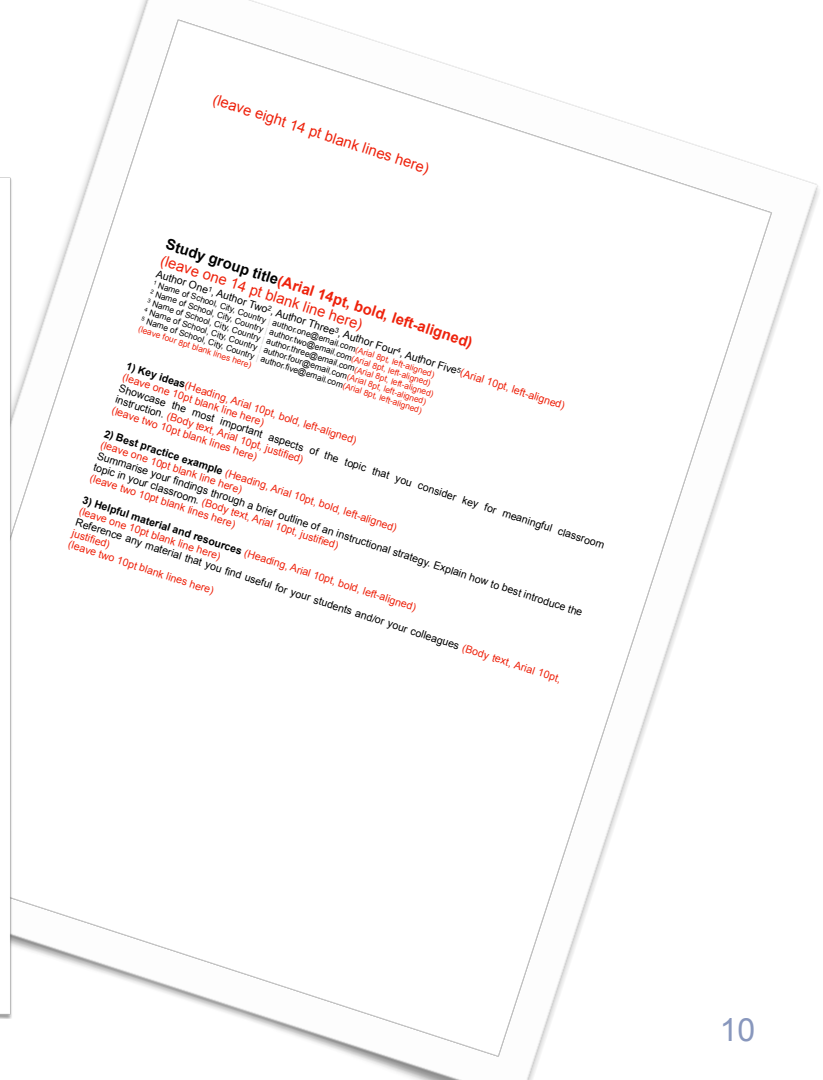
3) Potential students' conceptions & challenges
Illustrate elements of the topic that might obstruct a successful introduction in the classroom

4) Helpful material and resources
Reference any material that you find useful for your students and/or your colleagues

5) Best practice example
Summarise your findings through a brief outline of an instructional strategy

Output


HST2023
Study Groups
FINAL
REPORTS


(leave eight 14 pt blank lines here)
Study group title(Arial 14pt, bold, left-aligned)
(leave one 14 pt blank line here)
Author One[1], Author Two[2], Author Three[3], Author Four[4], Author Five[5](Arial 10pt, left-aligned)
[1] Name of School, City, Country author.one@email.com(Arial 8pt, left-aligned)
[2] Name of School, City, Country author.two@email.com(Arial 8pt, left-aligned)
[3] Name of School, City, Country author.three@email.com(Arial 8pt, left-aligned)
[4] Name of School, City, Country author.four@email.com(Arial 8pt, left-aligned)
[5] Name of School, City, Country author.five@email.com(Arial 8pt, left-aligned)
(leave four 8pt blank lines here)
1) Key ideas(Heading, Arial 10pt, bold, left-aligned)
(leave one 10pt blank line here)
Showcase the most important aspects of the topic that you consider key for meaningful classroom instruction. (Body text, Arial 10pt, justified)
(leave two 10pt blank lines here)
2) Best practice example (Heading, Arial 10pt, bold, left-aligned)
(leave one 10pt blank line here)
Summarise your findings through a brief outline of an instructional strategy. Explain how to best introduce the topic in your classroom. (Body text, Arial 10pt, justified)
(leave two 10pt blank lines here)
3) Helpful material and resources (Heading, Arial 10pt, bold, left-aligned)
(leave one 10pt blank line here)
Reference any material that you find useful for your students and/or your colleagues (Body text, Arial 10pt, justified)
(leave two 10pt blank lines here)

Questions?

jeff.wiener@cern.ch