



Introduction to Study Groups

Jeff Wiener | ITW2017

How and when?

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09:00 → 13:00	Morning programme	📍 60-6-015 - Room Georges Ch..
09:00	Particle Physics Lecture 1/3 Speaker: Rolf Landua (CERN)	🕒 1h 30m
10:30	Coffee break	🕒 30m
11:00	Study groups - concepts, offers & decisive phase Speaker: Jeff Wiener (CERN)	🕒 1h 30m
13:00 → 14:30	Lunch break	🕒 1h 30m
14:30 → 17:00	Afternoon programme	📍 503-1-001 - Council Chamber
14:30	Particle Physics Lecture 2/3 Speaker: Rolf Landua (CERN)	🕒 1h 30m
16:00	Q&A Speaker: Rolf Landua (CERN)	🕒 1h
18:00 → 22:00	Social Event	
18:00	Bowling&Pizza A bus will pick up the whole group in front of the CERN hotel (building 39) at 18:00! After the dinner you can return either by tram (3CHF) or by foot (the walk takes about 40-60mins). www.bowlingdemeyrin.ch	🕒 4h

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WEEK1

SG Session 1

Wednesday, 9 August
16:45-17:30

SG Session 2

Thursday, 10 August
16:00-17:30

WEEK2

SG Session 3

Monday, 14 August
16:00-17:30

SG Session 4

Thursday, 17 August
14:00-17:00

Last day of ITW2017

SG Final Reports

Friday, 18 August
9:00-12:30

Which topics?

Which topics?

- SG1 Medical applications of particle physics
- SG2 Particle accelerators
- SG3 Particle detectors
- SG4 Computing in particle physics
- SG5 Data analysis in particle physics
- SG6 Antimatter research
- SG7 Cosmology
- SG8 Engineering in particle physics
- SG9 Future particle accelerator projects

Aims and goals



Aims and goals

Be creative



Aims and goals

Be creative
Collaborate



Aims and goals

Be creative
Collaborate
Share your experiences



Aims and goals

Be creative
Collaborate
Share your experiences
Learn from your colleagues



Aims and goals

Be creative
Collaborate
Share your experiences
Learn from your colleagues
Create and develop *something*



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Collaborate
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Create and develop *something*

Independently & self-organised!

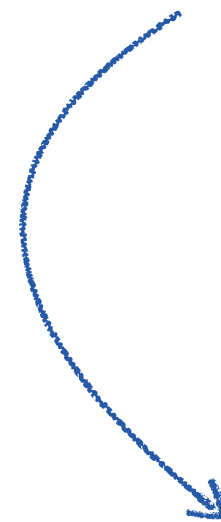


Aims and goals

Be creative
Collaborate
Share your experiences
Learn from your colleagues
Create and develop *something*

Present the results and outcomes
of your study group through a
detailed and extensive final report

Independently & self-organised!



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5x2mins + 5mins

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Share the results with your
students and your colleagues

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Send us feedback!

Process

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Guiding research questions about the SG topic

- 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?

Output

Output

Guidelines for the final report & summary paper

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 student 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

Output

Study group title(Arial 14pt, bold, left aligned, paragraph spacing before 96 pt)
(leave one 14 pt blank line here)

Author One¹, Author Two², Author Three³, Author Four⁴, Author Five⁵(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.one@email.com(Arial 8pt, left aligned)
³ Name of School, City, Country | author.one@email.com(Arial 8pt, left aligned)
⁴ Name of School, City, Country | author.one@email.com(Arial 8pt, left aligned)
⁵ Name of School, City, Country | author.one@email.com(Arial 8pt, left aligned)
(leave four 8pt blank lines here)

Curriculum & classroom connections(Heading, Arial 10pt, bold, left aligned)
(leave one 10pt blank line here)
Highlight potential connections to the various curriculums and your individual teaching practises(Body text, Arial 10pt, justified)
(leave two 10pt blank lines here)

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 to be key for a meaningful instruction(Body text, Arial 10pt, justified)
(leave two 10pt blank lines here)

Potential student conceptions & challenges(Heading, Arial 10pt, bold, left aligned)
(leave one 10pt blank line here)
Illustrate elements of the topic that might obstruct a successful introduction in the classroom(Body text, Arial 10pt, justified)
(leave two 10pt blank lines here)

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)

Best practise example (Heading, Arial 10pt, bold, left aligned)
(leave one 10pt blank line here)
Summarise your findings through a brief outline of an instructional strategy(Body text, Arial 10pt, justified)
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Questions?

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