



EUGLOH Summer School on Large-Scale Facilities for Global Health: Opportunities, Project Writing and Career Orientation

June 29-July 2, 2020 online, organized by Dr. Slavka Kascakova (Université Paris-Saclay, France) and Dr. Matthieu Réfrégiers (SOLEIL synchrotron, France) with the participation of speakers from University of Szeged (Hungary), Lund University (Sweden) and from Ludwig-Maximilians-Universität München (Germany)



Large-scale facilities offer unique opportunities to explore materials and living matter. It is sometimes difficult to grasp to what extent these facilities can be valuable to solve scientific issues related to global health. With this in mind, the EUGLOH Alliance is organizing a 4-day intensive course on large-scale facilities (SOLEIL synchrotron, MAX IV synchrotron and ELI-ALPS laser centre) to raise awareness of students and staff on the possibilities of facilities that contribute to the European research landscape. In depth overview of career opportunities, operations, techniques and applications (biomedical and environmental) of these light sources will be given. The last two days of the school will be dedicated to practical sessions to apply for beamtime allocation.

Teaching methods?

The school will take place online with theoretical courses (10.5h), practical sessions (12h), networking, virtual tours of large-scale facilities and assessment of knowledge and general discussion.

Who can participate

Free of access, it is designed to provide training to students (from undergraduates to PhDs) as well as to postdoctoral and senior scientists from the five EUGLOH universities (Lund University, Université Paris-Saclay, University of Porto, University of Szeged and Ludwig-Maximilians-Universität München).

Number of participants

Up to 30 participants can follow practical sessions. However, since theoretical courses will be given on a virtual basis, the school will be accessible to a much higher audience (up to 100).

What type of skills can you develop?

1) Getting to know techniques used within large-scale facilities and their applications in fields related to global health; 2) Skills on the operating range of a large facility and on modes of access to proceed to experimentation; 3) Gain an overview on job specific skills; and 4) Applying for beamtime allocation.

What do you get out of it?

Certificates and 4 ECTS will be provided for those who attend the practical sessions of the school. Participants who follow only theoretical lectures will receive the certificate and 2 ECTS.

Registration

Registration is open at: <https://admin-sphinx.u-psud.fr/v4/s/0748k0>

Registration deadline: May 31, 2020



Co-funded by the
Erasmus+ Programme
of the European Union



European University Alliance for Global Health

EUGLOH Summer School on Large-Scale Facilities for Global Health: Opportunities, Project Writing and Career Orientation

June 29 – July 2, 2020 **online**, organized by Dr. Slavka Kascakova (Université Paris-Saclay, France) and Dr. Matthieu Réfrégiers (SOLEIL synchrotron, France) with the participation of speakers from University of Szeged (Hungary), University of Lund (Sweden) and from Ludwig-Maximilians-Universität München (Germany)



Monday June 29, 2020

- | | |
|----------------------|--|
| 9:00 - 9:10 | Welcome by Scientific Director of Life Sciences at SOLEIL synchrotron, Andrew Thompson |
| 9:10 - 9:30 | Introduction of the school by organizers, Slavka Kascakova from Université Paris-Saclay and Matthieu Réfrégiers from SOLEIL synchrotron |
| 9:30 - 10:00 | History of synchrotron light. Presentation of SOLEIL synchrotron (France)
Stefan Kubsy, SOLEIL synchrotron, France |
| | Utility of synchrotron light for society: Research on the COVID-19 |
| 10:00 - 10:30 | SARS-CoV-2 and COVID-19: What have we learned so far?
Joakim Esbjornsson, University of Lund, Sweden |
| 10:30 - 11:00 | COVID-19 under the synchrotron light
Leonard Chavas, SOLEIL synchrotron, France |

11:00 - 11:30 ***Coffee break & Socializing***

11:30 - 12:00 **Presentation of MAX IV synchrotron (Sweden)**
Marjolein Thunnissen, MAX IV synchrotron, Sweden

12:00 - 12:30 **Presentation of ELI-ALPS (Hungary)**
Dimitris Charalambidis, ELI-ALPS, Hungary

12:30 - 14:00 ***Lunch break***

Illustrated applications of these light sources in *Biomedical Research*

14:00 - 14:30 **X-ray microCT tomography in Biology**
Timm Weitkamp, SOLEIL synchrotron, France

14:30 - 15:00 **Antibiotic resistant bacteria under UV light**
Muriel Masi, Université Paris-Saclay, France

15:00 - 15:30 **Diagnosis of Wilson disease by X-ray fluorescence**
Slavka Kascakova, Université Paris-Saclay, France

16:00 - 16:30 ***Coffee break & Socializing***

16:30 - 17:00 **XRF imaging of pancreatic islets to explore disease mechanism in diabetes**
Jens Lagerstedt, MAX IV synchrotron, Sweden

17:00 - 17:30 **Biomedical research in large laser facilities**
Katalin Hideghéty, ELI-ALPS Laser Center, Hungary

17:30 - 18:00 **Toward radiooncological application of laser based technology**
Katalin Hideghéty, ELI-ALPS Laser Center, Hungary

Tuesday June 30, 2020

Illustrated applications of these light sources in *Food and Environmental Science*

9:30 - 10:00 **X-ray fluorescence imaging and spectroscopy in food and environmental science**
Camille Rivard, INRAE, SOLEIL synchrotron, France

10:00 - 10:30	Enzymatic activity for green chemistry with UV and infrared light Frédéric Jamme, SOLEIL synchrotron, France
10:30 - 11:00	Synchrotron radiation brings a new light on food flavour mechanism Francis Canon, INRAE, France
11:00 - 11:30	<i>Coffee break & Socializing</i>
11:30 - 12:00	X-ray tomography for adaptation of trees to global warming Eric Badel, INRAE, France
12:00 - 14:00	<i>Lunch break</i>
14:00 - 14:30	Career orientation: Overview of professional opportunities in large-scale facilities Garance Aubry, SOLEIL synchrotron, France
14:30 - 15:30	Networking with people of different professions working in SOLEIL synchrotron, France Céline Lory (Industrial Liaison Officer) Stefan Kubsky (Surface Lab Manager) Franck Wien (Beamline Scientist) Gabriel David (Responsible for Biosafety issues) Hernan-Gabriel Pais (Coordinator)
15:30 - 16:00	<i>Coffee break & Socializing</i>
16:00 - 17:00	Interested by an experiment at a large-scale facility? Practical information on the procedure of access will be given with remote access control on a crystallography beamlines. Matthieu Réfrégiers, SOLEIL synchrotron, France Marjolein Thunnissen, MAX IV synchrotron, Sweden Zita Varadi, ELI-ALPS Laser Center, Hungary
17:00 - 18:00	Virtual tour of large-scale facilities

Wednesday July 1, 2020

Practical sessions on writing proposal application for synchrotron beamtime

Divya Madhavan, CentraleSupélec, Université Paris-Saclay, France

Daniel Graziadei, Ludwig-Maximilians-Universität München, Germany

9:30 - 12:30

Practical session (Part 1/4)

- How to write as a serious scientist
- How to convey an idea
- How to synthesize a flow of ideas

12:30 - 14:00

Lunch break

14:00 - 18:00

Practical session (Part 2/4)

- What is the art of persuasion and why is it important to science?
- Thinking about a proposal for large-scale facilities and how to portray it convincingly
- Discussion on the informal art of persuasion

Thursday July 2, 2020

9:30 - 12:30

Practical session (Part 3/4)

- Assignment feedback (on the overnight assignment) in breakout sessions with a feedback template
- Review (+ open questions)

12:30 - 14:00

Lunch break

14:00 - 16:00

Practical session (Part 4/4)

- How to do an accuracy read
- How to give written feedback on a paper
- Peer-to-peer accuracy read
- Feedback

16:00 - 16:30

Coffee break & Socializing

16:30 - 18:00

Assessment of what has been learnt so far and general discussion and feedback on the summer school

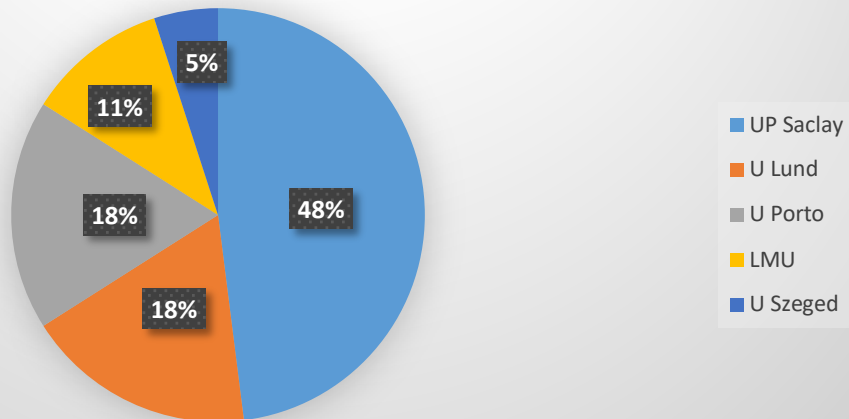
Slavka Kascakova, Université Paris-Saclay, France

Matthieu Réfrégiers, SOLEIL synchrotron, France

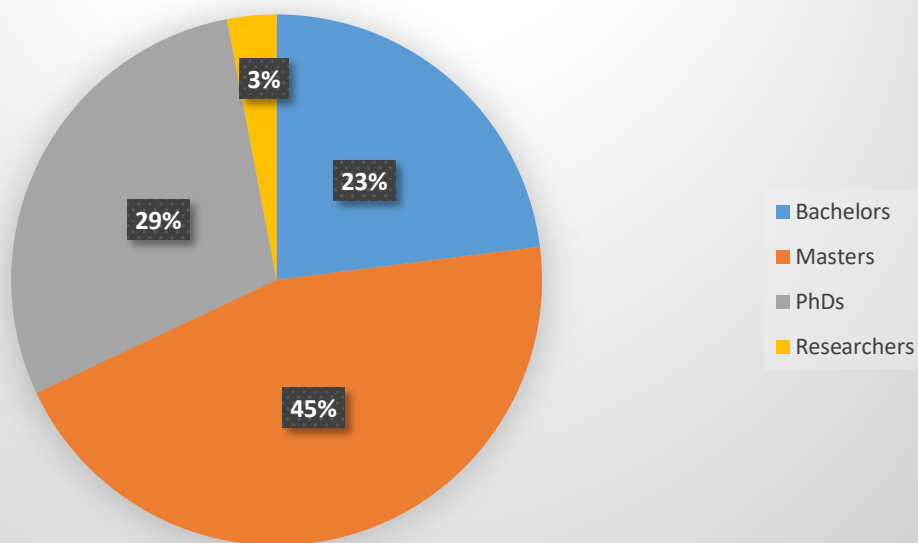


Co-funded by the
Erasmus+ Programme
of the European Union

Participation of Universities of EUGLOH Alliance to the Summer School on Large Scale Facilities



Participation of different study levels



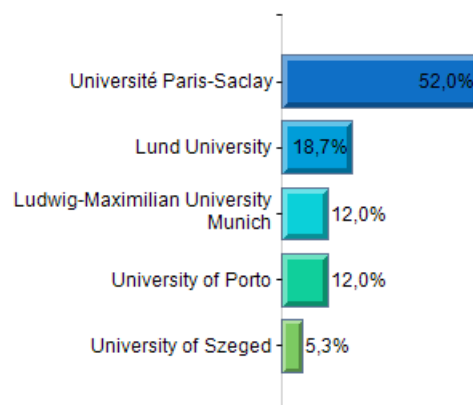
Number of participants :

Total number of participants connected online 72-75 first day, however only 62 participants were present for the assessment of knowledge

FEEDBACK ON LARGE SCALE FACILITIES SUMMER SCHOOL FROM

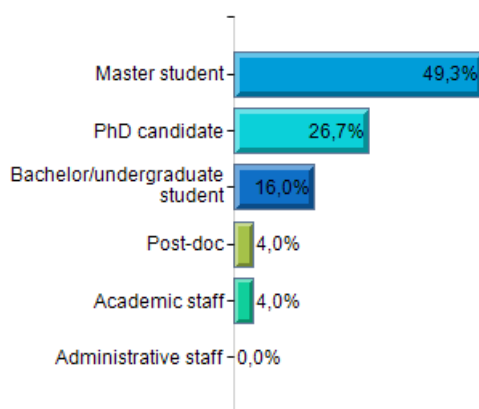
Home University:

Response rate: **100.0%**



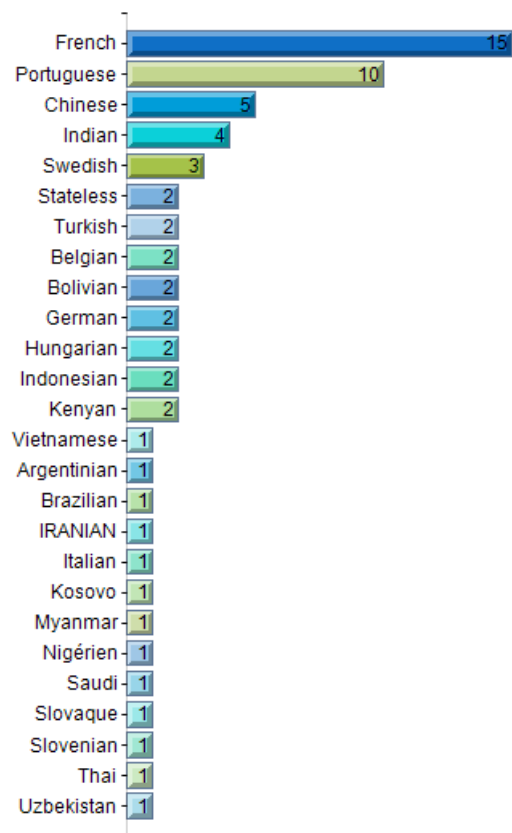
Status:

Response rate: **100.0%**



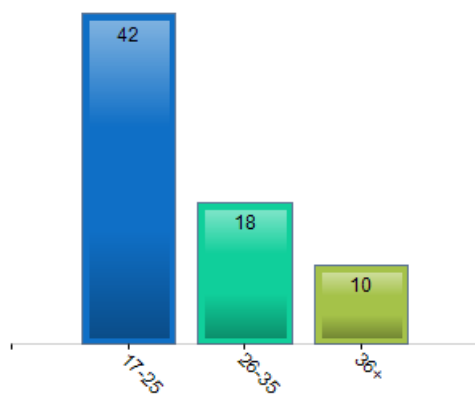
Nationality:

Response rate: **88.0%**



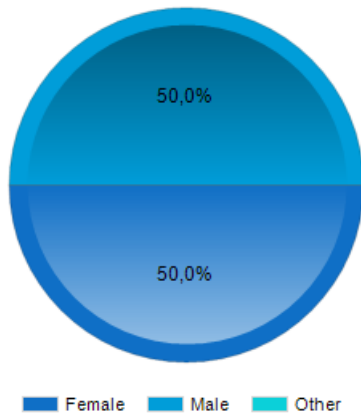
Age:

Response rate: **93.3%**



Gender

Response rate: **93.3%**



Feedback

Feedback about...

	Very poor	Poor	Average	Good	Excellent	Total
Classroom experience (How did you enjoy online classes?)	0.0%	4.0%	20.0%	41.3%	34.7%	100.0%
Quality of lectures	0.0%	2.7%	12.0%	38.7%	46.7%	100.0%

Interest in the sessions:

	Very low	Low	Moderate	High	Very high	Total
Utility of synchrotron light for society: Research on the COVID-19	0.0%	6.7%	22.7%	37.3%	33.3%	100.0%
Presentations of synchrotron SOLEIL, MAX IV and ELI-ALPS laser center	0.0%	4.0%	25.3%	46.7%	24.0%	100.0%
Illustrated applications of these light sources in Biomedical Research	1.3%	4.0%	24.0%	34.7%	36.0%	100.0%
Illustrated applications of these light sources in Food and Environmental Science	1.3%	5.3%	25.3%	45.3%	22.7%	100.0%
Career orientation: Overview of professional opportunities in large-scale facilities	0.0%	4.0%	49.3%	30.7%	16.0%	100.0%
Networking with people of different professions working in SOLEIL synchrotron, France	0.0%	6.7%	32.0%	32.0%	29.3%	100.0%
Interested by an experiment at a large-scale facility?	0.0%	8.0%	22.7%	44.0%	25.3%	100.0%
Virtual tour of large-scale facilities	0.0%	5.3%	32.0%	44.0%	18.7%	100.0%

Quality of the content:

	Very poor	Poor	Average	Good	Excellent	Total
Utility of synchrotron light for society: Research on the COVID-19	0.0%	2.7%	18.7%	45.3%	33.3%	100.0%
Presentations of synchrotron SOLEIL, MAX IV and ELI-ALPS laser center	0.0%	1.3%	17.3%	40.0%	41.3%	100.0%
Illustrated applications of these light sources in Biomedical Research	0.0%	1.3%	18.7%	34.7%	45.3%	100.0%
Illustrated applications of these light sources in Food and Environmental Science	0.0%	2.7%	17.3%	41.3%	38.7%	100.0%
Career orientation: Overview of professional opportunities in large-scale facilities	0.0%	4.0%	28.0%	41.3%	26.7%	100.0%
Networking with people of different professions working in SOLEIL synchrotron, France	0.0%	2.7%	22.7%	42.7%	32.0%	100.0%
Interested by an experiment at a large-scale facility?	0.0%	4.0%	14.7%	50.7%	30.7%	100.0%
Virtual tour of large-scale facilities	0.0%	4.0%	24.0%	42.7%	29.3%	100.0%

Feedback about the online character of the event:

	Totally disagree	Rather disagree	Moderately agree	Rather agree	Totally agree	Total
It was easier to attend because the summer school was online.	0.0%	5.3%	17.3%	29.3%	48.0%	100.0%
The sound and image quality was satisfactory.	0.0%	2.7%	24.0%	34.7%	38.7%	100.0%
My concentration was as good as in a face-to-face summer school.	9.3%	10.7%	36.0%	22.7%	21.3%	100.0%
The chat function allowed for enough interaction.	0.0%	8.0%	28.0%	26.7%	37.3%	100.0%
Instructions were clear.	0.0%	0.0%	18.7%	36.0%	45.3%	100.0%
The summer school was generally well structured.	0.0%	1.4%	12.2%	28.4%	58.1%	100.0%
I would prefer the next EUGLOH Summer School to be virtual as this one, even after the COVID-19 pandemic.	10.7%	21.3%	24.0%	14.7%	29.3%	100.0%
Total	2.9%	7.1%	22.9%	27.5%	39.7%	

How much do you agree with following statements?

	Totally disagree	Rather disagree	Moderately agree	Rather agree	Totally agree	Total
I have learned a lot during the summer school.	0.0%	0.0%	28.0%	33.3%	38.7%	100.0%
My interest in the summer school topics has risen due to my participation.	0.0%	2.7%	14.7%	36.0%	46.7%	100.0%
I can very well put into practice what I have learned in the summer school.	1.3%	10.7%	41.3%	26.7%	20.0%	100.0%
I established new professional contacts during the summer school.	2.7%	20.0%	53.3%	12.0%	12.0%	100.0%
I established new international contacts during the summer school.	5.3%	20.0%	49.3%	10.7%	14.7%	100.0%

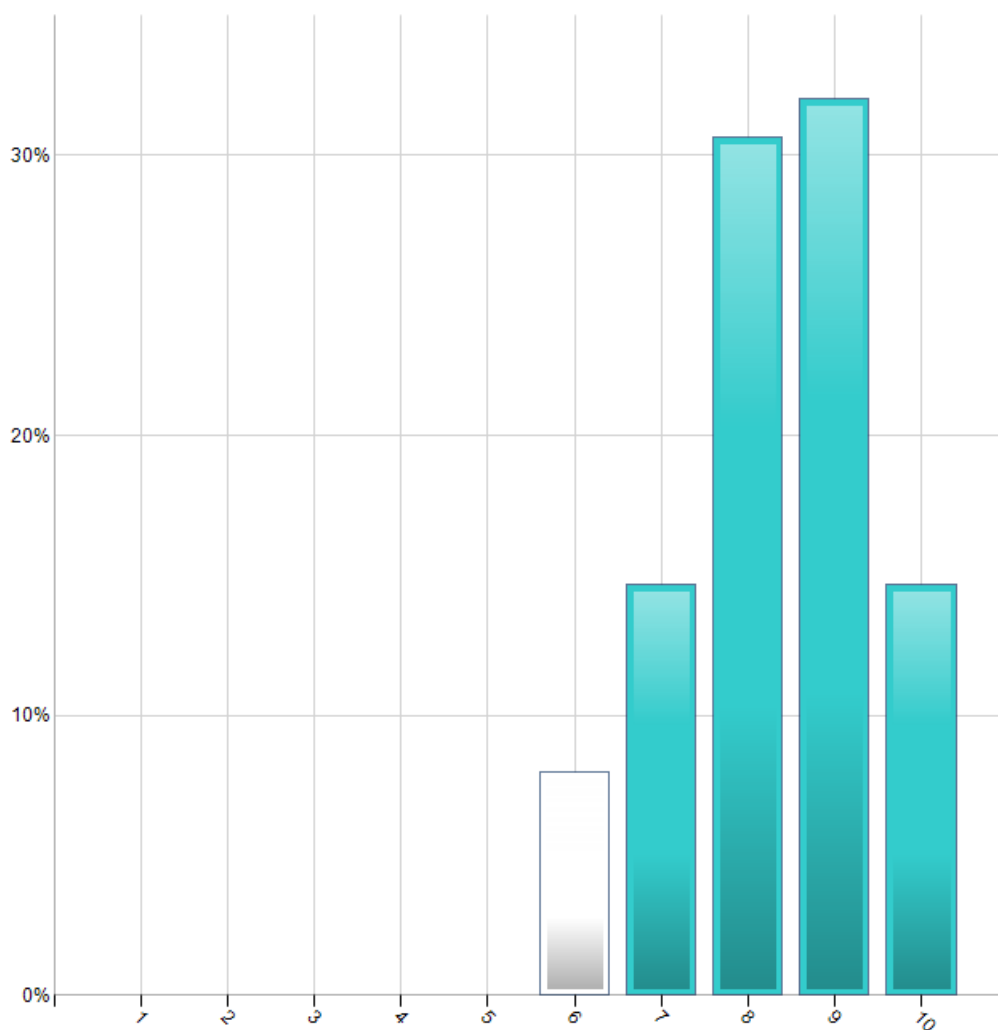
I have met people with similar interests during the summer school.	4.0%	24.0%	38.7%	22.7%	10.7%	100.0%
Thanks to the summer school, I broadened my personal horizon.	0.0%	2.7%	28.0%	37.3%	32.0%	100.0%
Thanks to the summer school, I broadened my international experience.	0.0%	10.7%	22.7%	28.0%	38.7%	100.0%
Thanks to the summer school, I received new impulses for my personal development.	1.3%	5.3%	28.0%	25.3%	40.0%	100.0%
The participation in the summer school contributed to seeing myself as a European citizen.	4.0%	9.3%	34.7%	24.0%	28.0%	100.0%
The participation in the summer school increased to my identification with European values.	2.7%	6.7%	37.3%	26.7%	26.7%	100.0%

Overall, on a scale from 1-10 (1 being the lowest number and 10 being the highest), how would you rate the summer school?

Response rate: **100.0%**

Mean = **8.31** Median = **8.00** Std deviation = **1.14**

Min = **6.00** Max = **10.00**



Final comments:

Response rate: **56.0%**

Being a biologist more than a physicist, many of the concepts presented during this summer school were kind of complex, to me. I only had general knowledge about them. However, thanks to the expertise of the speakers and the clarity of their speeches, I could gain a bit of knowledge about all these subjects, and have now to make my own research in order to understand everything better.

It was a great experience that I would recommend to anyone interested in research and science. Once again, thank you.

Thank you for arranging all these talks despite the pandemic. The first two days (I could not attend the last two) were extremely instructive.

As the school had an interdisciplinary character and was addressed to all students, I thought that the issues discussed would not be so technical and detailed and that someone with no similar background would be able to understand more and especially see the practical applications and the connection to the reality. For me it was difficult to follow due to many field terms and diagrams that I am not familiar with. The practical session was though of a high level and very good experience, I could follow the whole 2 days easily and participate actively.

Congrats on this first EUGLOH summer school !

EUGLOH Summer School boosted my confidence in research career.

Gostei muito da Summer School. Foi bastante educativa e permitiu-me tomar conhecimento com uma área de estudo desconhecida para mim. Gostei do painel científico escolhido e do conteúdo leccionado.

great course, great people. should be continued (face-to-face or mixed face-to-face and via e-campus)

I also hope to take part in a EUGLOH summer school in the future offline, too :)

I am really happy that I could attend this summer school despite the Covid-19 situation. I look forward to joining UP Saclay with even more enthusiasm because of the interactions during the summer school. I definitely expanded my knowledge on the applications of synchrotron radiation and feel satisfied with respect to the expectation I had from the summer school. I did face some network issue due to my slow internet so I would definitely hope that I get to attend such a summer school in person rather than virtually.

I am really happy to be part of this experience. It was a fantastic feeling to learn how students from other countries think, and how high quality and fascinating education can be. I do really hope that my university will learn a lot from You!

I enjoyed the summer school and thought it was a good way to gain some perspective for my future career

I enjoyed this school ! Very interesting program ! And everything is well organized

I hope to participate next year offline summer schools organized by EUGLOH.

I just don't give a 10 because I think there is always room for improvement. The summer school was fantastic. Very well organized, attentive and quick response to emails, very interesting activities, experienced and available speakers, attentive and dynamic moderators. It was an excellent experience.

I would have liked to hear a more theoretical presentation of how ELI works from inside.

I would like to express my gratitude for organizing such an excellent event.

I would recommend to other student when I receive the information for the next event. But I think you should put the next event on social media (linkedin) or send university email to all students i think not many students know this event

I'm really thankful for this opportunity, this was an amazing and truly rewarding experience!

It was a good experience for me to participate at this summer school. Very interesting presentations, thank you!

It was a great experience and offer a chance to learn new things and be in contact with professionals from different areas. The presentations were fun and everyone did a good job, even though it was a new experience for everyone.

It was a great opportunity! Thank you! :D!

It was a very nice surprise to see that the school was so well organized and managed on the eCampus platform!! I hope that everyone will appreciate the effort behind keeping such a program alive in this weird times.

It was overall a very interesting and well organized summer school, even if I found some conferences less interesting and harder to follow (no visible plan, a lot of acronyms and technical lingo...) , but maybe it is just a personal opinion.

Lecturers were selected timely and totally fulfilled my expectations. Thanks once again!

Practical sessions were awesome, Divya was great, super helpful, the whole process was flowing, examples were really interesting. Rare to find that. And I really, really appreciate being selected for the practical sessions, I realize not everyone got the place, I know I was lucky, I tried to take as much as I could from the practical sessions, and I learned a lot. Thanks for all the support and information from Slavka too.

Really nicely planned, well done Matthieu & Slavka!

Special thanks to Slavka and Matthieu.

Such an interesting experience! I would like to have similar summer school's programmes. I would also like to thank Slavka for being very active responding to my questions and also for being a huge part of this organisation.

Thank you

Thank You everyone.

Thank you for this activity. It is my first online school experience. As I interested in physics and medical science, this school provides me to link these two fields for the future knowledge. Thank you very much for the organization and very kind support.

Thank you for this programme.

Thank you so much for this incredible and amazing efforts to get the summer school online.

thank you very much for all the effort you put. it was a good, easy going, well thought program

Thank You very much for the high quality summer school. It was 1st summer school of my life, and you set the bar very high :)

Thank you very much to all the organizers and volunteers! The summer school is well structured, the instruction is given on time and correctly. I really appreciate the efforts to organize online lecture, encourage online interaction. Apart from the satisfaction with the lectures and practical, I feel very happy during the summer school thanks to the energy of Dr. Matthieu and Prof. Slavka.

Thank you very much! I learned a lot. You make a very good organization. What a pity we can't do this face to face. See you on Porto :)

Thanks to You I could experience how much better education can be organized than in my country.

The contents are satisfying but the network and video performance need to be optimized.

The program as a whole is really good. Efforts of coordinators and people behind this need a huge thump up. the summer school is very good, if we can have some visit and manipulation instruction, that will be perfect

The summer school was very well organized even in the online format, showing that the organizers did a really good job! The lectures were very interesting and high-quality with experts in the area. This was a very valuable experience.

very good experience ! the presentations were very interesting and the school was very well organised.

Very interesting school and very well organized !

Very well organised and excellent lectures. I am very pleased and happy to had the chance to participate i the summer school.

Very well organized courses with a lot of interesting topics and activities. I was pleased to follow the summer school. Maybe more difficult to follow at and less interactive in visioconference nevertheless I would not have the opportunity to follow it otherwise.

Wish to be next time virtual

You gave me the chance to learn more about large scale-facilities ,connection with SOEIL and their ecosystem ,connection with one of the best Researches in science in Europe and students from diferent countries .