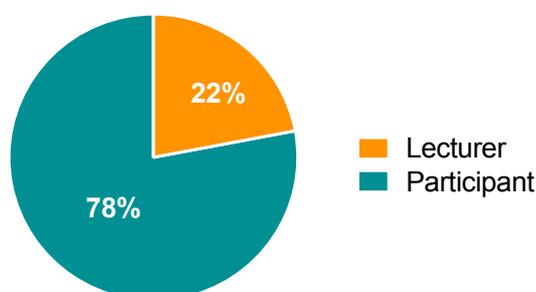


Bilan des évaluations

École thématique MetBio (2 au 6/10/2022)

Un formulaire en ligne a été envoyé à tous les participants et intervenants. Nous avons reçu 59 réponses aux évaluations (environ 76% de taux de participation). Voici une synthèse des réponses.

You were



In your opinion, did the program adequately cover the field of the school ?

According to **100%** of the participants who answered the survey, the program covered adequately the field of the school.

Comments

Great environments, great atmosphere, great students

Many spectroscopies were presented along with the fundamentals in bio inorganic chemistry

All principle techniques were covered!

Yes, however almost all examples were about metalloproteins, and it would have been interesting to vary the examples because not all participants study metalloproteins.

Great variety of lectures which clearly explained different applications of the various techniques.

The lectures covered a wide range of techniques to study metals in biology, from theory to practical examples, and I learnt a lot of things. Maybe one more lecture could be added at the end to present a case-study where multiple techniques are used to understand about a single biological system.

It is a very nice experience for me. The lectures are very nice. I learned a lot. Hope the next activity!

I really appreciated the wide range of techniques that were covered by the school and its application to metals in biology.

Very good

Shorter Sessions, more basic info at the beginning of the lectures

The 3rd French Bioinorganic Chemistry Summer School was an amazing opportunity to learn cutting-edge techniques of the field. This was accomplished by lecture and by practicals in the laboratories at CNRS Marseille and Aix-Marseille Université. I am extremely happy to have the privilege in being selected as one of the participants because I left with some strong motivations to research in new directions and to develop on some new experiments. By being able to leave the summer school this way, it has absolutely accomplished its mission, and I congratulate the organizing committee for their excellent efforts.

I felt the field of methods for studying metals was adequately covered with a large range of techniques

Very detailed

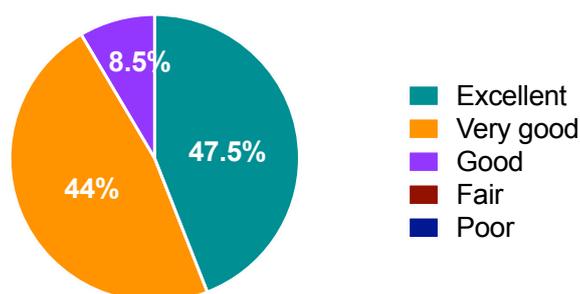
Great occasion to discover various fields and their applications

Le programme, que ce soit les lectures ou practicals étaient vraiment top et enrichissant

The different topics covered in the lectures did a really good job at providing a broad overview of metals in biology, successfully achieving the aim of the school.

Les sujets abordés sont vastes dans l'ensemble, c'est du plus basique au plus compliqué. C'est un bon point. Malheureusement c'est trop dense et y a des techniques que j'ai un peu zappé parce que je me suis noyé dans un flow de notions, même basiques comme les orbitales. Si les premiers jours qui traitent de manière théorique étaient plus légers ou entrecoupé de practicals ca aurait été plus agréable, matin théorique après-midi practicals.

Quality of the lectures



Comments

The level at which lectures were pitched varied a lot. As a lecturer, it would be useful to have a better understanding of the backgrounds of the students before the school, so that the lecture can be tailored accordingly.

The lectures were all very good, given by pedagogic lecturers

The slides were clear

Some lecturers maybe needed to go back to more basic concepts before diving into more complex aspects

Most were very adequate, others were a bit too high level (at least for me).

Some practicals were really good with a good first reminder of the techniques used, but some of them were too fast about how the technique works (which was not a prerequisite for everybody) and spend too much time on examples.

Speakers were very clear, spoke well and providing entertaining and interesting content.

The lectures contain many basic knowledges that I need to learn. It is very nice.

As the school went into several techniques, the majority of the participants did not have experience with most of them, while having more expertise in others. I think that the best lectures showed more of an overview of the techniques basics and explained the value of the technique for specific research questions (EPR, eChem, etc.). Other presentations briefly explained the basics, after which they went to the cutting edge research that is performed (NMR). This made these presentations more difficult to follow for the people that had little experience. In the end I think it is more valuable to know what a technique can be used for and what the basics are, so that people more easily can implement the technique in their research and become an expert in their application of the technique.

Very interesting lectures and personalities behind.

Very good

The one aspect with lectures that I felt could be improved was the level of information conveyed. A lot of the lecturers assumed a lot of pre-knowledge and talked about their research in-depth. As the event is advertised as a 'school', I feel it would be more beneficial to the participants if the lecturers

at least started from the basics. The lecture in X-Ray crystallography by Dr. Elsa Garcin is a wonderful example.

Sometimes too much complicated example and not enough basic theory

Sometimes the lectures were a bit too advanced to understand. Maybe more time on the basics would make them easier to understand.

The bioinorganic lecture series was an assembly of experts in the field of Bioinorganic Chemistry who are also experts in their specific experimental techniques (i.e., NMR, EPR, electrochemistry, Rapid kinetics, DFT/QM-MM, spectroscopy, etc.). It was inspiring to listen to these 1.5-hr long lectures and they were not taught at a level too advanced that an audience member could not understand, in fact, the speakers did a an excellent job on their presentations to communicate to the audience. I could imagine that this task could involve some work to craft their presentation slides, but nevertheless, the speakers managed and did great! I felt that I learned a lot from each of the lectures and the practicals as well. In particular, I was very excited to listen and learn about the fundamentals of electrochemistry that was presented by Dr. Christophe Léger, as well as the quantum mechanics and density functional theory by Dr. Jochen Blumberger. The other presenters also made impactful presentations!

Some lectures were too technical and I have found them hard to follow properly.

It was very intensive

Well constructed and dynamics presentations

The quality of the lectures was exceptionally high and generally they were very interesting. However, some of them were better than others. The best lectures in my opinion were those that started of introducing basic comments of the technique and throughout the talk built up on the complexity, with examples of how that technique was applied in specific research problems. EPR and EChem and Raman lectures were very good examples. Also having such long days of lectures made it difficult to concentrate.

passionate teachers which aims at transmit their knowledge

C'était bien mais j'insiste sur mon commentaire précédent. Néanmoins je ne néglige pas les effort qui ont été fait malgré cette contrainte de format. Je remercie l'ensemble des conférenciers ainsi que des organisateurs.

What aspects of the school met your expectations ? What did you like best?

Learning new concepts and interactions with students and lecturers

Overall a great format with a good number of lectures per day, in a wonderful environment.

Good coverage of the subject, from fundamentals to advanced aspects

The gathering of all of the topics in spectroscopy relevant for metals ions and the tutorials

Very enthusiastic and focused participants and lecturers. Nice location. Large time for practicals.

First involvements of the participants into the lectures with Slido and Co. Getting an insight into techniques that I always hear about, but ever understood was they are actually measuring or how it works.

Je dirais oui bien que je pense que la description sur le site semblait prendre en compte un thème plus large. Je ne pensais pas que l'école allait être tant portée sur les metalloprotéines mais d'avantage sur l'utilisation des métaux et leur caractérisation de manière plus générale, pour la biologie.

I really enjoyed lectures about how some techniques can be adapted in the presence of metal ions (NMR for instance), and with biological samples.

Wonderful location, interesting and diverse set of talks, interesting and interactive practicals

The large income of student and researchers from all Europe and even outside created an amazing environment for talk science and create new contacts. I found the poster sessions great, maybe a little improvement would be to have the posters more accessible during the coffee breaks. Another thing I really liked are the practicals, the groups were little enough to allow everyone to get in touch with the technique and the instruments.

The environment, lectures, practicals. The environment is the best aspect that I like.

All my expectation were met and exceeded. I really enjoyed getting an overview of the different techniques that are used in MetBio research. Also, the practical provided valuable information on how to implement the knowledge gained during the lecture into practise in your own lab.

I very much liked the practical part and also the combination of known content with something new or a more developed method.

Lectures on technical aspects but the "basis" were good as well.

The school by and large met the expectations I had of it. The chance to exchange ideas with people working in vastly different fields was a nice bonus.

The school gave the opportunity to recollect the basic principles of different techniques and also showed how it can be applied to our research

High scope of different characterization technique with experts in the domain

Practicals

The EPR and electrochemistry lectures were particularly good

The school met all of my expectations. The division between lectures, practicals, and poster session events made a wholesome learning experience. Even the availability of coffee and snacks was excellent because I have been to conferences in the past that would resist giving food and drink for most of the duration. In this case, food and drink was always available and that is a very important feature for any conference, in my opinion.

Practicals were very interesting

The program was perfect and very well organised! The practicals were fantastic!

The courses and thematics were good, the place and the overall atmosphere was great

The school gave a very good introduction to different techniques used to study metalloproteins. I particularly enjoyed the crystallography and cryoEM lectures.

I really liked the practicals, especially X-ray.

The practicals

The best lecture was the EPR.

J'ai aimé les cours, les tp aussi, l'électrochimie et la rpe à Saint Jérôme sont mes préférés

The program was very diverse, including practicals was great and the context in general was beautiful

The lectures were all really interesting as well as the practicals useful. I particularly appreciated the Introduction lecture on Metals in Biology, the EPR and electrochemistry lectures and the ones on vibrational spectroscopies and CryoEM. They were really pedagogic for people not in the field.

J'ai pu énormément apprendre et en plus les TPs ont permis de concrétiser les notions pour les appliquer à sa recherche !

The demonstrations of the instruments and spectroscopic techniques.

The lectures and practicals were very informative and valuable. It was great to have the opportunity to connect with so many researchers, both participants and lecturers. And the location was very lovely as well. An amazing opportunity at a reasonable price, as often such schools are inaccessible because of their high price tag.

The practical sessions

The quality of the exchanges and the overall ambiance were great, the communication and organization were also very well managed

Le cours de Elsa GARCIN était bien et très clair on voit de l'expression jusqu'à la structure. Malheureusement elle n'a pas eu assez de temps développer la résolution de la structure.

What aspects of the school did you find unsatisfactory, if any ? What did you dislike most?

3 h back-to-back lectures is too long.

None

None (or may be the lack of WIFI in the rooms ? But that was minor)

DFT tutorial was carried out in such a way that participants were given a short instruction, and afterwards were left to do very mechanical things on their own, without being given any interpretation of results or discussion. The whole practical course came down to copying and pasting file names, and opening files without any clarity of what all the results in the output mean, and how we can make our own scripts for input.

Definitely, the coverage of vegetarian/vegan food (especially during the lunch). And maybe the too high level of some of the lectures (especially XAS & Mössbauer)

Les exemples étaient peut être trop tournés vers les metalloprotéines (métaux dans la biologie) et pas assez sur les métaux pour la biologie à mon goût.

It would have been nice to have examples about peptides/metal interactions and/or interaction of inorganic drugs with their targets, to cover more fields of bioinorganic chemistry. Some conferences were really too short on the theoretical part about the technique (XAS and vibrational spectroscopies especially) and too much time was taken for long examples.

Would have been better to divide the coffee breaks into several shorter breaks. Two 90 minute talks unbroken is simply too long for adequate focus or without gaps to stretch your legs, toilet breaks etc.

No. But one thing I want to say. My room does not have wifi...

Some of the lectures went to the cutting edge of the research too quickly. As most of the students will at best be using 4-5 techniques, they won't be experts in the majority of them. An example of such a lecture that too quickly went into specifics was NMR.

The first two days were very long, but I understand that there is a lot of program and lectures that need to be included.

Late night poster sessions

The school could have been extended for a day or two so that the schedule could have been more relaxed. The first 3 days in particular were really hectic (we were occupied until 22h, the poster sessions got extended well beyond 22h too).

Very intense program

The time-table. The fact that we had lectures till 22:00 on Sun, a day when people had just arrived after long travels (some as far as the US) meant that people were not only inattentive during the lectures, but also had a diminished appetite for socialization/networking, which is arguably just as important a function of the school as the lectures, if not more. While I do not know the logistical challenges behind it, it might be helpful to have lectures on half of Friday before leaving rather than on Sun when everyone wants to get over the travel tiredness.

For me, the schedule duration was a bit longer

Program a little bit too dense difficult to stay focus on such difficult subject for 8h straight

The DFT practical was pitched at the wrong level. Was really hard to work through the exercises because the exercises assumed a lot of knowledge of the structure of the output of the computed DFT files (and obviously we didn't have any prior experience) and of aspects of chemistry that we weren't all familiar with (like g-tensors...). It would have also been useful to learn how to write/prepare input files so we could have actually learnt how to compute our own problems.

Nothing was unsatisfactory. This summer school was perfect.

The timing was very tight, little time to rest or sleep... 8 am to 10 pm it's complicated to stay focused all the day.

Nothing was unsatisfactory

Maybe the two first days were a little bit charged, with the poster session ending at 10pm

The 1h30 duration of lecture in one sitting is probably too long, after 30 minutes people generally start to lose concentration, a 5-minute pause should be included for each 1h30 lecture.

I think the program was a bit tight, maybe adding an extra day would be better.

A bit tense schedule

The schedule was very exhausting. The poster sessions could have been held multiple times throughout the week.

The schedule. Would be good to have at least one morning or afternoon free. Also the lecture in the first day from 20:30-22h was not not productive bc everyone was too tired.

J'aurais préféré plus d'explications de base sur La dft et les slides de la présentation

The program was slightly too condensed in my opinion, but this is completely understandable considering the price of the rents in the summer village

The lecture on coordination chemistry was really difficult to follow for someone who didn't study it at the university. In general being pedagogic in that first lecture is extremely important to let people who didn't focus their study on chemistry to better understand some techniques in which they are not specialists.

It was excellently executed, but the schedule was very tight and exhausting.

How long the days were on Monday and Tuesday, particularly if you were presenting in the poster session; from 8:30 am till 10 pm is a long time to be fully concentrated.

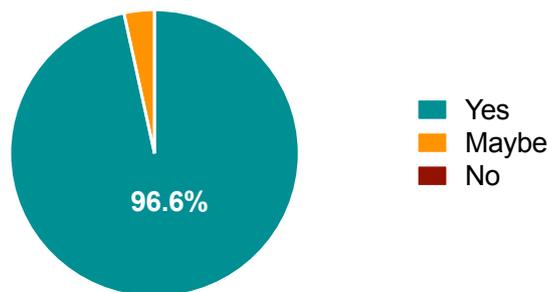
The time management

Maybe half a day of free-time to visit the city or enjoy the sea

Le TP de DFT était incompréhensible, je suis pas du tout familier à ça. Ça avait l'air génial les résultats obtenues semblent important et en plus il n'y pas besoin d'être au labo c'est trop dommage que j'ai pas pu comprendre.

De plus il y avait d'autre TP qui m'intéressait, même si je connais un peu, l'expertise de cristallographe m'était très importante et j'aurais aimé assisté au TP d'Elsa GARCIN.

Did you find that the practicals were interesting and helpful ?



Comments

Most of them.

Le TP de RMN ne m'a pas paru pertinent car nous n'avons pas eu l'occasion de manipuler et les exemples développés n'apportaient rien de plus par rapport au cours de lundi.

Practicals were really interesting, especially with the small size of the groups, which allowed to really interact with the researchers.

I enjoyed the practicals, and everyone who taught them was very knowledgeable and likeable

It is very important part to do some practicals.

I especially liked the electrochemical and the EPR part where I could relate to things that I had learnt during my studies/PhD but then deepen my knowledge by learning new applications.

Maybe more practicals with 1h of theory course at the beginning

Each of the four practicals that I attended were well taught. The electrochemistry practical by Dr. Vincent Fourmond was exceptional and I was so inspired, that I am even building a new electrochemical apparatus right now in my laboratory to work on a new research direction. The other practicals on NMR, EPR, and X-ray Crystallography/AlphaFold had excellent examples of demonstrating those techniques.

A little disappointed with NMR practical, I expected more analysis but as it was on proteins we could not

I loved them especially electrochemistry and stopped flow

The NMR practical could be better.

Il manquait un support écrit.

The best part of the course was the practices

EChem & EPR were excellent, it was so useful to have the theory of the data you obtained explained to you as you went along the practical and also starting with basic measurements and then going up in complexity. X-ray crystallography was also excellent with how involved it was and how much help you received. NMR was less interesting, mainly due to it feeling more like a lecture rather than a practical.

Was good to see the apparatus and the way the analysis could be conducted

Oui les practicals sont génial, juste DFT qui restera un cauchemar. Mais en plus j'ai pas compris pourquoi j'étais le seul qui n'a pas compris. Ils ont tous fait un peu de DFT et connaissait les calculs à faire au bon moment pour ensuite les interpréter.. Mais moi aussi je voulais faire ça ?!! Il y avait plusieurs pages d'exo si je commençais à poser des questions il aurait fallu plusieurs jours...

What methods (courses, practicals, informal discussions, ...) did you find the most useful for this school ?

Everything

Both

All

Practicals

Courses and informal discussions

Knowing DFT in general is useful, but the practical was carried out poorly.

Stopped-Flow, Fast Kinetics

J'ai trouvé la RPE, que ce soit le cours ou le TP, très intéressant et utile.

I really enjoyed the practicals part

X ray crystallography (Elsa Garcin) and electrochemistry (Christophe Leger)

poster session, electrochemistry and X-ray crystallography/alphafold

All of them, for different reasons. Courses were essential to then make the practical afterwards, and practicals were very useful to know how the technique work in real life. Informal discussion were useful to create links and a good environment to discuss science.

I think courses and practicals are the most useful.

I think both the lectures an practicals were very valuable in their own way. During the lectures we were able to cover a lot of techniques and get the basics. During the practicals on the other hand, we could get a sense of how the techniques are performed and what is needed in terms of machinery and samples.

The practicals were most useful to understand the application of the techniques and to discuss everything in detail with the group.

EPR, stop flow and mossbauer, raman.

Crystallography

EPR

Courses

Stopped flow / Electrochemistry / EPR practicals

Both the lectures and practicals were useful. The EPR practical and the electrochemistry practical was amazing.

The practicals were really interesting and allow us to better understand the different techniques showed during the lectures and make them really understandable. Moreover, as we are already using them for our research, we could exchange with some specialists to improve our experiments and understand the different problems in these fields that we could encounter.

All of the methods to learn about were most useful for me to learn about, indeed, it cannot be just one technique to consider as bioinorganic chemistry relies on the orchestration of all of these techniques to really elucidate a metallo-protein/metalloenzyme mechanism, structure, or function.

Practicals first, and some courses

Practicals were great to apply the (essential) courses in real life, as well as informal discussions/posters to get to know other research made by the others.

Courses and discussions around poster sessions.

NMR in metalloprotein

Practicals

EPR

Electrochimie et rpe

EPR and Rx

An association of both theory and practice is best in my opinion. I felt that the balance of both was greatly done here

The practicals. Observing the techniques practice allows to better interiorize the subject and consciously reason if this could be useful for our projects.

The lectures on EPR, and crystallography were very useful for me, along with the practicals on stopped flow kinetics and NMR.

I think all those methods were extremely useful and they complemented each other very well, ensuring that I got as much as possible out of the summer school. They all played a key role. Also it was a genius idea to have the school timetable on the back of your name card, such a simple thing but made life so much easier.

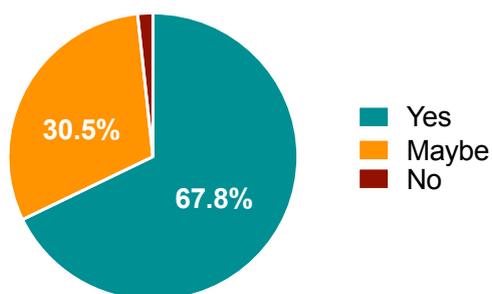
The lecture on electrochemistry impressed me, for example i learned that many other things than determine the redox potentials were possible with CV. The introduction by Clotilde was also very interesting and helpful to recontextualize the theme of the summer school.

Moi je retiens mes 3 practicals :

RMN pour la discussion

Electrochemistry pour tout ainsi que le cours

Did you find that the pre-requisite for this school were clearly stated ?



Comments

Unclear to me as a lecturer.

Personally, not being expert in metalloproteins, I was not completely sure about the profile of the participants

I was not super aware of the "prerequisites", but since I understood most of it, I think it was fine.

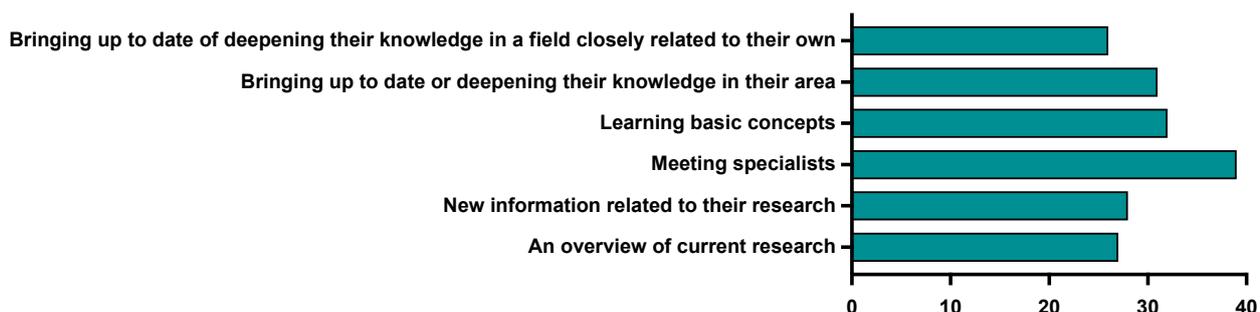
I liked the practicals, but my suggestion would be that several spent on the basics. I think after being shown a fundamental experiment in practise I would have liked a more tutorial based format where a range of more advanced biological applications were discussed.

I think it is clearly stated.

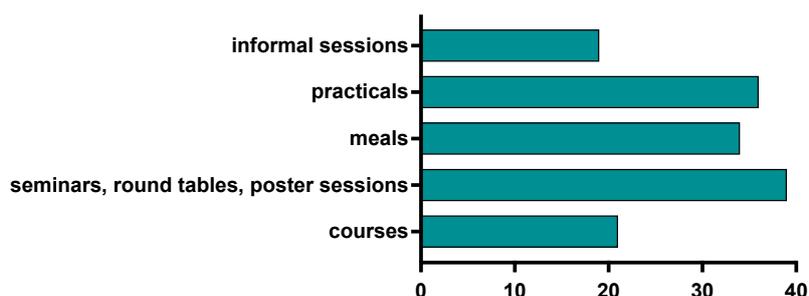
The schooled focused on topics that aren't my field so I'm not the best judge here

J'avais pas compris ce qui m'attendais pour la DFT. Le reste c'est bon c'est nickel.

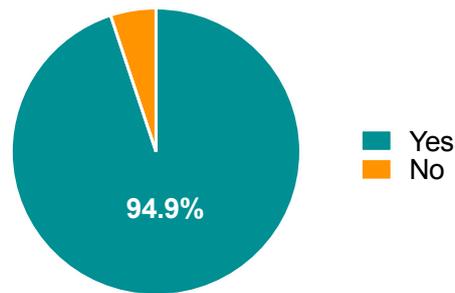
What were the benefits of this school for its participants?



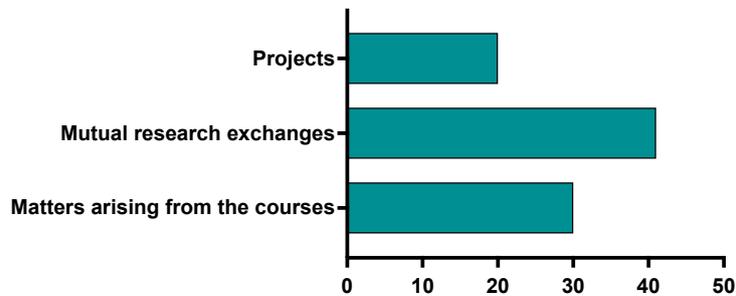
Please specify which of the following led to the most interesting interactions with participants or lecturers ?



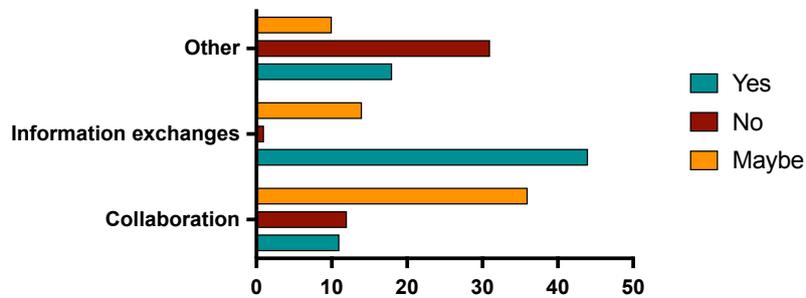
Did you have many professional discussions with participants or lecturers?



If yes what were the subjects ?



Do you think that exchanges will develop into



What will come out of the school for you ?



Are you in favor of a continuation of this school ?

100% of the participants who answered the survey are in favor of the continuation of the school.

What are your suggestions for improvement? What do you think would be useful (another teaching or practical session etc.)?

Perhaps some activities early on to really encourage different groups to mingle (I noticed that often the same people clustered together)

1/2 additional day with lecture focusing not on the methods but on their combination to solve scientific problems

Posters should be in a spacious room where, if possible, a good acoustics

Identical content for the mandatory practicals

Vegetarian/Vegan Food

Peut-être un cours avec de la spectroscopie de fluorescence et UV-visible.

Maybe it would be nice for some techniques to have a sort of short lecture just before the practical of the same technique, to directly be able to interact with the researchers and see the technique in application.

Space the same amount of content over one additional day, split the practicals between a short focus on basic experiments and then a seminar like session on application, and give posters a defined space in the poster room - everyone put their posters in the middle on the first day and it was incredibly crowded and difficult to get a clear look at people's work.

Do a group activity like kayaking

If this school can be 2 weeks. It will be better.

making all presentations as accesible as for instance EPR and eChem

I did not understand why we had this tube in our bag... ;)

Take an extra day to lighten the days

Just let half a day for people to enjoy with everyone and rest

More practicals sessions

To improve this school, maybe some practicals in cryoEM could be added if it is possible

Although no improvements are necessary, if the summer school could have one added day for example, I would suggest to include a seminar symposium on the last day for oral presentations from experts in the field. Such oral presentations could be set for a maximum of 20-30 minutes per speaker.

A less intense pace to increase productivity

Probably a separate practical on data analysis for everybody that covers the main data you get from the practicals. (simulation of spectra, interpretation of the results,...)

During practicals, maybe show participants how to actually analyze the data instead of just pressing buttons on screen.

I think the summer school was complete in terms of topics. It was good to structure a first part of lectures and a second part of practicals. I would perhaps have preferred not to have the poster sessions that late in the evening and perhaps having an extra day to relax a bit the tight programme of the lectures. In the end I think it was a great experience anyway, and that it was really informative. Some suggestions: have the room with the posters open the whole week. Have lectures in the morning and practicals in the afternoon. Have at least one free afternoon. Have some informal cultural event involving everyone like a visit to a museum or a some group dynamics. Have a small coquetel party in the first or last night.

Spectroscopie de fluo

Maybe the school could be prolonged for one day to allow for more practical sessions. It could be worth it also to make round tables to help the students discuss together with the teachers on the techniques which could be useful for their project.

I would suggest splitting up the lecture sessions a bit or alternatively giving participants a choice as to what lectures to attend as almost 12 hours of lectures in a day is way too long. Other than that, the organisers put together an excellent program. Thank you!

More long time

Le point important je pense c'est de laisser digérer l'information.

On a scale of 1 to 10, how do you define your overall experience (1 = I wasted my time, 10 = I loved it) ?

