Evaluation of the 2025 International High Performance Computing Summer School (IHPCSS)

November 2025

Prepared for
IHPCSS Program Leads

IHPCSS Planning Committee

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Executive Summary

The 2025 International High Performance Computing Summer School was held July 6 – July 11 in Lisbon, Portugal. The summer school is sponsored by HPC SPECTRA, Pawsey, DRAC, R-CCS, the University of Illinois at Urbana Champaign, the University of Texas at Austin, NICIS CHPC, NITheCS, and EPCC.

The objective of the Summer School is "familiarize the best students in computational sciences with major state-of-the-art aspects of HPC and Big Data Analytics for a variety of scientific disciplines, catalyze the formation of networks, provide advanced mentoring, facilitate international exchange and open up further career options." (IHPCSS.org)

This report summarizes results from the 2025 IHPCSS evaluation activities.

Summary of Findings

- Students were mostly master's students, doctoral students, postdocs, and early-career educators/researchers. There was one undergraduate student.
- Nearly half of students reported being first-generation college students.
- Students represented numerous countries, with the largest contingents residing in Europe, the United States, Australia, and Japan.
- Males represented the majority of participants at 63.1%, a figure nearly double the 32.1% recorded for females.
- Students found the Summer School to be less challenging than they had anticipated.
- Nearly 100% of students rated their Summer School experience as successful.
- The formal mentoring structure remained a strength, with both students and mentors expressing high satisfaction.
- Over 92% of mentors viewed the returning mentor program as effective.

Summary of Recommendations

- **Adjust the Schedule to Promote Work-Life Balance and Deeper Engagement:** The program schedule could be optimized by reducing the intensity, dedicating specific time blocks for the programming challenge, and shortening or adding breaks to longer sessions.
- **Enhance Programming Challenge and Hands-On Learning:** Efforts should focus on clearly defining prerequisites to ease setup, providing more time and communal space for student work, and refining the challenge format and rules to maximize learning opportunities.
- **Improve Mentor Utilization and Structure:** Consider providing goal-setting prompts to students beforehand to make early discussions more efficient, increasing flexibility by allowing more time for one-on-one meetings, and exploring ways to more actively engage and empower mentors in guiding students and contributing to the school's operation.
- **Rethink Poster Session**: Improvement suggestions include returning to physical posters or providing displays, ensuring the event space is appropriately sized to manage noise, offering seating for accessibility, and considering a two-day schedule to reduce intensity.
- **Address Venue and Logistical Issues:** Increasing the variety of food options (such as providing more diverse choices at breakfast) and ensuring consistent Wi-Fi connectivity, especially in hotel rooms, to better support preparation and challenge work.

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Introduction

The 2025 International High Performance Computing Summer School was held July 6 – July 11 in Lisbon, Portugal. The summer school is sponsored by HPC SPECTRA, Pawsey, DRAC, R-CCS, the University of Illinois at Urbana Champaign, the University of Texas at Austin, NICIS CHPC, NITheCS, and EPCC.

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Method

The evaluation of the 2025 IHPCSS used surveys and a focus group to assess students' entry characteristics and expectations (pre-event survey), their thoughts during the Summer School (focus group interview), their perceptions upon exit from the Summer School (post-event survey), and the experience of the Summer School mentors (mentor post-event survey). All evaluation activities conducted on behalf of the IHPCSS are performed under the auspices of the Indiana University Institutional Review Board. Results of the pre-event survey, post-event survey, mentor post-event survey, and a general summary of the focus group interviews are presented here.

Two focus group sessions were scheduled for the 2025 IHPCSS students and mentors. Everyone was invited to participate; focus group sessions were held at the IHPCSS venue during lunch to make participation convenient and so as not to conflict with instruction or hands-on sessions. Focus group topics included the Summer School's Mentor Program and the Future of the IHPCSS.

Comments made by focus group participants are never ascribed to individuals and all comments are presented anonymously in reports and/or presentations. Though we customarily record sessions for the purpose of transcription as allowed by our IRB protocol, it should be noted that to speak more directly and with greater specificity, focus group participants requested that sessions not be recorded. Focus group discussions were captured in real time and transcribed as accurately as possible.

RESPONDENTS

Survey responses closely mirrored the overall participant cohort both by Sponsor (Table 1) and by self-reported gender (Table 2), indicating a representative sample across the pre- and post-event surveys.

Table 1. Survey Response Percentage by Sponsor.

Sponsor	Registration Data (N=90)	Pre-event Survey (N=87)	Post-event Survey (N=88)
Europe	37.8%	37.9%	38.6%
USA	26.7%	25.3%	25.0%
Canada	10.0%	9.2%	9.1%
Japan	10.0%	10.3%	10.2%
Australia	10.0%	10.3%	10.2%
United Kingdom	3.3%	4.6%	4.5%
South Africa	2.2%	2.3%	2.3%

Table 2. Survey Response Percentage by Self-reported Gender.

Gender	Pre-event Survey (N=84)	Post-event Survey (N=82)
Male	63.1%	64.6%
Female	32.1%	31.7%
Other response	2.4%	2.4%
Prefer not to disclose	2.4%	1.2%

Over 30% of respondents indicated that they were first-generation college students (Table 3). (Note that a first-generation college student is defined as a student whose parent(s)/legal guardian(s) have not completed a bachelor's degree at a four-year college or university.)

Table 3. Survey Response Percentage by Self-reported College Student Generation.

First-generation College Student	Pre-event Survey (N=83)	Post-event Survey (N=81)
No	54.2%	42.0%
Yes	43.4%	55.6%
Prefer not to disclose	2.4%	2.5%

FINDINGS

Pre-event Survey

Response Rate: 93.5% (87/93)

An online survey was administered to all admitted students prior to the Summer School to ascertain expectations and capture the demographics of the student cohort. Highlights of the pre-event survey included:

- Student expectations for networking and mentoring possibilities at the Summer School were very high (Figure 1).
- Students were master's students (13.1%), doctoral students (72.6%), postdocs (9.5%), or early-career researchers/educators (2.4%). In addition, one student was an undergraduate and one student listed their academic/professional status as "other."
- Most students identified as male (63.1%).
- Over two-fifths (43.4%) of the students were first-generation college students.
- Over half (56.0%) of the students expected the Summer School to be difficult, while the rest expected it to be neutral or easy (Figure 2).
- Among the 19 U.S. respondents, 26.3% were Asian, 21.1% African American, 21.1% Latino, and 31.6% White. (Note that this data was only collected for U.S. participants; respondents could choose more than one race/ethnicity.)
- Students expressed some concerns over what to expect from the Summer School in the areas of dietary considerations, personal preparedness, and the mentoring program.

Focus Group Interviews

Two focus group sessions were conducted among students and mentors participating in the 2025 IHPCSS. This year's focus group discussions explored general impressions of the Summer School and its future directions, and their experiences with the Mentor Program.

While focus group participants largely felt their Summer School experience was positive, they also offered comments on specific areas that could be improved. Students see the unique value in this program and their critiques and suggestions appear geared toward making it even more successful:

- *The schedule for the programming challenge is challenging for me. I would like more time and space to work on it. I would also prefer to have a specific room to work in, possibly with others working on the same project instead of working in my room.*
- *It would be better to have a separate session on how to address cultural differences*
- *Descriptions for parallel sessions are only visible to mentors but not to the students. Students have to choose according to the headline. The abstract exists; please make it public to people.*
- *It was not entirely clear if you should prepare a poster or a slide or slides; some people had to redo the poster to slides; Better to provide displays to show the poster.*
- *The setup is not good; I attended session A, the noise level was insane, I felt overwhelmed; in poster session B I had to leave because it was too much.*

Some students felt the Mentor Program wasn't for them:

- *Mandatory mentoring is not the right approach for me. My mentor also agrees to this; mainly because I am finishing my PhD, I know what I am doing.*
- *I am not disappointed, but the mentoring program is not helpful for me.*

Summarized comments from the focus groups are at the end of this report.

Post-event Survey

Response rate: 96.7% (88/91)

On the last day of the Summer School, students were asked to complete an online survey asking them to evaluate their experience. Of the 91 students invited to participate, 88 agreed to take part. Results were mostly very positive.

- While networking experiences slightly exceeded student expectations, the perceived value of participation of students from other countries fell short (Figure 1).
- 98.9% rate their Summer School experience as successful.
- 86.4% reported that the skills/knowledge gained in the Summer School would significantly contribute to their research.
- 94.3% reported that their goals for IHPCSS were achieved.
- 94.3% felt that the Summer School was well organized.
- 86.2% would return as mentors.
- 93.1% felt the Code of Conduct was effective in setting expectations.
- 95.4% were satisfied with technical assistance and support they received during the Summer School.
- 89.7% were satisfied with their mentor interactions.
- 96.6% of respondents felt the health and safety precautions were sufficient.
- Over half (52.9%) of participants found the Summer School to be of neutral challenge; 31.0% found it difficult or very difficult (Figure 2).

Figure 1. Networking and Mentoring: Student Expectations vs Student Experience.

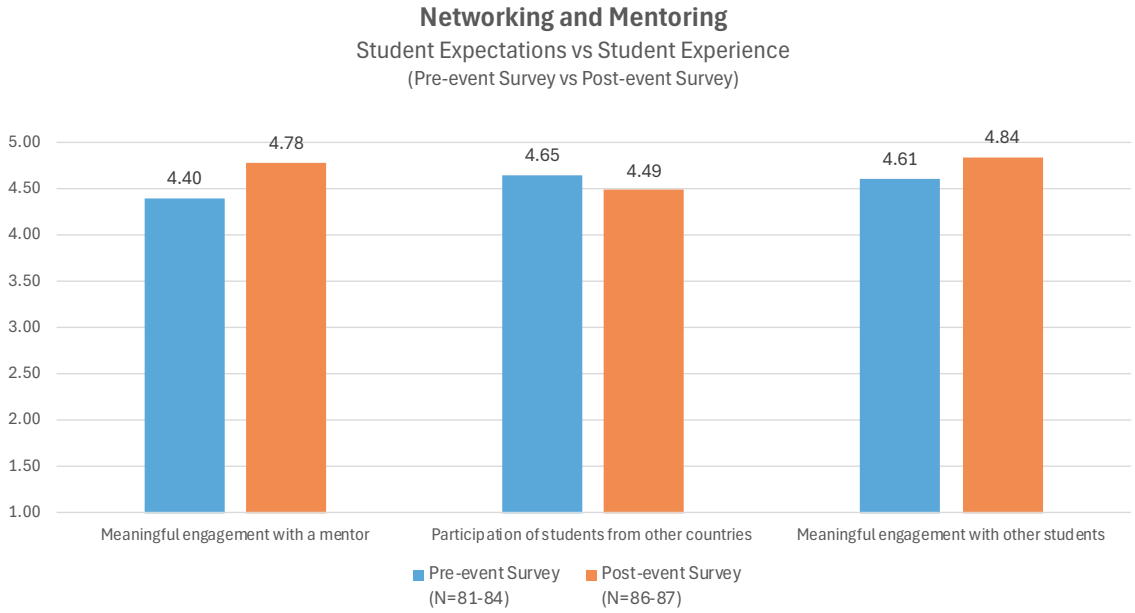
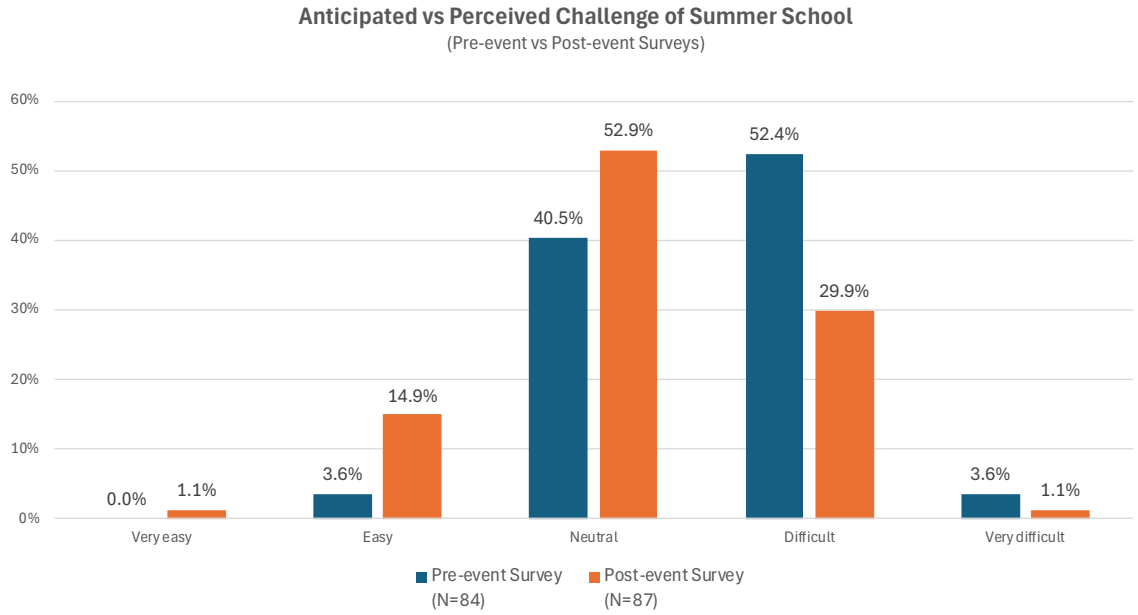


Figure 2. Anticipated vs Perceived Challenge of 2025 IHPCSS.



The general sentiment toward the 2025 International HPC Summer School was overwhelmingly positive regarding its unique value and community impact, with areas for improvement primarily relating to the schedule's intensity and logistical challenges.

- *I learned that networking is very important and how to do it. I also learned how it can help you. Many topics besides the pure HPC part were interesting, especially because you usually don't discuss them with your supervisor. You therefore get very valuable hints. The wide variety of topics gave me many new ideas on how to work better.*
- *The resistance and slower, though[t]ful adaptation of ML/AI in general science HPC workflows is eye-opening.*
- *I gained confidence in my ability and place working in HPC. As a beginner, I entered this summer school feeling like a bit of an imposter, but I now see that I am valuable in this field and I learned a lot about both techniques for HPC and techniques for working in the field. I really appreciated the emphasis on soft skills like networking, presenting, and cultivating work life balance. This made me feel very supported and encouraged to keep going and learning.*
- *Seeing the staff and mentors' willingness to help and give back made me look forward to being an active member of the HPC community. The technical learning was great, but the most valuable thing was seeing how much the staff cared about us learning and their belief that we will do great things with this new knowledge.*
- *I gained a network which would have been really difficult to obtain. Also, I feel "important" to be part of someone else network which might need me in the future. Also, the interaction with mentors and returning student was very important because I got some honest opinion on a lot of topics, from life to research*

- *The schedule was extremely intense. I am not sure how it's possible to make it more feasible, as I would not cancel any sessions, perhaps increase parallelization of the sessions? Maybe increase it to 6 days to decrease the intensity? It was a lot of information and socializing and I could not get as much sleep as I need.*
- *Don't call it a poster session, if there are no posters!*

Additional topics suggested for future Summer Schools include:

- Hands-on machine learning (ML) and AI applications, including ML workflows (especially models other than CNNs), deep neural networks, and optimization.
- Performance and code optimization in areas such as performance programming, performance profiling, and optimization tools.
- Modern programming and systems such as GPU programming, CUDA programming, systems architecture, and lower-level software/hardware concepts.
- Emerging topics like quantum computing and discussions on sustainable computing (writing code aimed at reducing power consumption).

Complete results for the post-event survey are at the end of this report.

Mentor Post-event Survey

Response rate: 86.1% (31/36)

On the final day of the Summer School, mentors were asked to complete an online survey asking them to evaluate their experience. Over 85% of mentors responded. Results were mostly positive.

- Mentors were satisfied with the mentor matching process (92.9%), and the quality of engagement with students (96.7%).
- They were also satisfied with their engagement with other mentors/instructors (96.7%).
- Despite this satisfaction with the program, fewer mentors plan to keep in touch with students (76.7%) than with other mentors/instructors (93.3%).
- The returning mentor program was seen as effective (92.9%).
- 96.4% felt they received enough guidance from the planning committee to adequately prepare for the Summer School.

The consensus among the staff and mentor respondents is overwhelmingly positive, highlighting the program's unique value, excellent organization, and dedicated staff:

> *[T]he matching was done well, as a mentor I feel like I could assist in the areas they wanted mentoring, the students were inspiring and motivated to get as much as they could from the mentoring program, and the mentoring experience was a great reflection and learning opportunity for me as well.*

> *[I]t is still very nice to see year after year a cohort made of total beginners up to already established expert-levels all trying to dive deeper in HPC waters, together.*

> *The mentoring program as a consistent theme throughout the Summer School is unique, and I think both the students and staff respond very positively to it.*

> *The program was a good mix of lectures, hands on activities and discussion/mentoring. Having the mentors and students attend all sessions and meals together was very useful. The students themselves were excellent and actively engaged with the summer school and mentoring program.*

> *This school offers so much more, particularly individual career (and life) support through the profound mentoring concept, panel discussions, and additional engagement through the programming challenge. This school should retain all it's colourful aspects that make it so unique.*

> *I think that one big strength of the program is that it is incredibly responsive to feedback, so that the program has been steadily improving year over year.*

> *The staff and students all attend for the entire week; the mentoring program is a point of emphasis and continues throughout the week rather than just being a single activity; the event is truly international; and by the end there is a strong feeling of community.*

While highly satisfied with the program's core structure and logistics, the respondents noted consistent areas of concern related to the intensity of the schedule and the integration of major student activities:

- *I and a lot of participants often felt wiped out by the schedule. While the breaks were good, it's also worth remembering that students often felt compelled to miss sessions for personal / work reasons.*
- *There was not actually enough unstructured time for both engagement and personal needs, plus attending all sessions, plus rehearsing for my own session, plus engaging to some degree with the programming challenge (just as non-participating staff). But there are so many hours in a week...*
- *Not having enough time to do the programming challenge has been an issue raised every single year with a strong voice from a higher number of students, times and times again.*
- *A student mentioned to me that having a way for students to connect and form teams for the programming challenge ahead of time might be nice, and also a way for students to get to know each other before the School beyond just their geographic location.*
- *The 4 poster sessions in a row was intense. It might be OK to leave it that way, but having a place to sit during the lightning talks would really help people for whom standing for 4 hours is a challenge.*

Results for the mentor survey are at the end of this report.

Mentoring

The mentoring remains a unique and beneficial component of the Summer School, with participants confirming its efficacy: mentors reported that sessions were effective and they engaged meaningfully with students, while students were highly satisfied with their mentor interactions and 86.2% expressed interest in returning as mentors themselves.

When asked about the value of the mentoring sessions (1=Not at all valuable, 5=Very valuable), most students rated them as Valuable or Very valuable (Table 4).

Table 4. 2025 IHPCSS Value of Mentoring Sessions.

	Not at all valuable (1)	Somewhat valuable (2)	Neutral (3)	Valuable (4)	Very valuable (5)	Mean	Std Dev	Total
One-on-One Mentor Meetings	1.2%	6.0%	13.3%	28.9%	50.6%	4.22	0.97	83
Resource Fair	0.0%	6.7%	17.3%	24.0%	52.0%	4.21	0.96	75
Career Breakout Sessions	1.3%	5.2%	15.6%	27.3%	50.6%	4.21	0.97	77

Qualitative responses indicate that students consider mentoring to be a valuable part of the Summer School:

- *The staff/mentor/student ratio was unlike any other I've seen. It was great. The structure and the way it was designed for maximum positive experience was better than anything I've participated before. The attention to detail and the individual also stood out.*
- *The non-technical aspects, such as mentoring, are a distinctive feature and contribute to a unique value that sets this program apart from others.*
- *Seeing the staff and mentors' willingness to help and give back made me look forward to being an active member of the HPC community.*

Students and mentors provided feedback regarding challenges they faced and how the mentoring program could be improved:

- *My mentor is very skilled, but their expertise is somewhat outside my own area, which made it difficult for me to build a strong connection or fully engage in the collaboration.*
- *It's hard to tell which mentors are open to communication after the school. My mentor did not seem very open to ongoing relationship but I am keen to find more long term mentors.*

- *Even though having a mentor as a first point-of-contact was good, the rest of the mentoring process felt forced and it didn't really help me. Given that my mentor was very early on in their career (first/second year of PhD) and I was towards the end of my PhD, this was somewhat expected, but ultimately resulted in me having a better idea of many things than my mentor.*
- *[M]ore time for the mentoring sessions - 1h for the 1-on-1 is way too short. Career Fair could also be slightly longer. In both sessions some topics were left undiscussed and that is quite regretful. Having the lunch break directly after the 1-on-1 created an imbalance in time spent with each mentee (last one had more time).*

As seen in Figures 3 and 4, mentors and students were both generally satisfied with the mentoring program.

Figure 3. Mentor satisfaction with the mentoring program.

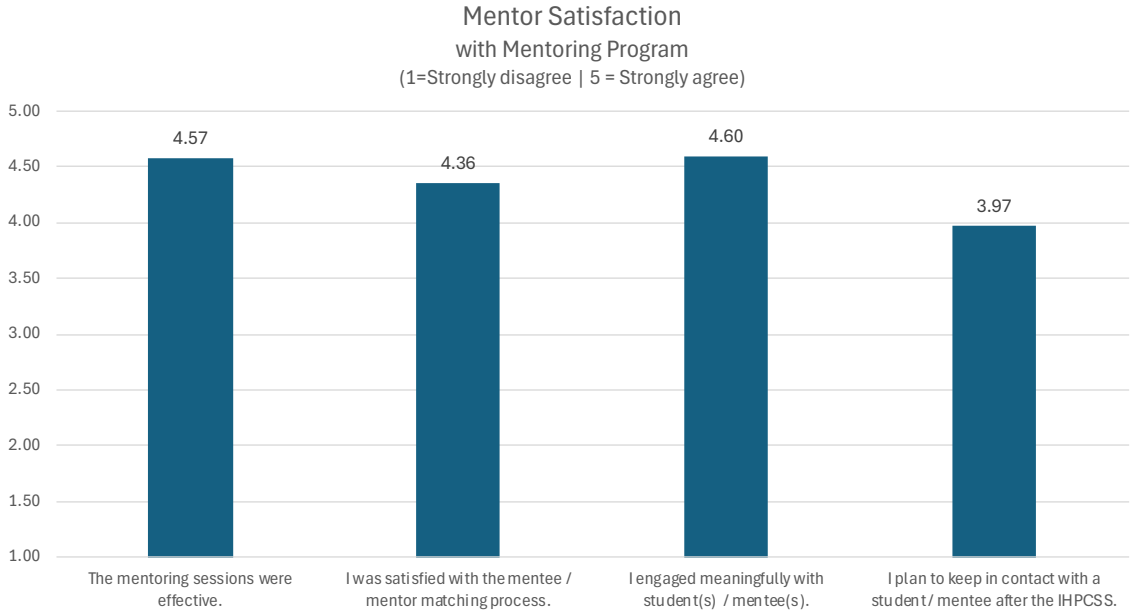
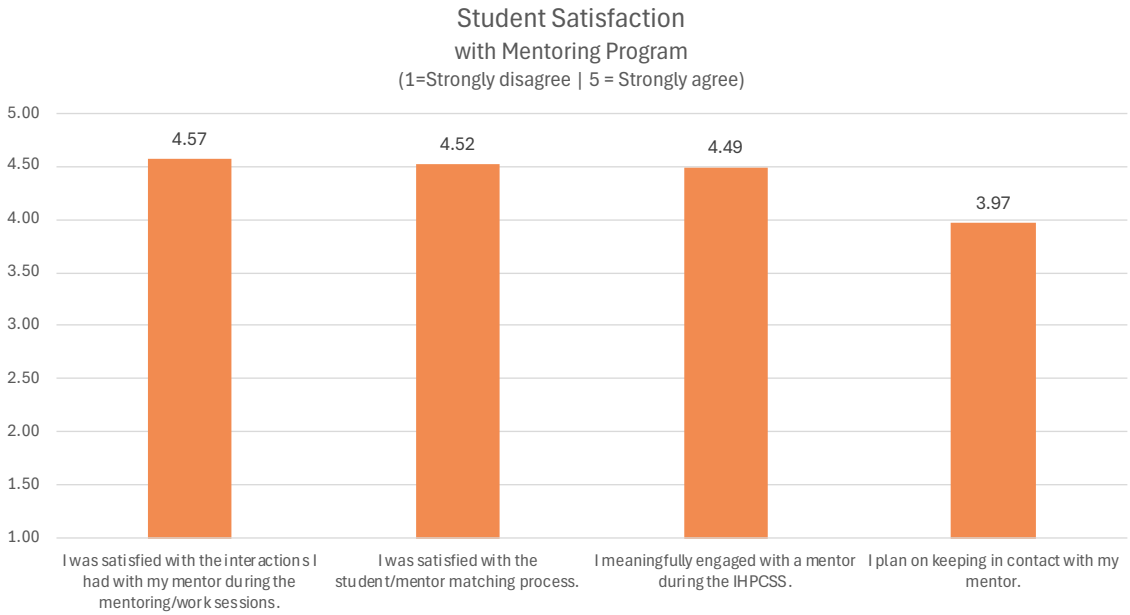


Figure 4. Student satisfaction with the mentoring program.



Programming Challenge

The programming challenge continues to be a highly valued component of the IHPCSS as well, with nearly 98% of those who participated calling it a good experience (Table 5).

However, findings reveal that the challenge's intended benefits, particularly collaboration and deep engagement, are significantly hampered by the rigorous schedule, leading to requests for fundamental structural improvements.

Table 5. 2025 IHPCSS Student Experience with Programming Challenge.

	Strongly disagree (1)	Somewhat disagree (2)	Neither agree nor disagree (3)	Somewhat agree (4)	Strongly agree (5)	Mean	Std Dev	Total
The problem scope was just right.	0.0%	12.5%	8.3%	37.5%	41.7%	**4.08**	1.00	48
The problem difficulty was just right.	0.0%	10.4%	8.3%	35.4%	45.8%	**4.17**	0.96	48
I had sufficient support to complete the programming challenge.	4.2%	2.1%	18.8%	29.2%	45.8%	**4.10**	1.05	48
The time allotted to complete the programming challenge was sufficient.	16.7%	27.1%	10.4%	25.0%	20.8%	**3.06**	1.42	48
Overall, the programming challenge was a good experience.	0.0%	0.0%	6.3%	43.8%	50.0%	**4.44**	0.61	48

Student participation was at 55.7% for the programming challenge, with many who did not participate citing lack of time due to the busy schedule, competing networking opportunities, or not having the capacity after long lecture days:

> *I chose not to participate in the programming challenge because there simply wasn't enough time, especially for someone like me with no prior experience in the area. I felt I wouldn't have been able to meaningfully contribute or complete the task within the given timeframe.*

- *I wanted to use that time to network with other people. I did not want to work at night so that I would be fresh the next morning, ready to learn and interact better with others.*
- *The days were already full and participating in the challenge would have meant either less free time or working on it during the other activities.*
- *Choice between networking/socialising, resting/downtime, and coding challenge*

Feedback from students who participated suggests the most stimulating aspects center on hands-on application and collaboration:

- *I like that we could participate just fun, no pressure! The problem was simple and it helped to apply what we have learned.*
- *Implementing the learned things from the sessions and working with other people on a solution*
- *Engage with other students - being competetive in a fun way, actually solving a problem together which we kind of understend on similar level*

Students repeatedly requested dedicated time slots (e.g., 1–2 hours) within the structured day to work on the challenge, suggesting this adjustment would boost participation and prevent sacrificing sleep or networking:

- *I felt there was insufficient time to complete the programming challenge and perhaps there should be dedicated slots in the schedule for working on the programming challenge, so students don't feel the need to work on it late at night or during the summer school lectures. scheduling a separate slot for working on the programming challenge also creates a specific time and place for students to form their groups because groups seemed to be constantly changing throughout the school.*
- *I would include more time built in to the sessions to work on the programming challenge. It was difficult to find time to work on it without sacrificing social/networking time during the breaks, lunch, and dinner, or sacrificing my sleep (when the sessions start really early, so you have to go to bed early!). Maybe some students thought this was fine, but I really wanted to use my free time for networking and socializing with my peers, which I think was a big goal for the summer school! I think I would have been able to try more things in the programming challenge if there was at least one 1-2 hour block scheduled to work on it during the week.*

RECOMMENDATIONS

Adjust the Schedule to Promote Work-Life Balance and Deeper Engagement

Feedback overwhelmingly indicates that the current program schedule often forces students to choose between missing other sessions, sacrificing sleep, or forgoing valuable networking opportunities to complete the programming challenge or attend to personal needs.

Consider optimizing the schedule to reduce its current density. This could involve either reducing the content covered in sessions, shortening the sessions themselves, or extending the school length to six or seven days to reduce daily pressure. A crucial structural adjustment would be dedicating specific time blocks for the programming challenge within the structured day, ensuring all students have equitable, scheduled time for this core activity. Given that breaks are valued networking opportunities, their length and frequency should be carefully considered during this optimization process.

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Acknowledging the time constraints and the desire to maximize instruction, at a minimum, long lecture sessions should be punctuated with periodic five-minute breaks to allow participants to use the restroom and attend to other personal needs.

Enhance the Programming Challenge and Hands-On Learning

While the programming challenge is viewed as a successful learning tool, its effectiveness is limited by practical and temporal constraints. Specifically, 43.8% of participants disagreed or strongly disagreed that the time allotted was sufficient, indicating a chronic issue with dedicated time. Furthermore, friction during setup suggests that pre-event preparation could be smoother.

Future efforts should focus on clarifying prerequisites to significantly ease the setup process for hands-on activities. To maximize learning and participation, the challenge format and rules could be refined and communicated well in advance of the in-person event. Most importantly, the program should provide more dedicated time and communal space, ideally accessible before and after the structured day, for student work. Incorporating specific, protected time slots during the day is highly suggested to boost engagement and prevent students from having to work late at night or during scheduled lectures.

Consider a pre-Summer School orientation session to introduce the Programming Challenge, its rules, requirements, and any prerequisites, so student can come prepared to take part. This may also serve to take some burden off the tight schedule.

Improve Mentor Utilization and Structure

The formal mentoring structure remains a core strength, yet feedback highlights opportunities for structural improvement. Students felt the one-hour slot for one-on-one meetings was "way too short," leading to regrets that topics were left undiscussed. Logistically, scheduling the lunch break directly after these sessions contributed to an imbalance in attention for the last mentees.

Explore ways to make early discussions more efficient by providing goal-setting prompts to students beforehand. Flexibility could be improved by allowing more time for one-on-one meetings to accommodate the depth of discussion students desire. Finally, the program could explore ways to more actively engage and empower mentors in guiding students and contributing to the school's overall operation, leveraging their expertise beyond the formal matching process.

While a very small minority of students felt the mentor program did not enhance their summer school experience, we do not recommend any change in the mentor-program-participation requirement. That said, leadership should take care to review the matching processes and ensure “junior” students are not mentoring their more senior counterparts. Alternatively, simply managing expectations and encouraging “peer” mentorship if/when the match is not a perfect one.

Rethink the Poster Session Format

Student dissatisfaction with the current poster session format suggests a need for re-evaluation. Reactions to the session's format indicates a mismatch between expectation and reality. Logistical concerns were also noted, including noise management in the event space and the challenge of standing for the duration of the intense four-session event.

Reconsider the poster session format, which could involve returning to physical posters or providing dedicated displays. Logistical planning should prioritize an appropriately sized event space to manage noise and ensure seating options are offered for better accessibility. Adopting a two-day schedule should also be explored as a viable option to decrease the overall intensity of the session.

Address Venue and Logistical Issues

Logistical pain points related to the venue impacted both participant well-being and productivity. Concerns were expressed about repetitive food options (with dietary issues noted in pre-event surveys) and the inconsistency of Wi-Fi connectivity, especially in hotel rooms, which hampered preparation and challenge work.

Key improvements could include increasing the variety of food options (e.g., providing more diverse choices at breakfast) and ensuring consistent and reliable Wi-Fi connectivity in all attendee areas to fully support student preparation and the programming challenge.

Appendices

2025 IHPCSS Student Pre-Event Survey Results

Response rate: 93.5% (87/93)

How strongly do you agree with the following statements regarding the International HPC Summer School?

	Strongly disagree (1)		Disagree (2)		Neutral (3)		Agree (4)		Strongly agree (5)		Mean	Std Dev	Total
I applied because I like the face-to-face format.	1.2%	1	0.0%	0	6.0%	5	26.2%	22	66.7%	56	**4.57**	0.71	84
I applied because my institution does not offer courses in this area.	6.0%	5	24.1%	20	27.7%	23	27.7%	23	14.5%	12	**3.20**	1.14	83
I applied because it fits my schedule.	1.2%	1	7.2%	6	21.7%	18	43.4%	36	26.5%	22	**3.87**	0.93	83
I applied because I want access to ACCESS / EuroHPC JU / EPCC / RIKEN / SciNet / Pawsey / NICIS CHPC resources.	8.3%	7	17.9%	15	35.7%	30	20.2%	17	17.9%	15	**3.21**	1.18	84
I expect that the participation of students from other countries will enhance the quality of the school.	1.2%	1	0.0%	0	4.9%	4	19.8%	16	74.1%	60	**4.65**	0.69	81
I expect that participation will enhance my CV/resume and/or credentials.	1.2%	1	1.2%	1	15.9%	13	39.0%	32	42.7%	35	**4.21**	0.84	82
I am interested in building an international network of collaborators.	1.2%	1	1.2%	1	3.7%	3	23.2%	19	70.7%	58	**4.61**	0.73	82
I expect to meaningfully engage with a mentor during the school.	1.2%	1	1.2%	1	7.1%	6	36.9%	31	53.6%	45	**4.40**	0.77	84
I expect to meaningfully engage with other students during the school.	1.2%	1	1.2%	1	1.2%	1	28.0%	23	68.3%	56	**4.61**	0.69	82
I expect to apply the knowledge / skills I gain during the school to my work/research.	1.3%	1	0.0%	0	1.3%	1	20.0%	16	77.5%	62	**4.72**	0.61	80

If you disagree or strongly disagree with any of the statements above, please explain why here:

- I have an intense MPI course at my school, but I haven't taken it yet, and now it would be beneficial for my research, and I wanted something intensive, packed in a few days, rather than a whole semester, and extensive.
- My institution does have an HPC course that is offered typically once a year. I have already completed my course requirements but would like to develop my HPC skills, hence applying for this program.
- My institution does provide courses in this area
- My school offers similar courses, and has great compute itself
- I was not expecting access to those resources, so this is a perk I appreciate but I was not aware of it.
- I have access to HPC systems. That is not reason for me applying here.
- My institution does offer HPC courses but I expect this summer school to be an expansion upon these courses.
- My institution actually offers courses in the same areas
- I already have access to supercomputing facilities, so gaining access to ACCESS was not a priority.
- The knowledge from this summer school could be highly relevant for my research
- I already have access to computing resources and had courses in several of the topics in this summer school. These are not the reasons I decided to apply.
- In my research project we have access to the vienna-scientific clusters. The vsc team offers some courses but I have heard from several sources that they are often not great and they are most of the time online. I think an in person is much more valuable and besides this whole summer school is a nice way to connect with other people and get a glimse what they are doing and maybe some of their used methods can be applied in our research field.
- I already have access to resources in CZ
- My idea of this summer school is to be able to connect with as much people as I can since, in my personal experience outside university, having multiple vision of life is always an enrichment, so I do think is the same in research. Also, I want to be proficient on the topics of the school, so I see this as a great starting point.
- My university does offer courses in this area.
- I already have access or ways to get access to computational resources. Therefore, I do not need this school for that. Learning about these different resources will probably be beneficial though, if not for my immediate research then for my future career.
- I didn't apply for the resources, I can access some clusters thanks to the project I am part of.
- I applied because I want access to ACCESS / EuroHPC JU / EPCC / RIKEN / SciNet / Pawsey / NICIS CHPC resources.: I already had access to ACCESS through a course I took, and have access to other supercomputing resources.

How challenging do you expect the International HPC Summer School to be?

	%	Count
Very easy	0.0%	0
Easy	3.6%	3
Neutral	40.5%	34
Difficult	52.4%	44
Very difficult	3.6%	3
Total	100%	84

What is your current academic or professional status?

	%	Count
Undergraduate student	1.2%	1
Master's student	13.1%	11
Doctoral student	72.6%	61
Postdoctoral fellow	9.5%	8
Other:	1.2%	1
Early career educator or researcher	1.2%	1
Early career industry professional	1.2%	1
Total	100%	84

Other:

- pursuing my master's but working at the university for more than three years

Are you a first-generation college student? (Note that a first-generation college student is defined as a student whose parent(s)/legal guardian(s) have not completed a bachelor's degree at a four-year college or university.)

	%	Count
Yes	43.4%	36
No	54.2%	45
Prefer not to disclose	2.4%	2
Total	100%	83

With what gender do you most closely identify? (Please select all that apply.)

	%	Count
Male	63.1%	53
Female	32.1%	27
Prefer to self-describe	1.2%	1
Prefer not to disclose	2.4%	2
Non-binary	1.2%	1
Total	100%	84

Prefer to self-describe:

- Agender

What is your country of residence?

	%	Count
Australia	10.7%	9
Austria	2.4%	2
Belgium	1.2%	1
Bosnia and Herzegovina	1.2%	1
Canada	9.5%	8
Czech Republic	2.4%	2
Finland	1.2%	1
France	1.2%	1
Germany	4.8%	4
Greece	4.8%	4
India	1.2%	1
Ireland	3.6%	3
Italy	4.8%	4
Japan	10.7%	9
Norway	2.4%	2
Portugal	3.6%	3
Serbia	1.2%	1
Slovenia	1.2%	1
South Africa	2.4%	2
Spain	1.2%	1
Turkey	1.2%	1
United Kingdom of Great Britain and Northern Ireland	4.8%	4
United States of America	22.6%	19
Total	100%	84

[US students only] What is your race/ethnicity? (Please select all that apply.)

	%	Count
Asian	26.3%	5
Black or African American	21.1%	4
Hawaiian or other Pacific Islander	0.0%	0
Hispanic or Latino	21.1%	4
Middle Eastern or North African	0.0%	0
Native American or Alaska Native	0.0%	0
White	31.6%	6
Prefer to self-describe	0.0%	0
Prefer to not disclose	0.0%	0
Total	100%	19

Please share any additional comments or concerns you have regarding your participation in the IHPCSS.

- I have no concerns at the moment.
- My background is in physics however due to the nature of modern theoretical and computational research the IHPCSS is a great avenue to expand my computational skills
- I hope I can learn a lot about HPC and make new international friends or colleagues, and if possible, make new international collaborations.
- I am honestly very thankful for the opportunity to attend the IHPCSS this year.
- N/A
- I would like some practical hands-on, because it will help us get familiar with the HPC knowledge and programming quickly.
- I am suffering from long covid so am unsure how much of the summer school I will able to participate in
- Excited to take part!
- Looking forward!
- I do not have any concern, I am very excited to participate.
- Just a small comment from my side. For me it was not clear what is meant by an electronic poster - I thought it was a normal poster but in an electronic format. I saw other students uploading their five-slide presentations. I asked the organisers to clarify and the answer was just a copy from the task I wanted to clarify. For me, this was not very helpful.
- I have sometimes difficulty speaking in public, talking to new people, etc. Plus its my first time abroad when its connected to my career.
- My only concern is that the "socializing" will be kind of enforced instead of being natural. I really like talking with other people but I'm afraid that if they are forced to do so, they feel less "free". At the same time, everybody (I hope) will come to the summer school with the mindset of connecting with other, so instead of something "forced" will be something "pushed" which is good.
- I'm worried any technical issues will arise with e.g. any tools preinstalled for this summer school, or my laptop itself will crash etc. I'm only worried about this because I don't know how heavy these tools we installed will be when running and that that will hinder my learning experience since I won't be able to address it. And I'm hopeful that the networking sessions won't be awkward and that people will be happy to chat.
- /
- I am very excited to learn more about HPC, and apply it in my current research. Also, I am looking for postdoctorate or employment opportunities during the summer school.

2025 IHPCSS Student Post Program Survey

Response rate: 96.7% (88/91)

To what extent do you agree with the following statements regarding your experience in the International HPC Summer School?

	Strongly disagree (1)		Disagree (2)		Neutral (3)		Agree (4)		Strongly agree (5)		Mean	Std Dev	Total
My goals for attending the IHPCSS were achieved.	0.0%	0	0.0%	0	5.7%	5	34.1%	30	60.2%	53	**4.55**	0.60	88
The IHPCSS was well organized.	0.0%	0	1.1%	1	4.5%	4	23.9%	21	70.5%	62	**4.64**	0.62	88
I was satisfied with the number of hands-on activities.	0.0%	0	4.5%	4	12.5%	11	45.5%	40	37.5%	33	**4.16**	0.81	88
I was satisfied with the technical assistance available during the IHPCSS.	0.0%	0	2.3%	2	2.3%	2	25.3%	22	70.1%	61	**4.63**	0.65	87
I was satisfied with the student/mentor matching process.	0.0%	0	2.4%	2	9.4%	8	22.4%	19	65.9%	56	**4.52**	0.76	85
I was satisfied with the interactions I had with my mentor during the mentoring/work sessions.	1.1%	1	0.0%	0	9.2%	8	19.5%	17	70.1%	61	**4.57**	0.75	87
I meaningfully engaged with a mentor during the IHPCSS.	1.1%	1	2.3%	2	8.0%	7	23.0%	20	65.5%	57	**4.49**	0.83	87
I plan on keeping in contact with my mentor.	1.1%	1	4.5%	4	23.9%	21	37.5%	33	33.0%	29	**3.97**	0.92	88
I plan on keeping in contact with a staff member.	0.0%	0	1.1%	1	18.4%	16	40.2%	35	40.2%	35	**4.20**	0.77	87
I meaningfully engaged with other students.	0.0%	0	0.0%	0	1.2%	1	19.8%	17	79.1%	68	**4.78**	0.44	86
The fact that students from other countries participated in the IHPCSS contributed to my learning.	0.0%	0	0.0%	0	2.3%	2	11.5%	10	86.2%	75	**4.84**	0.43	87
The knowledge / skills I gained during the IHPCSS will significantly contribute to my work / research.	0.0%	0	3.4%	3	10.2%	9	30.7%	27	55.7%	49	**4.39**	0.80	88
I know the next step required for me to build on what I learned at the IHPCSS.	1.2%	1	0.0%	0	7.0%	6	43.0%	37	48.8%	42	**4.38**	0.72	86
The health and safety precautions were sufficient.	0.0%	0	0.0%	0	3.4%	3	22.7%	20	73.9%	65	**4.70**	0.53	88
Overall, I consider my IHPCSS experience successful.	0.0%	0	0.0%	0	1.1%	1	14.8%	13	84.1%	74	**4.83**	0.41	88

You selected "disagree" or "strongly disagree" for one or more of the previous statements. Please explain here.

- I feel that the hands-on activities were not sufficient, and I don't think I learned enough, especially as someone starting from scratch, to understand how to navigate the topic independently. My mentor is very skilled, but their expertise is somewhat outside my own area, which made it difficult for me to build a strong connection or fully engage in the collaboration.
- I think the hands-on sessions were the best, while the sessions where the lecturer would only go through slides were not impactful or useful to me, because it was much harder to engage and follow the presentation.
- Wanted to look at all the questions in the survey on my personal info and suddenly submitted the survey without filling in the information. There was no submission button, the form was simply submitted almost empty.
- It's hard to tell which mentors are open to communication after the school. My mentor did not seem very open to ongoing relationship but I am keen to find more long term mentors
- Even though having a mentor as a first point-of-contact was good, the rest of the mentoring process felt forced and it didn't really help me. Given that my mentor was very early on in their career (first/second year of PhD) and I was towards the end of my PhD, this was somewhat expected, but ultimately resulted in me having a better idea of many things than my mentor.
- Some hands-on haven't really work out for me. I think that the OpenMP session was briliant, I'd make that longer.
- It was awkward to ask for technical assistance during the session (OpenMp, software engineering, visualization, ML, etc…). The fact that mentors or TAs where not easily accessible or walking around or stationed outside didn't make it easy to ask for help. The one time I asked for help help was offered at my station but I felt ashamed of my question as neighbors were listening. More over when is asked how easy something was it demotivates asking for help on subsequent tasks when surrounded by ppl that found it easy…

All attendees were required to agree to the Code of Conduct when accepting their invitation to the IHPCSS. To what extent do you agree with the following statements regarding the Code of Conduct?

	Strongly disagree (1)		Disagree (2)		Neutral (3)		Agree (4)		Strongly agree (5)		Mean	Std Dev	Total
The Code of Conduct was effective at setting expectations.	0.0%	0	0.0%	0	6.9%	6	25.3%	22	67.8%	59	**4.61**	0.61	87
The Code of Conduct made me feel the event was inclusive.	0.0%	0	0.0%	0	8.0%	7	26.4%	23	65.5%	57	**4.57**	0.64	87
The Code of Conduct made me feel I could report issues if needed.	0.0%	0	0.0%	0	4.6%	4	23.0%	20	72.4%	63	**4.68**	0.56	87

How valuable did you find the following events/activities?

	Not at all valuable (1)		Somewhat valuable (2)		Neutral (3)		Valuable (4)		Very valuable (5)		Mean	Std Dev	Total
Sunday, July 6													
Student Orientation	0.0%	0	1.3%	1	23.8%	19	37.5%	30	37.5%	30	**4.11**	0.81	80
Welcome Reception	1.2%	1	0.0%	0	21.0%	17	37.0%	30	40.7%	33	**4.16**	0.84	81
Monday, July 7													
Staff Introductions and IHPCSS Overview	0.0%	0	2.3%	2	17.4%	15	36.0%	31	44.2%	38	**4.22**	0.81	86
Keynote Address (Luis O. Silva, Instituto Superior Técnico)	4.7%	4	10.5%	9	19.8%	17	38.4%	33	26.7%	23	**3.72**	1.11	86
Parallel Programming Methodologies (James Richings, EPCC)	0.0%	0	1.2%	1	11.9%	10	41.7%	35	45.2%	38	**4.31**	0.72	84
Career Paths (Elsa Gonsiorowski, LLNL)	0.0%	0	10.6%	9	16.5%	14	37.6%	32	35.3%	30	**3.98**	0.97	85
[Track 1] Parallel Programming - OpenMP for CPUs (Ludovic Capelli, Pawsey)	0.0%	0	1.8%	1	3.6%	2	21.8%	12	72.7%	40	**4.65**	0.64	55
[Track 2] Parallel Programming - MPI (Andrew Kirby, U Wyoming)	0.0%	0	5.1%	2	12.8%	5	20.5%	8	61.5%	24	**4.38**	0.89	39
Tuesday, July 8													
[Track 1] Parallel Programming - OpenMP for GPUs (Ludovic Capelli, Pawsey)	0.0%	0	0.0%	0	1.8%	1	21.8%	12	76.4%	42	**4.75**	0.48	55
[Track 2] Parallel Programming - MPI (Andrew Kirby, U Wyoming)	0.0%	0	3.0%	1	15.2%	5	30.3%	10	51.5%	17	**4.30**	0.83	33
Poster Sessions	0.0%	0	1.2%	1	9.9%	8	33.3%	27	55.6%	45	**4.43**	0.72	81
Wednesday, July 9													
[Track 1] HPC Python Programming (Ramses Von Zon, U Toronto)	0.0%	0	8.9%	4	22.2%	10	26.7%	12	42.2%	19	**4.02**	1.00	45
[Track 2] Performance Analysis and Optimization (Ilya Zhukov, JSC)	0.0%	0	6.8%	3	36.4%	16	31.8%	14	25.0%	11	**3.75**	0.91	44

	Not at all valuable (1)		Somewhat valuable (2)		Neutral (3)		Valuable (4)		Very valuable (5)		Mean	Std Dev	Total
One-on-One Mentor Meetings	1.2%	1	6.0%	5	13.3%	11	28.9%	24	50.6%	42	**4.22**	0.97	83
Software Engineering (Erik Lindahl, Stockholm U)	1.4%	1	6.8%	5	6.8%	5	33.8%	25	51.4%	38	**4.27**	0.95	74
Panel: HPC Challenges in your Scientific Work	1.3%	1	15.2%	12	25.3%	20	35.4%	28	22.8%	18	**3.63**	1.03	79
[Track 1] Parallel I/O (John Cazes, TACC)	2.0%	1	14.0%	7	28.0%	14	30.0%	15	26.0%	13	**3.64**	1.07	50
[Track 2] Containers (Yohai Meiron, SciNet HPC Consortium)	2.8%	1	13.9%	5	22.2%	8	30.6%	11	30.6%	11	**3.72**	1.12	36
Thursday, July 10													
Big Data/ML Overview (Byron Gill, PSC)	0.0%	0	17.1%	12	25.7%	18	28.6%	20	28.6%	20	**3.69**	1.06	70
Mentoring: Resource Fair	0.0%	0	6.7%	5	17.3%	13	24.0%	18	52.0%	39	**4.21**	0.96	75
[Track 1] Big Data/ML Hands-On (Byron Gill, PSC)	0.0%	0	20.4%	11	33.3%	18	22.2%	12	24.1%	13	**3.50**	1.07	54
[Track 2] Software Engineering Hands-On (Elsa Gonsiorowski, LLNL)	10.8%	4	35.1%	13	21.6%	8	24.3%	9	8.1%	3	**2.84**	1.15	37
Programming Challenge Walkthrough for Non-Participants	0.0%	0	32.1%	9	35.7%	10	14.3%	4	17.9%	5	**3.18**	1.07	28
River Cruise/Dinner Social Event	0.0%	0	1.2%	1	12.2%	10	18.3%	15	68.3%	56	**4.54**	0.75	82
[Track 1] Scientific Visualization (Dave Semeraro, TACC)	0.0%	0	7.4%	4	27.8%	15	33.3%	18	31.5%	17	**3.89**	0.94	54
[Track 2] GPU Performance Analysis (Sebastian Kuckuk, FAU Erlangen-Nürnberg)	0.0%	0	0.0%	0	20.0%	7	28.6%	10	51.4%	18	**4.31**	0.78	35
Mentoring: Career Breakout Sessions	1.3%	1	5.2%	4	15.6%	12	27.3%	21	50.6%	39	**4.21**	0.97	77
[Track 1] Workflow Tools (Scott Callaghan, U Southern California)	0.0%	0	8.5%	5	20.3%	12	37.3%	22	33.9%	20	**3.97**	0.94	59
[Track 2] Numerical Libraries (James Willis, SciNet HPC Consortium)	3.6%	1	7.1%	2	17.9%	5	35.7%	10	35.7%	10	**3.93**	1.07	28
Panel: Future of HPC	0.0%	0	9.0%	7	20.5%	16	37.2%	29	33.3%	26	**3.95**	0.95	78

If you did not find an event or activity to be valuable, please explain here.

- Software Engineering Hands-on was honestly not well prepared. It seems like the presenter wanted to touch on a lot of topics, but did not have a clear plan in mind how do that in the very limited time, so we ended up not doing anything meaningful in that session.
- The software engineering hands on was a little too free form. The lack of structure made it hard to follow. I'm also not sure, if the things taught really matched my expectations for a software engineering hands on.
- We both agreed, that mandatory mentoring is not the way to go. I didn't need it
- The software engineering hands-on felt a bit disorganized and the content was perhaps rudimentary given that most people at this event likely knew the basics covered during the session, e.g., navigating the terminal, shell commands, etc. Perhaps not though! Loved the summer school and everyone in it though!
- The Python session was meant to be fór beginers, which Is a shame, because I think most of the people already know some Python. The ML session on the other hand seemed a little too advanced.
- (panel: hpc challlenges in your scientific work) I was not interested in the question, neither I did have question. I guess is very personal.

Did you participate in the programming challenge?

	%	Count
Yes	55.7%	49
No	44.3%	39
Total	100%	88

To what extent do you agree with the following statements about the programming challenge?

	Strongly disagree (1)		Somewhat disagree (2)		Neither agree nor disagree (3)		Somewhat agree (4)		Strongly agree (5)		Mean	Std Dev	Total
The problem scope was just right.	0.0%	0	12.5%	6	8.3%	4	37.5%	18	41.7%	20	**4.08**	1.00	48
The problem difficulty was just right.	0.0%	0	10.4%	5	8.3%	4	35.4%	17	45.8%	22	**4.17**	0.96	48
I had sufficient support to complete the programming challenge.	4.2%	2	2.1%	1	18.8%	9	29.2%	14	45.8%	22	**4.10**	1.05	48
The time allotted to complete the programming challenge was sufficient.	16.7%	8	27.1%	13	10.4%	5	25.0%	12	20.8%	10	**3.06**	1.42	48
Overall, the programming challenge was a good experience.	0.0%	0	0.0%	0	6.3%	3	43.8%	21	50.0%	24	**4.44**	0.61	48

What was the most stimulating aspect of the programming challenge for you?

- Since I have never done GPU programming before it was nice to try it out
- The opportunity to collaborate with others, and the ability to mathematically optimize the code!
- The opportunity to work as a team. Made great friends along the way.
- the most exciting thing about the challenge is the idea of trying to find a way to optimise the code that has been given. I know that the given problem is a well-known and heavily studied and optimised problem in computer science, but it was fun to put my head into it anyway to understand the problem itself and how to optimise it
- I think getting to apply parallelization tasks immediately after learning them.
- Putting what I learned from OpenMP quickly into practice as a beginner, and seeing how I have optimise the code straightaway are the most stimulating aspects for me.
- Track 1 & Track 2 (OpenMp & MPI) tracks were nicely focussed for me. I had previously taken a course on both (but I am no expert) and I found the challenge of getting the OpenMP and MPI implementations just

"working" with some speedup very rewarding. It was nice that I could just submit these implementations without any "pressure" to do anything spectacular with the algorithm as some people have done for Track 3.

- Learning from others what they tried and what worked, I wished we would have had some 'discussion groups' where we try to understand performance differences and why they are there
- Discussing it with other students
- I like that we could participate just fun, no pressure! The problem was simple and it helped to apply what we have learned.
- I can apply what I learnt from IHPCSS to real algorithms.
- It was a nice conversation starter with other participants and a welcome side-quest during sessions covering topics I already felt familiar with.
- debugging
- It was nice to test the things we learned in the parallel sessions.
- Interesting problem to solve
- The overal experience of multiple teams working on the same problem and the friendly competition
- Being able to do anything, given I've never done parallelisation like this before
- Flexibility to work on our tools/methods of interest in track 3
- Engage with other students - being competetive in a fun way, actually solving a problem together which we kind of understend on similar level
- Staying up and hacking with team
- A bit of friendly competition
- Implementing the learned things from the sessions and working with other people on a solution
- Being physically near everyone working on the same problem and exchanging ideas, as well as just the general chatter regarding the challenge (was quite fun and seemed to be a favorite topic among everyone to discuss during the whole week)
- Applying what was taughts in the OpenMP for CPU/GPU sessions
- It was a fun side challenge that kept me engaged with the summer school. It was a great conversation topic too, and gave all participants a common goal.
- Collaboration
- Applying what I learned in the challenge
- Leaning how to apply adapt existing software to parallel execution
- Try the GPU offloading in OpenMP
- Coming up with smarter MPI communication strategies for the dense matrix inversion problem
- Having a tangible metric to optimize
- Being able to apply skills learned in the classes to the challenge
- Opportunity to try something new to me in a controlled environment
- Getting to think outside the box.
- The competitive aspect
- Having a hands-on problem to implement the newly gained knowledge / methods.
- Applying what I had learnt to a real case.
- Working collaboratively with peers!

What aspects of the programming challenge would you change (e.g., simpler problem, harder problem, different problem, including Python, more time, etc.)?

- including Python would be helpful
- Probably a problem that would benefit more from the use of high performance resources (the overhead was a significant problem on this project, especially for Track 3)
- I would increase the problem size such that larger performance gains can be made.
- sure, more time.
- I would say maybe adding some algorithmic changes to be considered more in the problem. The problem was very application and a good choice. I think facilitating groups forming could've have been done better, but eventually, I just ended up talking to friends about their approaches and where I was getting stuck.
- Maybe have multiple problems that we can choose.
- I think that the problem was nice. I wouldn't change anything.
- Larger problem size so MPI is possible. More time for the challenge, dedicated in the schedule. A scoreboard where we can live see what speed others are getting. (there are websites that do this, you submit and the scoreboard updates)
- python would have been a nice option since that's what I mostly use
- I think more time to try the programming challenge would be great!
- I think the programming challenge should allow for either more time or increased reservation access to the HPC facility. Currently, we spend a significant amount of time waiting in the job queue, which often exceeds the actual execution time of our tasks. This limits our ability to iterate and debug effectively within the given timeframe.
- including Python, a variation of problems (where PageRank is only one of the problems) where you have easy, medium and hard. Perhaps PageRank could be the medium problem.
- including Python and more time
- The programming challenge could be designed slightly better. I.e. choose a problem (size) which actually scales well with the given resources. Define the rules and targets slightly clearer from the start. The GPU reservation was timed really odd. I understand that there are time limits and students should neither focus on the challenge during lectures nor during late hours at night, but the odd hours stopped me from attempting a GPU solution.
- time allocation, it should be started one weeks before the event begins
- It was generally just not enough time to sit down and do it properly. We were often too tired in the evening, after having lectures all day, and there were little time between lectures to get anything done.
- I would include more time built in to the sessions to work on the programming challenge. It was difficult to find time to work on it without sacrificing social/networking time during the breaks, lunch, and dinner, or sacrificing my sleep (when the sessions start really early, so you have to go to bed early!). Maybe some students thought this was fine, but I really wanted to use my free time for networking and socializing with my peers, which I think was a big goal for the summer school! I think I would have been able to try more things in the programming challenge if there was at least one 1-2 hour block scheduled to work on it during the week.
- More tracks maybe, maybe levels of achievement for different speed ups (bronze, silver, gold?) as currently a PhD in HPC, and didn't think a participation certificate was motivation enough, but also didn't think I had a chance of winning any particular track compared to some more experienced people. Also a clear instruction how to get running - first jobs didn't submit with a vague error (I think because the reservation was unavailable), but not being able to run a simple OpenMP (one pragma) was enough to put me off trying to complete it
- Make the problem more meaningfully parallelisable across 4 nodes. Make the graph more interesting - I would have liked some sparse and some dense components of the graph as the optimal algorithm would vary significantly
- including python, more time and the loss of GPU reservation on Wednesday,

- timing of the social event - the evening before deadline. I believe there would be more people submitting better results / enjoying the work more, if the cruise was some other evening than the deadline one.
- More anarchy. I think this could be accomplished with automated submissions. Love it if there were more explicitly competitive streams
- To maximize performance was mostly a question of how far you push the boundaries of the problem statement - I think it would be more interesting to use a problem such that there are true algorithmic and parallel performance improvements that make sense
- Different base versions for MPI and OpenMP, more time
- Perhaps allot a period (or periods) to work on it. It's a bit unfortunate we had to work on it during the evenings. But I know the program is quite tight on time anyway!
- If there's a python option, that would be interesting for the ML researchers I believe
- I think there should be blocked time on the schedule for just working on the programming challenge (maybe just an hour). That way students can form groups if they want to collaborate and we can have more time to work on the challenge. I wish I had more time to work on debugging the track I wanted to submit, so I felt like I wasn't fully able to apply what I learned during the summer school and relied on my previous HPC knowledge.
- Have unique problems for each track. For example, a problem that would greatly benefit for the OMP track, and a seperate one that would benefit more from MPI.
- include python
- including python
- Dedicated time to work on the challenge. Dedicated help session to debug issues with staff. Increase the scale of the task such that it is better suited to tools like MPI.
- Including python to try the optimisation methods in python
- Different problem as it is not well suited for MPI
- more freedom in implentation
- Clearer instructions, felt like the problem was a little underdeveloped
- Problem was badly designed for large scale computing. Low opportunities to explore multinode methods.
- Nothing
- 'including Python
- Including Python!
- The problem lent itself well to shared memory spaces and quite badly to MPI-only methodologies, but it served its purpose.
- I would allocate some official time to work on the challenge. In the beginning of the school there has been a lot of talks about work-life balance and getting enough sleep. To work properly on the challenge you had to work after the very packed program of the day... does not really fit together xD but I get that it is hard to allocate additional time and in general having this side task to work on was great.
- Needed much more time to do this challenge. The conference was so activity-packed that I didn't get a proper opportunity to complete the challenge.
- Including Python (even as a workflow tool perhaps)

Please share any additional feedback you have about the programming challenge.

- I know that the time available is that and the slots are that, but at the same time maybe I would have added the possibility to start the challenge on Sunday as well, to have an extra day right away. I don't know if it would have changed that as a lot of people would have been stunned by the jetleg but it's one more possibility anyway
- I wish the allocations were available throughout the day. I did not attempt parallelizing with GPUs, only CPUs because the wait-time was very long for GPUs.
- I liked the way that there was 3 tracks with the first too focussed on "beginners"
- I have seen in other workshops the idea of a 'master problem' that is taken through all of the sessions, I think the programming challenge would serve well for this. Eg after openmp session monday evening 1 hour allocated to work on the challenge, submission at midnight, tuesday a simple solution is discussed in plenary, there is a performance emgineering session where we work on the programming challenge profiling in small groups of 20 people with someone who shows how to do it, etc... then the python session is followed by a python submission of the problem, the visualization session is followed by a submission of that, ... but the sessions should be more hands-on in that case where we directly apply what we are learning to our master problem (ie to submit you dont need to put in work outside of hours, the sessions directly include hands-on application to a small problem shown by the teacher, followed by some time for us to try to execute it for the programming challenge). Such hands-on learning (example on small very similar problem, time to try it yourself on something else) is the best way to retain information in my experience.
- I felt there was insufficient time to complete the programming challenge and perhaps there should be dedicated slots in the schedule for working on the programming challenge, so students don't feel the need to work on it late at night or during the summer school lectures. scheduling a separate slot for working on the programming challenge also creates a specific time and place for students to form their groups because groups seemed to be constantly changing throughout the school.
- overall OK, except time allocation for debugging
- It was fun, and I will probably revisit it to do it properly later. It would be nice if we could have access to some example solutions after the event as well.
- I really liked that there was one code for everyone to work on and that it was based on adding things to an existing code, not just writing your own code. I felt like this made it a lot more fair and stimulating for me as a beginner user of parallel code.
- Was lots of fun
- The end time of the challenge should not coincide with the social activity, as we missed out on valuable social interactions to finish it, especially with the loss of the reservation on the previous day
- I would love a proper solution walkthrough, you learn about it, try use it, and then someone shows you how youre supposed to use it
- THANK YOU!!!
- Was lots of fun :)
- My groupmates did not contribute and I was left hanging on my own. This happened because there is no time in the schedule to work on it in a group.
- I wish we could have been permited to use all posible libraries. The problem could have been more specifically crafted so there are no canned solutions
- N/A
- No feedback, very nice and appropriate for my HPC level
- Thanks, it was fun!
- Plagued by the same time constraints that the technical sessions suffered from, it was nevertheless a fun extra challenge.

Please share with us why you chose not to participate in the programming challenge?

- I chose not to participate in the programming challenge because there simply wasn't enough time, especially for someone like me with no prior experience in the area. I felt I wouldn't have been able to meaningfully contribute or complete the task within the given timeframe.
- I had enough to do in one week already :)
- I began but couldn't complete it because of time
- I needed to spend that time of the day doing work related issues
- I missed most of the first day meetings because my flight was delayed, and hence the introduction to the programming challenge.
- Did not have the knowledge to try at the basics
- The time for the programming challenge was limited. If someone was new to OpenMP (per se), it was hard for them also to succeed and compete with students who already had expertise. More time for the challenge would be appreciated.
- I was too far behind on knowledge to tackle it.
- No time provided for programming challenge. After a full day of sitting, listening and participating in sessions, I wanted to walk outside and explore Lisbon. Also had to balance work responsibilities while attending.
- I wanted to use that time to network with other people. I did not want to work at night so that I would be fresh the next morning, ready to learn and interact better with others.
- It was hard for me to focus on the challenge and simultaneously focus on the lectures, the social aspect and also just sleep.
- I'm a FORTRAN user. While most participants chose C and the organizers also designed the problems based on C, I felt that FORTRAN support was added as an afterthought. For example, memory access patterns to arrays differ, and the behavior of automatic optimization is also not the same. In addition, the problem sizes were too small to be meaningful in a real HPC context. Overall, I found it somewhat ill-organized.
- I missed the first day it was introduced due toy flight schedule. Then unfortunately got sick for a couple of days
- The days were already full and participating in the challenge would have meant either less free time or working on it during the other activities.
- I did not have enough time to work on it. It was challenging with the jet lag and the busy schedule. I looked at it and tried some stuff but was not happy with the result as I did not invest enough time.
- put more importance on knowing the city of Lisbon
- Because I wanted to partecipate to all lessons and events organized by the Summer School and it was difficult to find a moment outside the planned activities.
- Barrier was a kittle too high with my background in HPC. Would've needed allotted time to review the things learned during the Track 1 sessions before I could apply them to the challenge. There wasn't't enough time for me to do that.
- I Felt like having too little time.
- I really wanted to but had other work to do from the University in-between sessions.
- I had tried the programming challenge However, it was completed past the deadline hence, I did not submit.
- I was tired at the end of the day + I had other work to be done
- The time required to complete the challenge would have impacted my ability to complete my non workshop responsibilities.
- Used the time to connect to other students and make the most of my stay.
- Time constraint but that was personal issue.
- I wanted to spend my time engaging with other students or resting
- I wanted to take some time to explore the city after activities.
- Choice between networking/socialising, resting/downtime, and coding challenge

- I need more time to learn OpenMP and MPIs, but I would like to try it once I have learned the fundamentals.
- I am not familiar with OpenMP.
- The agenda was too packed to find time to work in groups
- I wanted to review the material covered in lectures.
- Personal Time management

What changes could have been made to the programming challenge that would have made you more likely to participate (e.g., simpler problem, harder problem, different problem, including Python, more time, etc.)?

- Maybe including python, or giving a time slot to the challenge.
- A kick-off session where you could actually meet ppl interested in participating and joining a group
- More time
- Timing
- I looked at the challenge and it was doable just because I didn't take part in the introduction, it didn't help matters.
- Python inclusion coding
- More time and some random team pairing meant that students were not truly collaborating with other students from diverse backgrounds.
- More guidance on how to get started and perhaps some coaching sessions.
- A more in depth mathematical description of the problem and at least an hour to work on the problem during normal work hours.
- I would like a specific time slot to work on the programming challenge without spending time on networking. It would be great if there were a Python option.
- I feel like the problem was adequate for OpenMP, but I can't say for MPI. I think that having dedicated sessions to work on the problem could help, although that might be hard. The programming language that I would have used was C.
- Had the problem setup been fair, clearly defined, and well-organized, I would have been more motivated to participate.
- Having time in the day specifically allocated for working on it.
- More time to work on it
- including it the course
- Could be more than one challenge related to the sessions: eg: data challenge, software engineering challenge, like an optional homework. Especially since people have experience in slightly different areas.
- The deadline could have been extended by one more day. I had done the parallelisation for the programme but because of the deadline, I stopped making changes afterwards.
- I don't know, for me was really just a matter of finding a spot in the schedule of free time, which I spent for socializing instead of doing the slides
- Having time built in to work on this during the day, having it open at the start of the workshop, more support for Fortran in the MPI session.
- Dedicated time slot in the agenda schedule.
- /
- More time.
- Different problem, including python, more dedicated time
- I hope there is a "beginner category" with simpler problems.
- A dedicated work session time or an extra day with more breathing room or breaks.
- If more time
- More time

Please share any additional feedback you have about the programming challenge?

- None
- The school was great, i think if everyone can take part in both tracks could be great to a recorded of each session so one can be able to follow. Also is there a way one can still have asccre it the hpc beyond a year?
- It felt fun, I would try to solve it once I wrap up my exhaustive summer internship.
- I think it was a great idea, but it was too complicated for my background. I did not know how to get started at all.
- I would encourage use of GitHub with automated tests and submissions via PR's, but understand that this can be difficult provided the need for HPC.
- I really liked the part for non-participants. Maybe something like that could be included at the beginning. It could be a time slot for getting started with your project and asking questions.
- The walkthrough was fine, but I believe that the different tracks could be more divided on it. I also think it should be more focused on how we parallelize the specific problem and not about where to place the OpenMP directives (visualizations could help to show which parts are parallelizable and what might be the more correct approach).
- It might be better if the coordination team included at least one person responsible for C and one for FORTRAN, and if more thorough preparation was done in advance.
- In general I think it is a very nice activity that should be kept as is. Maybe giving one session during one day to work on it would be great
- I think it is a really good opportunity even if I did not partecipate
- /
- If the challenge relies on the courses. It is not a fair playing field when you have participants of all levels and you don’t provide opportunities or room for interactions to form teams and actually think about the challenge
- Positive concept, only personal timing reasons that I didn’t participate

Did your mentor help you to prepare for your presentation (e.g., review your material, help you practice, give constructive feedback and encouragement, etc.)?

	%	Count
Yes	60.9%	53
No	39.1%	34
Total	100%	87

How helpful was the Message of the Day in setting expectations?

	%	Count
Very helpful	19.5%	17
Somewhat helpful	57.5%	50
Not at all helpful	8.0%	7
Was unaware of the Message of the Day	14.9%	13
Total	100%	87

In which hotel did you stay?

	%	Count
Ikonik Lisboa Hotel	100.0%	87
I did not stay in a hotel during the IHPCSS	0.0%	0
I stayed at another Lisbon hotel	0.0%	0
Total	100%	87

To what extent do you agree with the following statements regarding your personal experience at the International HPC Summer School?

	Strongly disagree (1)		Disagree (2)		Neutral (3)		Agree (4)		Strongly agree (5)		Mean	Std Dev	Total
The daily schedule was optimized to promote learning.	0.0%	0	3.5%	3	9.4%	8	43.5%	37	43.5%	37	**4.27**	0.77	85
There was sufficient unstructured time in the schedule to engage with students, mentors, and staff.	2.4%	2	3.6%	3	15.7%	13	31.3%	26	47.0%	39	**4.17**	0.98	83
There was sufficient unstructured time in the schedule to attend to my personal needs.	2.4%	2	8.3%	7	25.0%	21	36.9%	31	27.4%	23	**3.79**	1.01	84
The social events promoted a sense of camaraderie among participants.	0.0%	0	0.0%	0	6.2%	5	29.6%	24	64.2%	52	**4.58**	0.61	81
I found the food options satisfactory.	3.5%	3	7.1%	6	21.2%	18	31.8%	27	36.5%	31	**3.91**	1.08	85
My dietary needs were sufficiently accommodated.	2.6%	2	5.2%	4	9.1%	7	32.5%	25	50.6%	39	**4.23**	0.99	77
My hotel (sleeping room) was satisfactory.	0.0%	0	0.0%	0	2.4%	2	20.0%	17	77.6%	66	**4.75**	0.48	85
The IHPCSS venue (Eurostars Universal Lisboa Hotel) was sufficient in terms of the following facilities:													
WiFi	0.0%	0	4.8%	4	15.5%	13	38.1%	32	41.7%	35	**4.17**	0.86	84
Accessibility	1.3%	1	0.0%	0	8.0%	6	36.0%	27	54.7%	41	**4.43**	0.75	75
Climate comfort	0.0%	0	3.6%	3	3.6%	3	34.5%	29	58.3%	49	**4.48**	0.73	84

You selected "disagree" or "strongly disagree" for one or more of the previous statements. Please explain here.

- timeline can be less intense and more free time for hands-on project
- Too cold
- I was dietary free and gluten free and had to buy everything at the supermarket to cover food and meals
- Food options could be better. Eating the same meal every day for lunch and dinner was off-putting. Additionally, the sautéed eggplant and bell peppers were often bitter and were served with every meal, along with just potatoes. Rest, loved the snack options.
- WiFi was spotty at times!
- There was a lot of unstructured time for lunch, which I really appreciated, but I think it would be a good idea to make an afternoon break 1 hour and the lunch break 1 hour. I found that usually, I did not use the entire 90 minutes, but I was very exhausted and/or had thoughts after some of the afternoon sessions that I wanted to share with people, but did not have enough time in the 30 minute break.
- The AC was too low in the morning and too hot at the end of the day.
- The schedule was extremely intense. I am not sure how it's possible to make it more feasible, as I would not cancel any sessions, perhaps increase parallelization of the sessions? Maybe increase it to 6 days to decrease the intensity? It was a lot of information and socializing and I could not get as much sleep as I need.
- WIFI internet access is quite slow. Food is also repetitive, with fewer choices.
- Not really a fish person so limited choice of meats but was enough to survive
- I am suffering from chronic fatigue so personally I did not have enough time to recover - however this is a personal concern not a general concern
- I think we could do with shorter lectures, more breaks. Maybe more semi-structured time
- Eduroam not working in one of the rooms, not being able to connect my laptop in my room to the WiFi, lactose-intolerance and vegetarian made eating difficult
- I chose not to participate in the coding challenge because I did not feel there was enough free time in the schedule to balance it with networking and my responsibilities. I would have liked yo participate if there was enough time.
- Better vegetarian options would be appreciated. My programming challenge was delayed partly because the internet was so slow. Especially in hotel rooms.
- It was quite cold sometimes!
- The schedule was extremely packed. It would be great if the school was a full 7 days with a day that is more loose to allow participants to tend to research demands and also participate in the challenge. Also, it would have been great to have built in slots in the schedule to check with TAs and instructors our work or questions (think office hrs or labs for the more advanced). In terms of the space the rooms where set up for extremely skinny tiny humans making it very uncomfortable to move around without invading personal spaces or knocking things off.
- Breakfast was good but lunch and dinner were the same food every day. I was sick of it by day 2. Vegetarian options were especially limited. Wifi had issues - both eduroam and hotel wifi Hotel lifts were very slow Conference scheduling was extremely busy so I had to skip a class just to wash my clothes. Overall the conference was great but the hotel had several issues.

How challenging did you find the IHPCSS?

	%	Count
Very easy (1)	1.1%	1
Easy (2)	14.9%	13
Neutral (3)	52.9%	46
Difficult (4)	29.9%	26
Very difficult (5)	1.1%	1
Total	100%	87

What was the most important thing that you gained from the IHPCSS?

- The most important thing I gained from IHPCSS was the opportunity to connect and network with people from all over the world. It was a valuable chance to share experiences, learn from others, and build relationships across different research areas and backgrounds.
- Networking is important. I don't have to stay in the field Inam currently working in.
- People who worked on my topic before and could advise me not to make the same mistakes they did
- Networking with professionals and learning about data analysis , parallel I/O and other hands on courses
- Getting to know experts in the field, having the tiools to excel in HPC and my career and above all networking.
- Scientific visualization and ML
- The resistance and slower, thoughful adaptation of ML/AI in general science HPC workflows is eye-opening.
- An introduction to parallelization with OpenMP.
- The opportunity to network with other researchers around the world and the professional development opportunities were invaluable!
- Soft skills: Networking and friendships. Technical skills: MPI track provided tips and tools for new implementations, ideas for new workflows.
- I have made new contacts which I believe will be incredibly useful in the future, which include research collaborations.
- I learned that networking is very important and how to do it. I also learned how it can help you. Many topics besides the pure HPC part were interesting, especially because you usually don't discuss them with your supervisor. You therefore get very valuable hints. The wide variety of topics gave me many new ideas on how to work better.
- the most important thing, being a first experience, I learnt is definitely that in this environment, in this field of research, there is a strong community, which gives space to explain problems and share them with others. That there are not just reviewers and names on papers. But people who can pass on information and knowledge.
- I think it was exposure. There are a lot of technical words in HPC, and I think it scared me off a little. Having exposure to these words, makes it so that I am more confident inspecting my own HPC architecture, and enhancing performance to the hardware. I think every talk I went to did an amazing job at introducing the topics, so that a beginner could pick it up with everyone else.
- I found that many people from different backgrounds end up working tightly in HPC, this largely encourages me to explore more in my future career.
- Meeting people and broadening my network. It was lovely to make friends with other PhDs etc from around the world. Often at conferences (I have only been to one conference) the other attendees are more advanced in their field of research (i.e. they are Professors, or have completed PhDs and are working industry, etc) and it is a harder to connect.
- The knowledge obtained from the staff and from some of the lectures. The connections with other students/staff and the skills I worked upon to make those connections.
- The connections with other students and mentors, knowledge of openmp and mpi, some performance engineering tricks, links to resources I can refer to later, information on where to take my career next and how to get there.
- That I have many options after PhD.
- The evolution of hardware is driven by the market, so as a scientific software developer, all we can do is try to keep up with it.
- I had the opportunity to learn more about to HPC and develop my skills on programming and learn more about tools that can help me in my research. Also I had the chance to meet very interesting people from a variety fields! In general this experience was valuable to me!
- Gained a better perspective on what I want to do in the future

- I establish connections with other researchers, gaining extensive knowledge of technology and research methodologies in science and HPC.
- Meeting lots of new people to help decide on where I could prospectively do my PhD. Making new friends. An intuitive understanding of parallel computing and the libraries used for it.
- knowledge of computational tools. Expose myself to audience. Networking
- A lot of personal interactions which people who work on similar problems, although in different fields.
- making friends and learning various things
- Resources that I can use as I dive deeper in to HPC.
- The sense of belonging to a global community, many ideas of techniques/tools to try in my research and new friends.
- gain new insights
- Decisions on my career path
- The most important thing was the connection with the other students, and hearing how they have many of the same challenges and how they overcome (or cope with) them.
- I gained confidence in my ability and place working in HPC. As a beginner, I entered this summer school feeling like a bit of an imposter, but I now see that I am valuable in this field and I learned a lot about both techniques for HPC and techniques for working in the field. I really appreciated the emphasis on soft skills like networking, presenting, and cultivating work life balance. This made me feel very supported and encouraged to keep going and learning.
- 1-1 mentor talk and problems in HPC work, as well as making friends
- Spending a week in an include and comfortable environment while still learning a lot and engaging in scientific communication. It made me feel like I belong in a setting like this one and gave me a lot of motivation and confidence to go forward in my career. Seeing the staff and mentors' willingness to help and give back made me look forward to being an active member of the HPC community. The technical learning was great, but the most valuable thing was seeing how much the staff cared about us learning and their belief that we will do great tings with this new knowledge. Everyone made me feel like I belonged to be here, even without an HPC background. I feel confident in the set of skills I have and that they can be translated to a great career in HPC!
- Connections and career guidance
- The interaction with colleagues from other countries and other fields, along with the resources for networking and in general the knowledge that although I might not need HPC at this point in time, I have the resources and the basis to start and get up to speed extremely quickly and I have the connections to help me should I need assistance.
- Connections and openMP handson knowledge
- As an HPC library developer and programming language enthusiast, interacting with people outside of Computer Science (who are also potential users of the tools we build)
- HPC friends!
- Contacts. Knowing people. Awareness of technical things was also useful.
- Networking practice and connections with people from other institutions
- Lectures providing knowledge on completely unknown methods in HPC, exposure to application. Networking as well!
- Besides knowledge on how to implement HPC, the possibility to engage with researchers from other fields and countries
- I was exposed to a lot of information and resources, and while it felt like that amount was overwhelming at times, I now know where to start when it comes to incorporating HPC in my own research. The lectures were very informative and I look forward to referencing them in the future. The professional development was also great--I am used to talking to people within academia and my own field, so it was great to get feedback from others, especially staff.
- Networking skills, international experience
- Networking with other scientists. Soft skills training and advice. GPU focussed lessons.

- Besides technical knowledge, it was really helpful in setting career goals and expectations for the future.
- Learning, new programming paradigms, networking oppurtunities, leadership qualities
- Meeting international students from all around the world.
- Probably networking and perspective on what I could do after. It opened my horizon
- Learn from others outside my field to see how they use HPC and how I can adapt their approach to my research.
- Explore future career options
- I gained a network which would have been really difficult to obtain. Also, I feel "important" to be part of someone else network which might need me in the future. Also, the interaction with mentors and returning student was very important because I got some honest opinion on a lot of topics, from life to research
- A broader understanding of how my peers are using hpc.
- To meet people from different field, and I have never tought that I meet and socialize like this, I am very happy to participate this summer school
- Friends, networks and knowledge <3
- Connections and meeting exciting new people
- The single most valuable takeaway for me was the clear vision of interdisciplinary collaboration potential that HPC has.
- A huge willingness to commit further to the field. Experiencing what the people here are working on created immenes excitement in me to join the field.
- Learned about supercomputing as a whole across the world from multiple sources. I also learned a lot of good tips from mentors that were previously in similar situations to myself.
- Mentoring
- Networking
- Knowledge of community and support in this field. Especially enjoyed the new ideas and tools that I can apply to my own research
- Information in which areas to broaden my knowledge.
- Awareness of new programs, transferability of my coding skills
- Tools and networking life lessons
- Connections to peers and mentors. Understanding of job opportunities outside of my current scope.
- The most important thing I gained is my new network of friends. This would help me a lot in the future.
- Networking and opening my mind to learn a lot from people, not only from the lecturer but also from group mates and school participation.
- Networking opportunities, new mentors, and knowledge that I am confident I can readily apply or find out how to apply it.
- Experience communicating with students from different fields.
- A sense of what my future career path could look like and the idea of how to get there.
- HPC tools and skills to apply to research.
- Knowledge about MPI and GPUs, as well as many new contacts.
- Career advice, international networking, learning materials I can revisit
- The ability to communicate with people outside of my area of expertise. Apart from the learning, meeting motivated, equally ambitious new people was an amazing experience.

How is the IHPCSS program unique from other programs/trainings you have attended?

- I have no other experiences.
- one full week with people from all over the world who are still in the early career status. Never had a mentor before which I think it was nice too.
- It is very detailed and well organized. Programs are tailored to meet graduate student needs
- It will well structured, trans continent and the school size if great.
- Networking and opportunity to connect from around the globe
- This was my first experience engaging with people from such varied research backgrounds and countries in a small user group, unlike NeurIPS or SC, where thousands participate. With fewer than 100 attendees, it was easy to have casual conversations and share laughs with different students, making it a very enjoyable experience.
- The guided hands-on sessions and the whole aspect of mentorship that it had were quite unique.
- The emphasis on professional development and the multitude of social activities makes IHPCSS stand out!
- Communication was excellent! The size was very manageable. There were many social opportunities to connect. I utilized the Slack channel and was able to meet folks I may have missed otherwise. The opportunity to share meals with mentors and staff. The emphasis on education and quality sharable resources was outstanding Truly a wonderful experience.
- This is in fact my first training of this kind. I particularly enjoyed it.
- The greater focus on networking and social skills rather than purely HPC topics, which is very helpful.
- I honestly do not know if it is unique compared to other programmes so I prefer not to answer
- I believe that this program is very well suited to beginners in HPC, so people that have worked with HPC, but haven't delved into the technical aspects of it very much. I have attended supercomputing, and I believe that this is a better bridge program for attending conferences like supercomputing that have training sessions. The trainings were real trainings, which balanced the participants previous knowledge.
- I have never done anything like this before. The networking opportunities are incredible here. The days are packed full but it is really really enjoyable. Ensuring that everyone stays at the same hotel and mixes continuously from breakfast to dinner is a really cool idea.
- High variety of different backgrounds. The topic as I hadn't attended an HPC conference before.
- The openmp/mpi trainings were exceptionally well-taught. I also really loved the mentoring and career aspect of this training, as HPC scientists who are willing to answer such questions are hard to find. I also appreciated connecting with the other students, thinking about how we could collaborate in the future with some, learning from their experience and having those tough conversation about compensation, imposter syndrome, belonging, the pressure, etc. The panel on working in HPC and the career question conversations in small groups were really amazing!
- Mixed scientific disciplines
- The non-technical aspects, such as mentoring, are a distinctive feature and contribute to a unique value that sets this program apart from others.
- There was balance between learning technical and social skills!
- I can only compare to my university: there are no tests in the end :), less pressure, it feels more like a conference where you can pick and choose what you find interesting
- I think IHPCSS offer more targeted training programs and provide opportunities to explore topics beyond HPC, such as career development and professional growth.
- Practically orientated. Lots of meaningful mentoring engagement.
- The mentoring part was unique
- It's the first summer school I attended and obviously it's quite different from attending a domain science conferences I usually go to.
- social events and courses ara very good
- All the staff members are very friendly and passionate about what they do. The atmosphere is so nice that I felt comfortable to learn and ask all kinds of questions.

- Focusing on the field of HPC
- Exceptional networking
- There was a large focus on the networking and social parts. The lectures were important, but it seemed like the main focus was personal development and networking.
- I think this was very friendly for beginners and gave me a great introduction to techniques and resources that are available. I liked that the emphasis was not to make me an expert in HPC in one week, but rather to make me aware of things I could look further into and tools I might use in the future.
- Lots of varied degree backgrounds - very fun
- The staff/mentor/student ratio was unlike any other I've seen. It was great. The structure and the way it was designed for maximum positive experience was better than anything I've participated before. The attention to detail and the individual also stood out.
- The quantity (and quality!) of mentors willing to engage
- It promoted friendly competition and it encouraged the interactions between participants and stuff with the poster sessions and in general.
- It promotes networkimg and socialising just as much, if not even more, than the learning aspect. Ive never seen that anywhere else
- As a student, I could relate a lot more to the other attendees (compared to other scientific conferences). I also appreciated the unstructured time, which led to very interesting discussions about our work
- It was my first program/training over more days, so it was very unique in every aspect. I love that we had time to socialize with others afterwards
- Don’t know why but it worked well for me. I think the organizing team and mentors are really good—thats probably why (em dash my own, not LLM)
- Everyone is extremely friendly and relaxed which is amazing
- Good communication in advance Interdisciplinary
- More technical, more hands on work, fewer distractions (all good!)
- The challenge felt like a good continuation from the initial sessions
- I think the emphasis on networking was unique. When I go to conferences or compared to another summer school I attended, the focus was really just the science.
- It certainly took longer. Much more participant. A huge commitment in a sensei.
- It has a very strong focus on the mentoring program, which I found unique and extremely helpful.
- It had unique modules and had provided sufficient time to network with othe rpeople unlike other summer schools.
- Engaging with very talented people and networking with them.
- very well run program that is accessible but offers the opportunity to go beyond if one is already experienced
- It is unique in how well organised everything is, and the quality of teaching resources, including access to the Bridges cluster and the technical team here to support us.
- Lively environment, well organised, scheduled interaction sessions with mentors and staffs
- This was the very first I attended, but it set the bar high
- It was larger and international.
- Well, I can say that this IHPCSS program more than a summer school, its a envirioment to make network and disscuss about our future life both academic and work, also I made very nice friends in this program :)
- I havent attended other programs/trainings
- Very diverse, different backgrounds and institutions. Lots of potential to learn new things
- IHPCSS stood out to me because of its diversity, both in participants (from different disciplines and career stages) and in content. Unlike many workshops that feel siloed, this program gave me direct, small-group access to experts, people you’d normally have to chase down at conferences or via mails.
- Solidarity and allignment of goals between participants! Everyone cares about science for its beauty :)
- The international aspect sets this event apart, along with the large majority of PhD students that attended.
- Mentoring

- Very multidisciplinary. Super cool to meet people with very different backgrounds.
- Completely unique. A full opportunity to learn in a mentored environment with no distractions to just enjoy learning in a challenging field. Especially collaborative, rare opportunity to connect with experts in the field at a meaningful level.
- It was funded by the organiser, much more hands on work.
- Unique focus area in terms of programming languages and emphasis on parallelisation
- I really liked the mentoring and the networking and the meetings and tips for pitch and work life balance
- The emphasis on work and social balance!
- The mix of lecture and workshop, plus the engagement between co-participants and mentors, provides a holistic approach to learning.
- IHPCSS is more international, and the sessions are varied
- It was intense in terms of time. It was also refreshing to have a diverse group of instructors and mentors. Even though more can be done to have more female instructors and females in the panels or queer humans in front of our eyes to feel represented.
- Various fields of expertise and countries of origin
- There was a very heavy focus on soft skills as well as a large number of very interesting, but very rushed technical sessions, every one of which felt like several weeks condensed into a few hours with varying levels of success.
- N/A
- Getting together so many people from different fields. Having so many experts which are easily approachable and around most of the time.
- Much more diverse group of researchers. More intensive and had many useful modules considering the short time. Seeing the breadth of HPC research was great.
- The truly interdisciplinary and international setting. So many great perspectives and observations.

What topics would you suggest for future IHPCSS programs?

- I was particularly interested in the session on machine learning, but I found it a bit underwhelming. We were only shown a pre-built network and asked to tweak some parameters, which didn't really reflect the focus or depth I expected from IHPCSS. In the future, I would suggest offering more in-depth sessions that explore how HPC techniques are actually applied in ML workflows.
- CUDA?
- I think the program as it is can be re-proposed as same, it was very involving and useful
- More like some meter or indicator showing the specific HPC resource usage, accompanied by a bar chart comparing their posters, such as low, medium, high HPC usage, AI versus non-AI usage, etc., along with other HOC-centric metrics.
- The BigData/ML hands on could be improved. I appreciated time to try things on my own, but I think more guidance could be provided: - Details about the parameters in the CNN code (many were hard coded and were not obvious to new learners) Ensuring profiling tools can be used on many systems, most importantly bridges2: - I know setting up profiling tools can be challenging, but neither of the profiling sessions were set up for user interaction due to system requirements and time. - I wanted more hands on opportunities for learning how to profile vs. watching someone profile a code. - In the first profiling session (by Ilya), the first 20 minutes were slides that were labeled as "pre-requisites" before attending. I took the time to watch the recording before the summer school and was disappointed that it was a waste of time. Don't make something a pre-req if it's going to be presented MPI track: - I wanted to learn more about MPI+X. It was mentioned, but not discussed in detail. Please consider adding more on this as systems move to ExaScale. Programming challenge: - More on the mathematical formulation (matrix definitions, etc.) - Time to work on the challenge
- I would suggest a session on optimal usage / configuration of a local environment with the clusters. Bash, ssh, scp, etc...
- That the exercises are also available for Python and a combination of MPI and GPU.
- maybe, an introductory panel on quantum computing, but I don't know well.
- I would love to do more Hands-on deep learning and machine learning, so maybe there could be instead of one approach to the programming challenge, maybe there is a deep learning track for instance. So, the challenge can be solved both algorithmically, and with deep learning. I think it would be great to also evaluate performance/use a script that evaluates performance speed and memory. To my knowledge, a lot of HPC work is about optimal usage of the hardware.
- It was mentioned a few times throughout the week but sustainable computing. As in a discussion, or a tutorial on how to write code aimed at reducing power consumption instead of reducing time. Perhaps even a basic Python example for people to see how their code writing affects power consumption.
- I think the program gave a great 'first introduction' to many topics, I would have also been interested in more technical depth, ie explanation on how the backend of mpi/openmp works and how to optimize to get the most performance out of them.
- SIMD Optimization hand-on with enough time utilizing assembly codes
- Hard question. I would just suggest to stay up to date with the state of the art, obviously.
- I think IHPCSS should include a module on performance programming, particularly focusing on optimizing serial code. If the serial code is inefficient, parallelization alone will not yield good execution performance. A strong foundation in writing efficient serial code is essential before scaling up to parallel systems.
- Possibly, an intro to Quantum Computing since majority of the students in the school had lots of questions about it.
- more python applications
- Covering more in-depth topics. Maybe an entire seperate track. Have a track that goes really in depth on performance profiling and optimization instead of a 2-hour overview session (which i'm sure was great, but haven't attended because i was already familiar with the tools discussed there).
- hands on on performance analysis

- More about building programs (e.g., writing CMakefiles), developing open-source software projects, maybe something like a career fair or a session where possible places to work are introduced (supercomputer centers, main research institutes in the participant countries, etc).
- HPC in Python
- I would suggest to give the possibility of attend both MPI and OpenMP lessons without separating them into tracks (I would prefer to sacrifice one of the other lessons)
- More ML that is not just CNNs. There are many other interesting types of ML that is less mainstream than CNN. If you do any course on ML then you will have done CNN, so maybe focusing on other aspects of Ml would be nice.
- I would have some kind of event like the ice breaker but more speed dating style at the start to help people make friends. Some of the mentors did a great job but lots of people seemed more alone and hesitant to engage with groups that had already formed
- Some recitation sessions would be great. Where we work on exercises that apply what we learned in a session while the professors are available for help. Sometimes the issues are not exactly what the session was about so having time to try to figure it out by ourselves while also having the possibility of having someone with experience help out would be great.
- More python, also for track 2. And maybe some systems architecture session to discuss the one thing not directly under fire from the vibe coders, the structure of the code and the optimal architecture.
- CUDA
- I'd love there to be like a roster of bounties
- Really broad overviews of what tools/languages etc exist and when/why to use them over others - it's generally fairly easy to learn specific topics like MPI online but only if you're aware that they exist and why you want to use it
- Discussion of lower level software, firmware, hardware of processing units.
- ML for beginners
- A deeper dive into GPU performance analysis and profiling tools.
- Slurm, best practices when submitting jobs to a big cluster.
- Deep Neural Networks and optimization,
- The use of LLMs
- Examples with parallel I/O. Machine learning specific workflows.
- I suggest to have 2 structured course (like the open mp/ mpi and another couple, one for each track), in order to give better information and having enough time for everything
- More in depth hands on opportunities.
- Well, I am from Turkey and in my department and university are very interesting this summer school, I sincerely suggest to disscuss participation number of Turkey :) Thank you
- More emphasis on MPI+x. Field specific (CFD, Comp Chemistry, Physics) breakout rooms.
- Better student/mentor matching (it's better to have someone from my field because It will make me make the most of the mentorship program). Include a third track for more experienced students with HPC. Add presentations before time so student know what to expect add a small briefing beforehand to know what to expect. record the classes so we can get back to them afterwards
- AI/ML integration
- Computer Networking Topologies
- N/A
- /
- Hardware architecture.
- More machine learning Longer career and resource fair sessions.
- Productionising ML.
- Incorporating C++ and python in R scripts to improve efficiency
- Python GPU programming More discussion on the future of computing to help us understand what we may need to focus our learning on in the future.

- I am interested in package development (e.g., python)
- Maybe the Cuda and some numerical library hands-on (for example, Eigen and PETs)
- Quantum Computing
- More sessions targeted to and design for newbies and available at the beginning of the week such as software engineering or setup your ide so that you can follow and practice using it. A session on Managing or project management of code development would be awesome. Also a deep dive into git or GitHub from the terminal or IDE
- As a student in the field of AI & HPC, it would have been nice to have a few more students in the same field to talk more about my and their research.
- I do not believe the program suffered from a lack of topics, but serial profiling would have been useful.
- -
- I think there was good coverage of topics
- Collaboration in work (have more git workshops).

Had you previously applied to the IHPCSS?

	%	Count
Yes, one time	8.0%	7
Yes, two or more times	3.4%	3
No, this was the first time I have applied	88.5%	77
Total	100%	87

Would you be interested in returning to the IHPCSS as a mentor?

	%	Count
Yes	86.2%	75
No	13.8%	12
Total	100%	87

Please note any additional comments you would like to share regarding the International HPC Summer School.

- All mentors and staff were very intentional about the summer school and especially the progress of the students
- This was a great experience and really helped to shape me for the future.
- I loved the networking and would really appreciate having the chance to return as a mentor
- Overall, I highly recommend it.
- It was a great experience to learn the basics of parallelization and HPC, to network with students and professionals in different Institutions around the world, and to receive some useful advice on my career path.
- Thank you for a wonderful experience. The summer school was well organized, friendly and a great way to network. I will be recommending it friends and colleagues.
- I am very grateful for the opportunity to have participated at IHPCSS2025. I believe it was a very enriching experience!
- It was a wonderful experience and I learned a lot. I've gained so much and would recommend it to everyone!
- I have to be honest I applied it without thinking about where I was going, not having the idea that HPC means so many different areas of research, I would have preferred more detail about the tools used (at least as far as openMP is concerned). But still I understand the need to adjust the level for all conference participants

- This was a really great experience. I enjoyed my time here so much! There was so much to learn, and I know how difficult it is to pack all of this into the summer school. Maybe making the summer school one day longer, with less programming packed would help us feel less tired. I was so excited to learn, but definitely felt very exhausted by the end of it. Besides the exhaustion (which is an indication of my brain just absorbing a lot of great content), I would say this was an excellent experience. I am so glad I was accepted, attended, and participated in the way I did.
- I felt as though it was really well organised. I feel as though you guys have definitely refined the programme through student feedback and I wish you guys all the best in the future. One note is that I heard about this from my supervisor in Ireland- I have not met anyone that had heard about the school other than him but I work in the engineering department. Possibly promoting the school more might be an idea. But then you guys will have applications to sift through.
- I loved it! Even though not all was perfect I felt welcome by everyone (including the staff) and I found it very valuable for my career.
- I had an amazing time, thank you so much!!
- The structure of the poster session was great but it would have been nice to split over 2 days. More info on international career paths, I found a lot of the information was focused on a specific area rather than more general, or dedicated talk maybe. More structured ML hands on. I found the number of emails before the school slightly overwhelming. I really enjoyed the mentoring programming and found it very beneficial, along with the mentoring activities. The school felt very inclusive.
- Overall, it was a highly rewarding school. I would like to express my sincere gratitude to the organizers, mentors, and fellow participants.
- Thank you for everything! It was a great experience! It helped me both in academic and communication skills! I would really love to spread this knowledge back to my country but also I hope I could contribute in the future IHPC summer schools!
- Very nice atmosphere & people! Keep up the good work!
- The location was excellently chosen! I love how accessible it was coming from the airport.
- overall is very well organized
- I want to thank all the organizers for this amazing event. I really enjoyed the summer school! It was a great experience, I learned so many things, but most of all, I gained a lot of motivation to continue working in what I do. This summer school show me that there are many career paths you can take in HPC and everything will be okay as long as you love what you do. Thank you! I hope there were more events like this in the HPC community
- I had a great time, and will recommend it to others in my group. The lectures were not too hard and the social aspect of the event was great!
- This was a great program! I am really glad to have experienced this and I really liked the emphasis on socializing and soft skills.
- Great event overall
- Just an overall great experience, I would strongly recommend anyone interested to apply.
- Perhaps a higher level discussion of tools available rather than attempting a deep dive into eg MPI would be beneficial. With modern tools it is relatively straightforward to learn new concepts (eg sending different MPI types) but I do not have a good grasp of the full spectrum of HPC tools
- I loved being here, and it was great energy from everyone here, up until the very last session. Rhis is due to both the staff and the obviously well selexted candidates
- Thank you again!!! Y'all are amazing:)
- Was a fantastic event, thank you to everyone involved!!
- Don't call it a poster session, if there are no posters!
- The resource Fair is wonderful. I think it should be extended over the days of the school. At lunch/dinner, you could have optional food tables to discuss the topics for longer and in a more informal setting.
- I wish I had known about this event earlier during my studies. I still found the program extremely relevant for me. I am pretty sure many people in my community are not aware of it. I actually learned about the

summer school thanks to a newsletter I usually never read. I am interested in attending other kinds of workshops during my career.

- Thank you for the opportunity to attend IHPCSS!
- It was a very special event and I am glad I applied: I was about to pass the opportunity since I felt to be not the perfect candidate. I suggest to: -be more specific on the topic inside each classes: it would be nice to have a little syllabus in advance in order to decide which parallel section to follow -to do the above point if possible in the page were all the instruction were given beforehand: I installed a bunch of tools that were not the right version or that I didn't used since I attended a different classes
- This was a fantastic opportunity and I really appreciated being able to learn from the presenters and my peers.
- Thank you, this was a wonderful learning experience. The only comment I have is that maybe it would be good to have a 5-minute break in between the 2-hour-long sessions.
- One challenge I faced was the uncertainty around my visa approval timing; it came through at the very last minute, which made planning travel and accommodation stressful. In the future, it might help to have a dedicated liaison or checklist for visa support to smooth that process for international attendees. Otherwise, the program itself was excellent!
- I feel like the Thursday Big Data session was very long, and another session could have been provided in it's place. I really enjoyed the OpenMP sessions as they were interactive, and I think that having more courses with this structure would be great!
- I loved everything, thank you❤️
- Feedback: -longer and dedicated ML session, improved ML hands on -move the career session to Monday (hard to get motivation to fully participate by the end of the week) -less emails upfront, got very complicated and overwhelming -time limit on HPC challenges in science panel. Some tended to dominate the conversation
- It was very Nice i would only add more Python
- This was an extremely well run and balanced conference. One of the best I've ever attended. I enjoyed speaking to the mentors, lecturers and of course my peers. I made valuable connections for future research and careers. I think the content was a bit on the easier side, but I sit at the more experienced end of the spectrum of the target delegate (late postdoc). Nonetheless, it was a very valuable and worthwhile experience. I hope to be able to return as a mentor!
- IHPCSS is generally well-planned and executed. The programs complement each other, and there's enough time to practice each task. The panel sessions and mentorship are very helpful.
- I prefer a physical Poster to an e-Poster.
- It was a great experience. A more diverse attendance (queer and people of color particularly) would have made many of us feel more comfortable. An ice breaker or built in activity for team building would have made a huge difference helping introverts get more comfortable.
- Great work! It was a fantastic trip with good social moments and lots of useful information and mentorship. One of the best conference-like trips I've taken.

2025 IHPCSS Mentor Program Survey Results

Response rate: 86.1% (31/36)

To what extent do you agree with the following statements regarding your experience at the International HPC Summer School?

	Strongly disagree (1)		Disagree (2)		Neutral (3)		Agree (4)		Strongly agree (5)		Mean	Std Dev	Total
The mentoring sessions were effective.	0.0%	0	0.0%	0	3.6%	1	35.7%	10	60.7%	17	**4.57**	0.56	28
I was satisfied with the mentee / mentor matching process.	0.0%	0	0.0%	0	7.1%	2	50.0%	14	42.9%	12	**4.36**	0.61	28
I engaged meaningfully with student(s) / mentee(s).	0.0%	0	0.0%	0	3.3%	1	33.3%	10	63.3%	19	**4.60**	0.55	30
I plan to keep in contact with a student / mentee after the IHPCSS.	0.0%	0	3.3%	1	20.0%	6	53.3%	16	23.3%	7	**3.97**	0.75	30
I engaged meaningfully with other mentor(s) and/or instructor(s).	0.0%	0	3.3%	1	0.0%	0	46.7%	14	50.0%	15	**4.43**	0.67	30
I plan to keep in contact with other mentor(s) and/or instructor(s) after the IHPCSS.	0.0%	0	0.0%	0	6.7%	2	43.3%	13	50.0%	15	**4.43**	0.62	30
I was given sufficient guidance from the planning committee to adequately prepare for my role as a mentor.	3.6%	1	0.0%	0	0.0%	0	50.0%	14	46.4%	13	**4.36**	0.81	28
The returning mentor program was effective.	0.0%	0	0.0%	0	7.1%	2	46.4%	13	46.4%	13	**4.39**	0.62	28

You selected "disagree" or "strongly disagree" for one or more of the previous statements. Please explain here.

- I was not matched with any mentees and although I engaged in mentoring this was largely ad hoc and organic. At times I felt like there was very little expected of me when I wanted to contribute much more to the running of the summer school. I didn't receive any real contact from staff or other mentors during the school — not via email or slack — I don't think I was added to the staff slack channel, if there was one, so I had to take my own initiative to help guide students.

To what extent do you agree with the following statements regarding your personal experience at the International HPC Summer School?

	Strongly disagree (1)		Disagree (2)		Neutral (3)		Agree (4)		Strongly agree (5)		Mean	Std Dev	Total
The daily schedule was optimized to promote learning.	0.0%	0	0.0%	0	10.0%	3	43.3%	13	46.7%	14	**4.37**	0.66	30
There was sufficient unstructured time in the schedule to engage with students, mentors, and staff.	0.0%	0	0.0%	0	19.4%	6	41.9%	13	38.7%	12	**4.19**	0.74	31
There was sufficient unstructured time in the schedule to attend to my personal needs.	0.0%	0	13.8%	4	6.9%	2	55.2%	16	24.1%	7	**3.90**	0.92	29
The social events promoted a sense of camaraderie among participants.	0.0%	0	0.0%	0	10.3%	3	44.8%	13	44.8%	13	**4.34**	0.66	29
I found the food options satisfactory.	0.0%	0	6.5%	2	19.4%	6	38.7%	12	35.5%	11	**4.03**	0.9	31
My dietary needs were sufficiently accommodated.	0.0%	0	7.4%	2	3.7%	1	37.0%	10	51.9%	14	**4.33**	0.86	27
My hotel (sleeping room) was satisfactory.	0.0%	0	3.2%	1	3.2%	1	29.0%	9	64.5%	20	**4.55**	0.71	31
The IHPCSS venue (Eurostars Universal Lisboa Hotel) was sufficient in terms of the following facilities:													
WiFi	3.3%	1	0.0%	0	20.0%	6	46.7%	14	30.0%	9	**4.00**	0.89	30
Accessibility	0.0%	0	4.2%	1	12.5%	3	41.7%	10	41.7%	10	**4.21**	0.82	24
Climate comfort	0.0%	0	3.3%	1	16.7%	5	30.0%	9	50.0%	15	**4.27**	0.85	30

You selected "disagree" or "strongly disagree" for one or more of the previous statements. Please explain here.

- WiFi: When trying to connect from my room and choosing the strong room WiFi it did not connect and the connection flipped to trying to connect to the WiFi on the floor where the main ihpcss event was happening, which was too weak in my room. This was not always the case, sometimes it worked, but most of the times it didn't. After attempting for more than 5x every time with the WiFi connection flipping to the downstairs one, I resorted to use the mobile hotspot from my phone which luckily had enough data. In the conference rooms all worked fine. Climate comfort: Room was very hot when we arrived and had stale air. Unfortunately one could not open the window, understandably, but this would have solved both issues in 5-10min. AC could cool the room down, but didn't solve the issue that one needed fresh air from outside to increase the oxygen content in the room, so we tilted the window as far as possible and had to wait about half a day till enough fresh air had entered the room, of course at the expense of being exposed to all the outside noise during this time. Being able to properly open the window would be one solution, or one could instruct the cleaning personnel to air the rooms as part of their cleaning routine. Otherwise the hotel was excellent! Particularly the staff, level of cleanliness, and the quality & quantity of food. Rare to experience such good quality food in a hotel.
- I and a lot of participants often felt wiped out by the schedule. While the breaks were good, it's also worth remembering that students often felt compelled to miss sessions for personal / work reasons. The food options were largely good but there was a notable absence of grains at breakfast, it would have been nice to have a better selection of eg. muesli, granola, etc.
- There was not actually enough unstructured time for both engagement and personal needs, plus attending all sessions, plus rehearsing for my own session, plus engaging to some degree with the programming challenge (just as non-participating staff). But there are so many hours in a week...
- I jad problems with my room that ultimately required changing room. This took three failed attempts at adressing. We had very much the same food from the hotel. Some variety would be appreciated. The facility was not as accessible even for regular people. The table were too close and chairs too close making it difficult to even get to a seat.

In which hotel did you stay?

	%	Count
Ikonik Lisboa Hotel	90.3%	28
I did not stay in a hotel during the IHPCSS	0.0%	0
I stayed at another Lisbon hotel	9.7%	3
Total	100%	31

What are some of the strengths of the IHPCSS and its Mentor Program?

- IHPCSS - great networking opportunity for students/staff, great visibility to other research and career paths, great learning environment, well organized Mentoring program - the matching was done well, as a mentor I feel like I could assist in the areas they wanted mentoring, the students were inspiring and motivated to get as much as they could from the mentoring program, and the mentoring experience was a great reflection and learning opportunity for me as well
- Resource fair - targeted and based on-demand experience exchange, that is difficult to find somewhere else in this form; accessibility of all staff during this event, wide range of expertise and perspectives.
- Covers soft skills and career development advice at an international level which is quite unique.
- The mentor program remains an opportunity for students to interact with staff that may be hardly reachable otherwise, certain are directors of HPC centres and thus understandly very hard to get ahold of. Having this dedicated time to discuss with people from such circles really is a priviledge. This year in particular it helped me reassure a student who had strong and deeply emotional doubts about their belonging to the IHPCSS (e.g.: intense imposter syndrome). About the strenghts of the IHPCSS more generally, it is its ability to handle an audience made of wide variety of backgrounds and expertise levels. This remains one of our main challenges in session design, programming challenge, etc... Nevertheless, it is still very nice to see year after year a cohort made of total beginners up to already established expert-levels all trying to dive deeper in HPC waters, together.
- The mentor program was well designed and had actual structure. Other events, if they have a mentor program, tend to run it as a social mixer that doesnt work. Having specific mentoring activities with goals was great.
- It adds an element of support for very early career researchers that I think is quite valuable. Especially now, as post-pandemic students, every bit of extra support is valuable.
- Having experienced mentors who are still between the generational gap of students and the senior staff who lead the program enables a greater potential for relatability between students and mentors. Overall, IHPCSS, with mentor support, builds international relationships and science across borders. The program also enables opportunities for convergence science in future generations given the activation and co-location of many different scientific domains to meet together and form strong relationships that propel their careers forward.
- - Lots of engagement opportunities with mentees and other students. - Real life knowledge/experience transfer among participants.
- Definitely the fact that students feel connected to a broader field and are encouraged to look ahead with the assistance of early/middle career researcher peers who were in their shoes not long ago.
- Matching algorithm was perfect for me this year.
- The interactions between mentors and students. The variety of training opportunities.
- Expert staff Global participants hence diverse Learning focus e.g. with programming challenge Ample time for unstructured elements
- I think getting outside opinion is always good
- Availability to the future relation and collaborations
- It provides a rare opportunity for very early career individuals to connect with senior individuals in a comfortable environment.
- Personal mentoring and relatively small scale, allowing interacting between participants
- Connecting the dots for multiple disciplines to engage with HPC and evaluate/learn how to best make use of it as a tool. Mentors get the chance to give away the recently acquired skills and share the career progression journeys. Great networking within HPC

- The mentees have a point of contact for their first few days and do not feel completely isolated. Mentors are able to help them or connect them with people who could help them resolve their issues The mentoring sessions and resource session were extremely helpful for mentees
- The quality and delivery of topics was excellent, the staff and mentor were amazing and dedicated and engaged with the needs of the students.
- The program is very international, with students and staff from many regions. I think the broad range of topics covered in both the technical program and the mentoring sessions are very useful to students. The mentoring program as a consistent theme throughout the Summer School is unique, and I think both the students and staff respond very positively to it.
- personal exchange that is quite valuable for both sides; chance to mentor (and be mentored) on topics beyond technical aspects; good mix of technical sessions and mentoring sessions.
- low number of mentees and enough time for meetups
- Real, meaningful and long lasting connections between mentees and mentors that can be called back in the future at crucial junctions in a career trajectory.
- The program was a good mix of lectures, hands on activities and discussion/mentoring. Having the mentors and students attend all sessions and meals together was very useful. The students themselves were excellent and actively engaged with the summer school and mentoring program.
- Giving direct one on one communication between students and staff. It feels more personable.
- The amount of schedule and unscheduled mentoring - there is plenty of time to engage with the students.

How is this program unique from other programs in which you have participated?

- The mentoring program is definitely unique, the blend of research topics in the poster session was unique to me, usually summer schools I've attended are focused on a research area rather than a tool/computational methodology
- The wide range of activities offered. Typically winter/summer schools are dominated by lectures with some social events. This school offers so much more, particularly individual career (and life) support through the profound mentoring concept, panel discussions, and additional engagement through the programming challenge. This school should retain all it's colourful aspects that make it so unique.
- The mentoring programme! And international participants from 5 continents.
- Interactivity.
- There is an actual mentor program. This event was student and education focused though. So I would expect no less. Other events focus on conference content and do education as an also ran sort of thing.
- I think that one big strength of the program is that it is incredibly responsive to feedback, so that the program has been steadily improving year over year.
- Give me a differnt view to touch more students‘ story
- The emphasis on international collaboration as well as the very well organized and curated set of training materials which are given sufficient time over a full week to impart on students. For other programs, similar teaching and knowledge sharing is often attempted to cram content into fewer days and the adequate length of IHPCSS provides sufficient time to cover all necessary topics across the entire summer school.
- - Making meaningful connections / networking beyond the traditional circle. - Diverse backgrounds and experiences, all merged in one setting.
- Much more interactive and structured — and with a much better focus on networking and building connections as an essential part of science.
- The focus on the people and their interactions makes this program unique.
- It doesn't end at 5 pm. Socializing is encouraged.
- Strong learning focus Global presence
- Other summer schools I participated in as a student or as a teacher were just a series of lectures with possible hands-on, with very little or no mentoring, social, or networking aspect.
- Metoring and networking are very strong
- The mentoring activity was far beyond what i see in other events. The collection of presenters and mentors covered a significant range of backgrounds and experience and cultural contexts.
- The mentoring and international settings
- Amazing environment and energy. Great oppertuinity to learn and connect. Great organisation and thoughful arrange of the session themes.
- One of the r best things about this program is the mentoring. And that everyone is open minded about discussing various topics. The second best thing is obviously the quality of lectures. I feel that staying in the same hotel where the school is conducted also enhances the quality by a lot. People are more comfortable, not very drained and can go to their rooms in breaks if they’re tired.
- The mentor program of this Summer school is excellent and so different of what bother programs offer, Thank you for what you do for the students.
- The staff and students all attend for the entire week; the mentoring program is a point of emphasis and continues throughout the week rather than just being a single activity; the event is truly international; and by the end there is a strong feeling of community.
- chance to mentor (and be mentored) on topics beyond technical aspects; good mix of technical sessions and mentoring sessions
- very interactive and many experts from manydifferent fields
- Group size and connectivity during all of the activities mean that you can meet almost everyone and have actual personal conversations.

- More dynamic and interactive, the students were far more engaged and participated pro-actively.
- Other conferences I have attended don't have this.
- The focus on non-technical mentoring
- Being in a room with people in my field from other countries is a rare and uniquely enriching experience.

How can the IHPCSS be improved?

- I think the mentoring was pretty great already but if I had to choose improvements, maybe if the students were given goal setting prompts ahead of the summer school so we can discuss goals on day 1 that would make things more efficient, but I understand students are busy.
- Dedicated slot for working on the programming challenge, which would also strengthen networking, as this is when students form meaningful relationships that can last far beyond the school - bonding over successfully solving a task together. Equally a dedicated room where students can work on the challenge together in the evenings after the end of the official programme would be beneficial. Not providing those spaces pushes the students to work alone in their rooms, which is a pity. It would be nice to organise the social dinner such that after the dinner (during which one is confined to a small group of people at one's table) there would be an opportunity to mingle with all other attendees over some drinks (like in Kobe last year, that was excellent).
- Splitting the poster session could help avoid a single 4h chunk as it was seen as draining by a certain number of students. However, the format this year was already a significant improvement in the overall workflow of the event. Not having enough time to do the programming challenge has been an issue raised every single year with a strong voice from a higher number of students, times and times again. The first time where the Monday and Tuesday evenings become available, the number of submissions nearly triples to reach 38. I hope this gives the clear signal that the programming challenge is an entire component of the summer school and here to stay, and it too deserves to grow.
- The program seems fine. My only complaint is with the venue itself. The acoustics of the break room were terrible. You could not have a conversation with your students without shouting. It is difficult to find a good location for such meetings except outdoors.
- Keep pushing on hands-on training, perhaps by giving some additional time for hands-on sessions and considering if any other sessions should be hands-on.
- Make schedule considering that many attendee face critical jet leg, I think the schedule is a little bit full
- More active engagement and empowerment of mentors to contribute to the school and support permanent staff and perhaps soon retiring staff, to provide an on ramp for mid career mentors to increasingly contribute to the school, and perhaps create the opportunity for them to lead it for future iterations.
- - More chances for students to attend parallel sessions. - More engaging workshops/hands-on sessions
- I think it could be improved by utilising mentors more effectively.
- More free time for the students. A tie in between the challenge and the training provided.
- Some sessions e.g. software engineering theory and workflow tools are too general in naming hence unsure how much detail/depth is given. It can be hard to make one on one connections in a context beyond the programming challenge or gping out etc. It would be good if students have profiles that other students can lookup prior so to see prior if there are common interests. Perhaps one of the fields could you be what is your quirk or hobby etc. that allows social connection without the pressure of a challenge/competition.
- better microphones and less ambient noise.
- I would love for the IHPCSS to connect the dots between HPC and current technologies in AI/ML stack. Probably include a talk on HPC for AI/ML.
- There could be a dedicated slot for programming challenge on first day where people can make teams.
- More group activities during the evening hours to create more opportunities for the students to interact and bond.
- The 4 poster sessions in a row was intense. It might be OK to leave it that way, but having a place to sit during the lightning talks would really help people for whom standing for 4 hours is a challenge.
- more time for the mentoring sessions - 1h for the 1-on-1 is way to short. Career Fair could also be slightly longer. In both sessions some topics were left undiscussed and that is quite regretful. Having the lunch break directly after the 1-on-1 created an imbalance in time spent with each mentee (last one had more time). Poster sessions could be distributed onto two days or am and pm sessions.
- the time is not enough for the content

- more time for career transition next steps in the agenda. students are operating at very basic levels on things like applications and interviews
- Better communication about the topics of some of the hands on session ahead of time so students know what to expect and can ready themselves ahead of time if they want. Having a short abstract for each session with a list of key topics and outcomes, and any prerequisite knowledge that is expected would help with this.
- Software Engineering hands on needs to be better aligned with the lecture

Would you be willing to participate in another IHPCSS offered in this format?

	%	Count
Yes	96.8%	30
Maybe	0.0%	0
No (please explain)	3.2%	1
Total	100%	31

No (please explain)

- Definitely, it is by far the best summer school I've attended (and I've attended many)

Is there anyone you would recommend as a mentor for the IHPCSS? If so, please provide the individual's name and as much contact information (i.e., institution, email, website, etc.) as possible so that a mentor committee member can follow up.

[REDACTED]

Please note any additional comments you would like to make regarding the International HPC Summer School.

- The HPC school was well organized and a valuable experience, thanks to all the staff and organizers!!
- Overall excellent and a pleasure.
- Seeing more and more of the work that takes place behind the scene, done by staff who are already overworked, I just grow more and more appreciative of the kind-hearted-ness of its organisers.
- While instruction in MPI and GPU computing is important and useful I think the mentoring and career advice that students get is more valuable. Learning to write a grant and how to publish are just not taught anywhere. You are expected to figure that out yourself. More formal sessions on how to do those things as well as other information on how to get an internship would be useful I think.
- Happy to stay involved, help with planning, and offer support (both virtually and in-person) for future years.
- Thanks you so much for all who made this event a success. Much appreciated and proud to be a member of this wonderful committee. I'd love to contribute to future versions as well.
- This year the social program was a little bit less to my liking. The boat ride was very nice but it would have been better if there were some cultural context given, for example a local guide describing what we were seeing and the history of Lisbon.
- Would love to discuss more about AI and HPC synergetically ... more discussions on how to execute/train large models efficiently using HPC sources would be nice.
- Thank you to everyone who was involved in the organising committee.
- This was first experience with IHPCSS and I am grateful for the opportunity, for what I have learned and all the people I have met and connected with.
- A relatively smooth year, I thought! A student mentioned to me that having a way for students to connect and form teams for the programming challenge ahead of time might be nice, and also a way for students to get to know each other before the School beyond just their geographic location.
- I loved it - thanks for putting it together, the excellent organization and execution!
- thank you
- This is a really singular event, it was a privilege to participate (and I hope I'll be invited back again).
- It was great!

Focus Group 1 (Wednesday, July 9, 2025)

Have you met with your mentor?

- *I have met with my mentor.*

What are your thoughts?

- *Mandatory mentoring is not the right approach for me. My mentor also agrees to this; mainly because I am finishing my PhD, I know what I am doing.*
- *My mentor is in the first year of his PhD and cannot give me advice.*

Do you think somebody more senior would have been a better match and it would have been helpful for you?

- *Yes, maybe.*
- *I am not disappointed, but the mentoring program is not helpful for me.*

What would have been a better use of your time? (alternative)

- *I like working on the programme challenge, this would have been better.*
- *I don't think I have time for the programming challenge.*
- *I have not gone out of the hotel since the last three days.*
- *More free time would be better. It would be better not to have forced mentoring (mandatory mentoring).*
- *Perhaps it would be better to opt in or to opt out of the mentoring.*

What other thoughts do you have about the mentoring programme?

- *I learned from the keynote speaker today that he has experience I am interested in, and it might be more useful me to discuss with him.*

Do you any other recommendations aside the mentoring program?

- *Better would be to use the communication tool "Slack" more to make it effective to network. For now, I only get messages in Slack about the programme challenges.*
- *What would be nice to have would be a "lounge", an open space for people to discuss. - A kind of 24-hour lounge maybe.*
- *I think you always need dedicated space where you can work.*

Neurodiversity

- *[when registering] It is better to have options offered when you have special needs, instead of only saying if you have special needs.*
- *Problem with food option; e.g. make sure that one of the meat options is lactose-free; it would be better to specify what one person can eat with all details about lactose;*

What is about neurodiversity?

- *List and options would be better; making clear: what it is your need (specifically asking)*

What do you need to do to create your perfect environment?

- *Getting information about the food, so I can bring my own food for that day, etc.*
- *Autism is about you having a routine and not breaking it.*
- *For free time, it would be good to offer options of what you can do; some ideas:*
- *For food options, it would be to provide information about what is close by.*
- *A quiet room could be a prayer room or resting room.*

What did you like?

- *The lunch breaks are nice - 1h30 is great to have time.*
- *The break before dinner is good to decompress.*
- *I recommend incorporating a 5-min break into the sessions.*

[the person:]I want to give feedback on the poster session:

- *The poster session was exhausting; even other people needed a 5-min break, some left.*
- *The setup is not good; I attended session A, the noise level was insane, I felt overwhelmed; in poster session B I had to leave because it was too much.*
- *Feedback from a lot of people: reading the slides on the laptop is not good, is confusing; because of changing the slides; better would be to have physical posters.*

What do you think would have been better?

- *It was not entirely clear if you should prepare a poster or a slide or slides; some people had to redo the poster to slides; Better to provide displays to show the poster.*
- *Make sure the room is big enough.*

Do you think it would be better to over two days?

- *Yes*
- *I know that some people dropped the poster session and left.*
- *Poster sessions should be poster sessions, not "slide talks".*
- *The poster sessions are not available for accessible people; it would be good to have sitting options during the poster session; e.g. high level of the table.*
-

General comments:

- *I have a comment about safety: The badge hanger should be breakable.*
- *I am non-binary and I need a non-gender bathroom. It is good when the venue is at the same place like the hotel so you can get your bathroom.*
- *Descriptions for parallel sessions are only visible to mentors but not to the students. Students have to choose according to the headline. The abstract exists; please make it public to people existing.*
- *Please have a point of contact for mental health, e.g. a colored color.*

Focus Group 2 (Thursday, July 10, 2025)

How did you like the summer school so far?

- *I liked it a lot.*
- *I think it is well structured and organized.*

What would you do differently?

- *The schedule for the programming challenge is challenging for me. I would like more time and space to work on it. I would also prefer to have a specific room to work in, possibly with others working on the same project instead of working in my room.*
- *Today, at the resource fair, there are a lot of topics. We talked about these topics this week a lot already. [Seems to imply that it would have been better to talked about it earlier in the week IMO]. Topics like working with minorities and neurodivergence would be more interesting (topics like masking: neurodivergent people use masking). It would be helpful to know how to deal with different types of people.*

Would it be better to have a talk about neurodiversity?

- *Yes. It was mentioned on Sunday, but only touched on it; the depth could have been better.*
- *It would be better to have a separate session on how to address cultural differences*

I wonder about your thoughts regarding the poster session?

- *It was good, I am social, so I don't have problems with this.*

Anything else:

- *I liked all the lectures, they were great; I don't have experience with summer schools, however, it was greatly organized.*
- *I would surely consider coming back as a returning mentor, if possible.*
- *The staff was very helpful to accommodate my needs.*

Notes:

- *I was in doubt how can I reach out to a specific staff member?*
- *Wednesday was the perfect moment to have a free evening, it was needed.*