

HACKAQUANTUM: Second Quantum Computing School Hackathon

1. RULES

These rules govern the Second Quantum Computing School Hackathon, held between October 7 and October 18, 2024. They establish the rules to be followed by participants and the details of the Quantum Computing School Hackathon, which will now be referred to as “Hackaquantum”, “hackathon”, or “event”. Every participant in this hackathon declares themselves aware of and in agreement with the stipulations in these rules.

2. Objective

The event aims to present problems relevant to the academic context. With the proposed problems, we intend for the Second Quantum Computing School participants to apply the knowledge acquired in the lectures. Overall, we hope that practical application, together with the knowledge acquired in the school, will contribute to the educational formation of professionals in the field of quantum computing.

3. Date and Venue

Hackaquantum is one event that makes up the Second Quantum Computing School. It will be held between October 7, 2024, and October 18, 2024, according to the following schedule:

Date / Time (Brasilia Time)	Activity	Description
07/10/2024 - from 14:00 to 15:45	Hackaquantum presentation;	Presentation of the Hackaquantum format and main information.
09/10/2024 - 18:00	Deadline for group presentation;	Submission of group names and their participants to the organization.
10/10/2024 -until 10:00	Publication of exercises and challenges.	All exercises will become available on the Classroom platform (Classroom code: hdww7ml).
17/10/2024 - 12:00	Solution submission;	Deadline for submitting the proposed solutions by the groups.
18/10/2024 - 14:00	Announcement of the	Announcement of the

	winner.	winners.
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Any face-to-face activity will occur at the same venue as the Second Quantum Computing School (ICTP-SAIFR, São Paulo, Brazil).

4. Registration

Any Second Quantum Computing School participant can participate in the event by being part of a group and submitting a solution for at least one of the proposed problems within the stipulated deadline.

5. Team Formation

The problems must be solved in teams of 4 to 5 people. The participants themselves must name teams. The registration of groups will be done by filling out a form available on the Google Classroom platform (Classroom code: hdww7ml). The following information must be sent to the organization by the date stipulated in section 3:

- Team name;
- Name of each team member;
- Email of each team member;
- CPF or passport number of each member (information for participation certification).

6. Proposed Problems

The proposed problems will be divided into “exercises” and “challenges”.

- Each exercise will be worth 5 points.
- Each challenge will be worth 10 points.
- Professors will create all the exercises and challenges related to the lectures.
- Extra challenges and exercises may be created by the organization if necessary.
- All exercises will be available on the Google Classroom platform (Classroom code: hdww7ml) from the end of group registration until 10:00 on October 10, 2024.

7. Evaluation

The criteria below will be applied to each exercise or challenge to classify the groups that will be awarded.

Exercises:

- Correct solution: 5 points;
- Partial solution: 3 points;

- Incorrect solution: 0 points.

Challenges:

- Correct solution: 10 points;
- Partial solution: 5 points;
- Incorrect solution: 0 points:

The general criteria will be applied:

- Executable code (eliminary).
- Commented code and/or solution explanation. Three qualitative ratings will be assigned in this criterion: good, regular, or absent.
- Solution quality. Three qualitative ratings will be assigned in this criterion: good, regular, or absent.
- Solution creativity. Three qualitative ratings will be assigned in this criterion: good, regular, or absent.

If the code is not executable or the solution is incorrect, it will be classified as an “incorrect solution”.

If the exercise or challenge solution is classified as “good” in most criteria, the group will receive the maximum score for this exercise or challenge (“correct solution”).

The “partial solution” classification will be assigned to the exercise or challenge solution in intermediate cases.

8. Awarding

- All participants who correctly solve 50% of the questions (exercises and challenges) will receive a certificate of participation.
- The top three groups will receive certificates for 1st, 2nd, and 3rd place.
- The certification can be included in their CVs and shared on LinkedIn, showcasing their achievements and enhancing their visibility and employability in the growing quantum technology sector.
- In the event of a tie, the groups with the same score will receive equivalent certificates.
- The group must solve at least one challenge to receive the 1st, 2nd, and 3rd place certificates.
- The winning teams will be announced on 18/10/2024, as established in the schedule.
- If they are present at the winners' announcement ceremony, the group with the highest score (first place) will receive a surprise prize.
- The certificates will be sent by email.
- The organization will discuss any situation not covered in these rules.

Winners of the Quantum Hackathon will not only receive recognition for their innovative solutions but will also gain valuable skills crucial for the rapidly evolving quantum industries.

The hackathon challenges foster proficiency in quantum computing, optimization algorithms, and interdisciplinary problem-solving, all essential in future professions such as quantum software development, cryptography, and quantum research.

9. Rules

To facilitate the evaluation of the solutions, all the participants must follow the following rules:

- Each person must participate in only one group;
- No new members will be allowed once the deadline for defining groups has passed (per the schedule in section 3).
- For exercises and challenges that require programming codes, they must be submitted as the solution or part of the solution to the organization;
- All necessary pips must be included at the beginning of the code;
- The code must be executable in Google Colab;
- The developed code must be commented on clearly and concisely in English;
- The analytical solutions should be typed and submitted in PDF format;
- Solution submission must be made only through the GitHub provided by the organization.

Failure to comply with the rules is subject to disqualification.

10. Intellectual Property

The intellectual property remains with the authors of the solution.

Upon submission of the proposed solution, participants grant the Quantum Computing School a license to use, reproduce, distribute, publicly display, publicly perform, and create derivative works of the solutions for educational, promotional, and research purposes.

The Quantum Computing School commits to crediting the authors of the solutions for any public use.

11. Sharing and Disclosure

Participants agree that the developed solutions may be published on the official Quantum Computing School website and other related platforms, aiming to promote innovation and collaboration in quantum computing. Additionally, the solutions may be presented and demonstrated at future events of the Quantum Computing School or by partners.

12. Confidentiality

Participants must ensure that their solutions do not contain confidential information or third-party trade secrets. The Quantum Computing School is not responsible for protecting confidential information contained in the submitted solutions. Participants are responsible for ensuring that information they wish to keep confidential is not included in public submissions.

13. Available Resources

No electronic equipment will be provided to the event participants.

14. Communication

Official communication will be carried out through the Discord platform.

15. Closing

The event will close on 18/10/2024 with the announcement of the winners.

16. Final Provisions

The Hackaquantum organizers will evaluate any situation not covered by these rules.

The organization reserves the right to change the program or cancel the event at any time upon notification to the participants.