OptiQ Bell Game

a competition for all European students Rules

§1. General Provisions

1. The OptiQ Bell Game Design Competition is organized by Silesian University of Technology under the authority of the OptiQ grant agreement (No. 101080374).
2. The competition is open to all students enrolled in universities located in European Union countries and countries associated with the Horizon Europe project.
3. The competition will be conducted in accordance with these rules and regulations.

§2. Competition Schedule

1. Online registration for the competition will be open from September 9, 2024, to September 21, 2024.
2. Submissions for the first stage of the competition will be accepted from September 9, 2024, to October 6, 2024.
3. The first stage evaluation will conclude on October 11, 2024.
4. Presentations for the second stage will take place from October 14, 2024, to October 18, 2024.
5. Final results of the competition will be announced on October 18, 2024.

§3. Eligibility

1. The competition is open to individual students from European Union countries and countries associated with the Horizon Europe project.
2. A participant may receive support from a formal or informal group (e.g., Study Circle) but only the individual participant will be eligible for free participation in the Thematic School in case of winning.

§4. Submission Requirements – First Stage

1. Each participant must submit a Game Design Document (GDD) in accordance with the provided template.
2. A proof-of-concept developed using Unity 3D or Unreal 3D engines must be published in a public repository shared by the organizer.

3. A video demonstrating the proof-of-concept application must accompany the submission.
4. A document describing the method of generating a 0-1 sequence as required by the game must be provided.
5. Proposals for implementing an experiment related to Bell's inequality using the generated sequence are optional but will be awarded additional points.

§5. Submission Requirements – Second Stage

1. Participants qualified for the second phase of the competition will be asked to present their idea at a remote meeting.
2. The duration of the presentation should not exceed 20 minutes plus 10 for questions from the committee.
3. The form of presentation is arbitrary.

§6. Evaluation Criteria

1. Submissions must meet the following formal criteria:
    a. The proposal to generate random numbers must follow a uniform distribution.
    b. The game must be able to be accessed through the website.
    c. The game must not in any way suggest to the player that it is related to Bell's experiment.
    d. Submissions should be anonymized, which means that all documents, source code, recordings, etc. can only contain the identifiers obtained by the participant in the registration process.
2. Failure to meet at least one of the criteria in point 1 means rejection of the application.
3. Submissions will be evaluated at the first stage, based on the
    a. creativity (10 pts. max),
    b. feasibility (10 pts. max.),
    c. ease of gameplay with no prior training required (10 pts. max),
    d. engaging gameplay (10 pts. max),
4. Additional up to 20 pts. points will be awarded for proposals that include a method for implementing Bell's inequality experiments.
5. The second stage criteria are as follows:

a. The competence of the Participant and supporting team in 3D interactive computer graphics (10 points)
b. The competence of the Participant and supporting team in quantum information science (20 points)
c. The quality of the presentation (10 points)
d. Quality of the game from the player's point of view (20 points)

§7. Evaluation procedure

1. Formal evaluation will be carried out within 5 working days of the application by a person appointed by the Project Manager.
2. The merit evaluation will be conducted by an Evaluation Committee of at least three reviewers, appointed by the Project Manager and approved by the Scientific Committee. This acceptance by the Scientific Committee may be done via email.
3. Each reviewer will give two grades for each submission: one based on the Game Design Document and the other on the proof-of-concept. The ratings will be given on the scale described in §6.3 and §6.4.
4. The lowest and the greatest grade will be removed. From the remaining grades, an average will be calculated, which will be considered the final evaluation of the first phase.
5. The second stage will be evaluated by an evaluation committee with the same composition. If necessary, it can be changed with the approval of the scientific committee, expressed via email.
6. After presentation, each member of Evaluation will give one grade basing on criteria from §6.5. The average of this grade is the final grade from the second stage.
7. The final grade of a given proposal is the weighted average of the grades from the first (with weight of ½) and from the second (with weight 1) stage.

§8. Awards and Benefits

1. All participants, including supporting groups, will gain active participation in the OptiQ project.

2. The top three participants will receive free and personal participation in the Thematic School on entangled photons and Bell's inequality experiments.
3. The winning project, if it meets project requirements, will be implemented as part of the OptiQ project, with participants credited as co-authors in related publications.
4. Participants fulfilling MSCA SE eligibility criteria may be invited as secondees within the OptiQ project.

§9 Confidentiality

1. The Participant and its supporting team members, by registering an application for the competition, agree not to disclose to anyone any information obtained in connection with participation in the contest, including technological, technical, work organization and activity information of the Organizer (hereinafter "Confidential Information").
2. Confidential information shall be considered in particular, but not exclusively, those that have been communicated to the other party with information about their confidentiality, regardless of the form of its communication.
3. The confidentiality obligation set forth in this paragraph shall not apply to information or data, the disclosure of which is required by law and which is available from other public sources, or has been made available by the Organizer to the public.

§10 Copyright Transfer Clause

1. By submitting an entry to the competition, the participant agrees to transfer to the Organizer all copyright and related rights to the submitted work(s). This transfer includes, but is not limited to, the exclusive right to use, reproduce, distribute, display, and create derivative works from the submitted entry, in whole or in part, in any medium now known or hereafter developed, worldwide and in perpetuity, without further compensation to the participant. The Organizer also reserves the right to modify, adapt, or translate the work(s) as necessary.
2. The participant represents and warrants that the submitted work is original and does not infringe upon the rights of any third party. The

participant further agrees to indemnify and hold harmless the Organizer from any claims, damages, or expenses arising out of any breach of this representation.
3. The transfer of rights is effective upon submission of the work to the competition.

§11. Final Provisions

1. The organizer reserves the right to modify the competition rules at any time, with appropriate notification to participants.
2. Participation in the competition constitutes acceptance of these rules and regulations.