https://ictqt.ug.edu.pl/job/ogloszenie-zp/

Inquiry for the preparation of two scientific publications on the general formalism of the causal transmission of information in globally hyperbolic spacetime, including post-quantum schemas based on scientific researchin the project Maestro UMO-2021/42/A/ ST2/0035, “Relativistic causality and information processing”.

Hiring organization
International Centre for Theory of Quantum Technologies

Date posted
2022-06-28

Contract award procedure
The contract award procedure is conducted in the form of a request for quotation in accordance with Art. 2 clause 1 point 1 of the Public Procurement Law.

Awarding Entity
Uniwersytet Gdański, ul. Bażyńskiego 8, 80-309 Gdańsk, NIP: 584-020-32-39

Contact person: Marta Krzyżykowska, +48 58 523 51 80, marta.krzyzykowska@ug.edu.pl, ictqt@ug.edu.pl

Detailed description of the subject of the contract

1. Order type: service.
2. Name and code according to the Common Procurement Vocabulary (CPV): Research and experimental development services and related consultancy services. CPV: 73000000-2.
3. **Subject of the contract**
    1. The subject of the contract is the presentation of research results in two scientific publications, taking into account topics in the area of:
        1. Analyzes of necessary and sufficient conditions for the causal transmission of information in globally hyperbolic space-times using multiparticulate carriers (publication no. 1).
        2. Development of a formalism for the transmission of information in globally hyperbolic journals, taking into account the possibility of active intervention by local observers (Publication No. 2).

Scientific research is carried out as part of the implementation of the Maestro UMO- 2021/42 / A / ST2 / 0035, financed by the National Science Center.

2. The scope of this contract includes the following research activities:
    - an in-depth review of the literature related to the subject of the study,
    - establishing of a mathematical formalism for information transfer in globally hyperbolic spacetimes,
    - investigation of necessary and sufficient conditions for operational no-signalling in spacetime,
    - analysis of the impact of local interventions on causality of the information transfer,
    - investigation of the causality aspects of multi-particle correlations and their dynamics,
    - preparation of the scientific publication including the description of

the analyzes carried out, the methods used, results discussions and research results.

3. The subject of the contract must be performed taking into account the highest European quality standards for conducting scientific research described in „The European Code of Conduct for Research Integrity", available from: https://ec.europa.eu/research/participants/data/ref/h2020/other/hi/h2020-ethics_code-of-conduct_en.pdf, and the final report must be full-fledged (original, unique, present a new contribution to knowledge in a given field) and free from any legal defects.
4. The Contracting party undertakes to provide all materials necessary to complete the subject of the contract, including access to scientific publications and computer or specialized software, at his own cost and risk.
5. The Awarding Entity accepts to prepare of the report (developed as part of the contract) only in the English language.

Contract award procedure participation terms

1. In accordance with the terms of the financing agreement, Contractors that may participate in the contract award procedure are those who have the necessary knowledge and experience in the field of the subject of the contract (natural person), i.e., the Contractor must meet all of the following conditions jointly:

- PhD degree in physics, mathematics or computer science,
- have experience documented by at least three (3) international publications on the JCR list (Journal Citation Report) in the field of:
    - Relativistic physics,
    - Causality,
    - Measure theory and spacetime geometry.
- Have at least an advanced level of English (the language level will be verified during the interview).

2. Assessment of compliance with the above conditions will be made in accordance with the formula "meets – does not meet", based on information contained in the documents listed above. The content of the attached documents must clearly show that the abovementioned conditions are met by the Contractor.
3. In the event of submitting incomplete documentation regarding confirmation of the fulfillment of the condition for participation in the contract award procedure, the Contracting Authority may request the Contractor to supplement them, if the Contractor fails to complete the documentation within the specified deadline, the offer is deemed incomplete and the condition is not met.
4. Failure to meet even one of the abovementioned conditions will result in the Contractor's exclusion from the procedure. The Contractor may be excluded from the procedure at any stage of the contract award procedure.

Grounds for exclusion from the contract award procedure

Excluded from the contract award procedure shall be Contractors who:

- do not meet the conditions;
- do not meet the conditions for participation in the contract award procedure regarding the submission of the required documentation (incomplete offer);
- submitted an offer after the deadline;
- performed activities directly related to the preparation of the contract award procedure or used to prepare the offer with persons participating in these

activities, unless the participation of these contractors does not hinder the fair competition;
- submitted false information affecting the outcome of the contract award procedure.

Offer preparation method

1. The offer must be prepared using the form which constitutes Appendix 1 of the Request for offers – “Offer Form”.
2. The content of the submitted offer must be consistent with the Request for offers and it must include all of the required documents and declarations indicated in the Section III. The Contractor shall submit with the offer:

- A declaration of the compliance with the requirements indicated in Section III, which constitutes Appendix 2 of the Request for offers;
- Documents (scans or certified true copies) confirming the qualifications held by the person indicated by the Contractor to perform the subject of the contract, in particular:
    - a CV;
    - PhD degree in physics, mathematics or computer science (diploma);
    - three (3) international publications on the JCR list (Journal Citation Report) to the extent indicated in Section III, paragraphs 1;
    - a certificate confirming level of English (optional);
- Other documents required by law (scans or certified true copies) – if applicable.
- A power-of-attorney for submitting an original or certified copy of the offer, where the offer has been signed by an attorney-in-fact on behalf of the Contractor – if applicable.

3. The offer must be signed by a person authorized to represent the Contractor.
4. The offer should be prepared in Polish or English.
5. The price may be given in Polish zlotys (PLN) or any currency other than PLN. If the price given in the offer is expressed in a currency other than the Polish zloty, it will be converted according to the average selling rate announced by the National Bank of Poland in force on the day the offer is received.
6. The price must be expressed numerically with the accuracy of up to two decimal places and in words.
7. The price must include all the costs of the contract including all fees and taxes (including goods and services). In the case of natural persons performing the subject of the contract on the basis of a civil law contract concluded directly with the Awarding Entity, the total price should take into account the total gross cost of the civil law contract.
8. The Contractor shall bear all the costs related to the preparation and submission of the offer.
9. Before the expiration of the deadline for the offer submission, the Contractor may amend or withdraw the submitted offer.
10. The offer shall be valid for 30 days starting from the date of the offer submission deadline. The offer binding period may be extended with the consent of the Awarding Entity.
11. The Awarding Entity reserves the right to correct obvious spelling mistakes in the offer, as well as obvious calculation errors, taking into consideration the calculation consequences of the corrections made, provided that they do not significantly alter the content of the offer. The Awarding Entity shall not correct the “Gross total price” quoted in the offer.
12. The Awarding Entity reserves the right to amend or supplement the Request

for offers at any time before the lapse of the offer submission deadline. In such an event, the Awarding Entity shall promptly publish a notice of the amendments or supplements made, providing the date of announcement of the changes and a description of such changes or supplements, at the site of the publication of the Request for offers.

13. Where the scope of the changes introduced into the Request for offers result in the need to modify the offer, the Awarding Entity shall extend the offer submission deadline.
14. The Awarding Entity reserves the right to recall or cancel the contract award procedure at any time without giving a reason.

Offer evaluation criteria and method

1. In selection the best offer the Awarding Entity shall evaluate the "Gross total price" criterion for the total gross prices of the subject of the contract supplied by the Contractor in the Offer Form.
2. The score for this criterion shall be calculated as follows: Score granted to the evaluated offer = [(Lowest offer price) / (Evaluated offer price)] x 100
3. The score will be expressed with the accuracy of up to two decimal places.
4. As a result of the evaluation, according to the criterion indicated in the clause 1 above, the offer may receive the score of maximum 100 points.
5. The most economic and best quality offer shall be the one which has not been excluded from the procedure and which receives the highest score during the evaluation.
6. If at least two Contractors submit the same lowest price, they will be called to submit a new offer, with a new price for the subject of the contract.
7. The Awarding Entity shall award the contract to the Contractor whose offer received the highest score during the evaluation process.
8. The Awarding Entity will notify Contractors who have been awarded the contract electronically to the e-mail address from which the offer was sent or to the e-mail address indicated in the offer.

Order Delivery Date

The deadline for performing the subject of the contract was set for the period from the date of signing the contract to August 31, 2023 . The Awarding Entity reserves the right to change the date of the subject of the contract. The new date will be determined in agreement with the selected Contractor.

Offer submission place, date and method

1. The offer and attachments should be sent via e-mail to the address ictqt@ug.edu.pl
2. **The offer submission deadline shall expire on the 18 th July 2022 (CEST).**
3. The submission date shall be deemed to be the date when the offer is received at the Awarding Entity's email address.
4. Offers submitted past the offer submission deadline shall not be considered.
5. The Awarding Entity reserves the right to extend the offer submission deadline. In such an event, the Awarding Entity shall each time publish a relevant notice at the site of the publication of Request for offers.

Appendices

Appendix No. 1 – Offer form
Appendix No. 2 – Declaration of the Contractor