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Inquiry for the performance of scientific research on relaxation properties of exponential dynamical maps describing the dynamics of quantum open systems based on scientific research in the project OPUS 21 UMO-2021/41/B/ST2/03207, "Quantum open systems and thermodynamical resource theory"

Hiring organization

International Centre for Theory of Quantum Technologies

Valid through

16.03.2023

Date posted

2023-03-08

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

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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 performance of scientific research taking into account the following tasks:
 - Analyzes of emergence of relaxation property for exponential quantum dynamical maps, in which (pseudo-)generator is a sum of superoperator in GKSL form and additional (time-dependent) term which deviates the GKSL structure.
 - Determination of sufficient conditions for emergence of the relaxation property.
 - The scientific research is carried out as part of the implementation of the OPUS 21 UMO-2021/41/B/ST2/03207, 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,
 - Description of the possibly general form of trace-preserving (TP) exponential quantum dynamic maps, in relation to the disturbed GKSL structure,
 - Investigation of necessary and sufficient conditions for complete positivity property (CP) of general exponential quantum dynamic maps,
 - Determination of necessary and sufficient conditions for the inheritance of relaxation properties for a quantum dynamical maps with (pseudo-)generator of deviated structure from quantum dynamic maps with a generator in the GKSL form.

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/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/european-code-of-conduct-for-research-integrity_horizon_en.pdf.
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.

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:
 - M.Sc. 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:

 - Quantum physics,
 - Quantum information theory,
 - Quantum open systems;

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

1. 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.

2. The following shall also be excluded from the procurement procedure:
- Contractors referred to in Article 7 (1) listed in the lists specified in Regulation 765/2006 and Regulation 269/2014 or included in the list, on the basis of a decision on inclusion in the list ruling on the application of the measure referred to in Article 1 (3) of the Act of 13 April 2022 on specific solutions for counteracting support for aggression against Ukraine (Journal of Laws, item 835);
 - Contractors whose beneficial owner within the meaning of the Act of 1 March 2018 on anti-money laundering and counter-terrorist financing (Journal of Laws of 2022, items 593 and 655) is a person listed in the lists set out in Regulation 765/2006 and Regulation 269/2014 or listed or being such a beneficial owner as of 24 February 2022, provided that he or she has been included in the list on the basis of a decision on inclusion in the list resolving the measure referred to in Article 1(3) of the Law of 13 April 2022 on specific solutions for counteracting support for aggression against Ukraine (Journal of Laws, item 835);
 - Contractors whose parent company within the meaning of Article 3 (1) (37) of the Accounting Act of 29 September 1994 (Journal of Laws of 2021, item 217, 2105 and 2106) is an entity listed in the lists set out in Regulation 765/2006 and Regulation 269/2014 or listed or being such a parent company as of 24 February 2022, provided that it has been included in the list on the basis of a decision on inclusion in the list deciding on the application of the measure referred to in Article 1, point 3 of the Law of 13 April 2022 on special solutions for counter-acting support for aggression against Ukraine (Journal of Laws, item 835).

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;
 - M.Sc. 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 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.
12. 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.
13. 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.
14. 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.
15. 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 = $[(\text{Lowest offer price}) / (\text{Evaluated offer price})] \times 100$
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 **June 30, 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 16th March 2023 (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

[Inquire description](#)

Appendix No. 1 – [Offer form](#)

Appendix No. 2 – [Declaration of the Contractor](#)