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Project Code: 71793

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TO BE PUBLISHED ONLINE

CALL FOR EXPRESSION OF INTEREST

(For submission of proposals for the conclusion of a project lease contract)

The Research Committee (Special Account for Research Funds) of Aristotle University of Thessaloniki (ELKE AUTH), in the framework of the project "**SERRANO - TRANSPARENT APPLICATION DEPLOYMENT IN A SECURE, ACCELERATED AND COGNITIVE CLOUD CONTINUUM**" funded under EUROPEAN COMMISSION DIRECTORATE-GENERAL FOR RESEARCH & INNOVATION – HORIZON 2020, with Academic Head Prof. Kostas Siozios, invites candidates to submit proposals for **five (5)** position/positions as described below, through the award of a project contract, starting from the of the signing of the contract until 31/12/2022 and with a total anticipated remuneration **39.150€** (taxes included).

The contracts can be extended until the end date of the project 31/12/2023 (in case of extension until its completion) and within the approved limits of its budget.

PhD Candidate / Electrical and Computer Engineering / up to 8.000€ / up to 31-12-2022

Project Description (A)

The work is about the designing hardware and software kernels to perform workload acceleration in disaggregated data centers. The implementation phase will emphasize on improving performance and energy consumption for the computationally intensive applications and tasks. The candidate is going to deal with the:

- Design and implement computationally intensive kernels related to project's usecases with Xilinx High-Level Synthesis (HLS) tools.
- Develop a framework for seamlessly integration of heterogeneous workload-aware performance improvement.
- Performance optimization of computationally intensive under maximum affordable error.

The above tasks will be implemented as part of the project's work packages:

- WP3: Hardware and Software Platforms for Enhanced Security.
- WP4: Cloud and Edge Acceleration.

Required Qualifications

- Degree of University (UE) in Electrical & Computer Engineering
- PhD candidate specializing in designing hardware accelerators for computationally intensive tasks.
 - *Proven by relevant document from university department.*
- Proven knowledge on the design and implementation of hardware accelerators onto reconfigurable platforms.
 - *Knowledge proven by relevant bachelor's thesis or relevant courses during bachelor studies (analytical grading and if this is not proved directly from the course's title, then the analytical grading must be accompanied by the course description in the Studies Guidebook or by teaching relevant courses (institution certificate and / or contract).*
- Proven knowledge of Xilinx software tool for digital design.
 - *Knowledge proven by relevant bachelor's thesis or relevant courses during bachelor studies (analytical grading and if this is not proved directly from the course's title, then the analytical*

grading must be accompanied by the course description in the Studies Guidebook or by teaching relevant courses (institution certificate and / or contract).

- At least knowledge of English (B2).

Additional Qualifications

- Relevant research experience in accelerating computationally intensive tasks with reconfigurable architectures (FPGA platforms).
- Additional knowledge of English.
- Publications in scientific journals related to the acceleration of computationally intensive applications with reconfigurable architecture.
- Announcements in scientific conferences about accelerating computationally intensive tasks with dedicated hardware accelerators.
- Seminars and trainings related to digital circuits design for accelerating computationally intensive applications.

Qualifications Assessment

	Qualifications criteria	Credits (Researchers)
1	Bachelor's degree mark	mark * 40
2	Research experience* (per month) - 84 months max	7 (per month)
3a	Excellent knowledge C2	70
3b	Very good knowledge C1	50
4	Publications in scientific journals (per publication) – 6 max	40 (per publication)
5	Announcements in scientific conferences (per announcement) – 6 max	15 (per announcement)
6	Seminars - Trainings (per hour) – 300 hours max or 5 max	0,25 or 15 per seminar

All the qualifications listed above are in relevance with the project requirements and objectives.

PhD Candidate / Electrical and Computer Engineering / up to 14.350€ / up to 31-12-2022

Project Description (B)

The work is about the designing hardware and software kernels to perform workload acceleration in disaggregated data centers. The implementation phase will emphasize on improving performance and energy consumption for the computationally intensive applications and tasks. The candidate is going to deal with the:

- Methodology and software tool development for performing architecture-level exploration with heterogeneous IP kernels.
- Performance optimization of computationally intensive kernels under maximum affordable error.

The above tasks will be implemented as part of the project's work packages:

- WP3: Hardware and Software Platforms for Enhanced Security.
- WP4: Cloud and Edge Acceleration.

Required Qualifications

- Degree of University (UE) in Electrical & Computer Engineering
- PhD candidate specializing in resource management for edge and/or fog devices.
 - *Proven by relevant document from university department.*
- Proven knowledge on Cloud technologies.
 - *Knowledge proven by relevant bachelor's thesis or relevant courses during bachelor studies (analytical grading and if this is not proved directly from the course's title, then the analytical grading must be accompanied by the course description in the Studies Guidebook or by teaching relevant courses (institution certificate and / or contract).*
- Proven knowledge on the performance optimization of computationally intensive tasks.
 - *Knowledge proven by relevant bachelor's thesis or relevant courses during bachelor studies (analytical grading and if this is not proved directly from the course's title, then the analytical grading must be accompanied by the course description in the Studies Guidebook or by teaching relevant courses (institution certificate and / or contract).*
- At least knowledge of English (B2).

Additional Qualifications

- Relevant research experience in resource management in fog and edge environment.
- Additional knowledge of English.

- Publications in scientific journals related to the efficient resource utilization.
- Announcements in scientific peer reviewed conferences about efficient resource utilization.
- Seminars and trainings for the design and development of resource management targeting computationally intensive applications.

Qualifications Assessment

	Qualifications criteria	Credits (Researchers)
1	Bachelor's degree mark	mark * 40
2	Research experience* (per month) - 84 months max	7 (per month)
3a	Excellent knowledge C2	70
3b	Very good knowledge C1	50
4	Publications in scientific journals (per publication) – 6 max	40 (per publication)
5	Announcements in scientific conferences (per announcement) – 6 max	15 (per announcement)
6	Seminars - Trainings (per hour) – 300 hours max or 5 max	0,25 or 15 per seminar

All the qualifications listed above are in relevance with the project requirements and objectives.

PhD Candidate / Electrical and Computer Engineering / up to 7.200€ / up to 31-12-2022

Project Description (C)

The work is about the designing hardware and software kernels to perform workload acceleration in disaggregated data centers. The implementation phase will emphasize on improving performance and energy consumption for the computationally intensive applications and tasks. The candidate is going to deal with the:

- Methodologies and software tools for rapid prototyping (reduce design time)
- Performance and energy optimization of computationally intensive kernels with FPGAs and GPUs.
- Performance optimization of computationally intensive kernels under maximum affordable error.

The above tasks will be implemented as part of the project's work packages:

- WP3: Hardware and Software Platforms for Enhanced Security.
- WP4: Cloud and Edge Acceleration.

Required Qualifications

- Degree of University (UE) in Electrical & Computer Engineering
- PhD candidate specializing in accelerating computationally intensive tasks with dedicated hardware accelerators.
 - *Proven by relevant document from university department.*
- Proven knowledge on accelerating computationally intensive tasks with FPGAs and GPUs.
 - *Knowledge proven by relevant bachelor's thesis or relevant courses during bachelor studies (analytical grading and if this is not proved directly from the course's title, then the analytical grading must be accompanied by the course description in the Studies Guidebook or by teaching relevant courses (institution certificate and / or contract).*
- At least knowledge of English (B2).

Additional Qualifications

- Relevant research experience in accelerating computationally intensive applications with FPGAs and GPUs.
- Additional knowledge of English.
- Publications in scientific journals about the acceleration of computationally intensive applications with FPGAs and GPUs.
- Announcements in scientific peer reviewed conferences to the acceleration of computationally intensive applications with FPGAs and GPUs.
- Participation in seminars and trainings for the acceleration of computationally intensive applications with FPGAs and GPUs.

Qualifications Assessment

	Qualifications criteria	Credits (Researchers)
1	Bachelor's degree mark	mark * 40
2	Research experience* (per month) - 84 months max	7 (per month)
3a	Excellent knowledge C2	70
3b	Very good knowledge C1	50
4	Publications in scientific journals (per publication) – 6 max	40 (per publication)
5	Announcements in scientific conferences (per announcement) – 6 max	15 (per announcement)
6	Seminars - Trainings (per hour) – 300 hours max or 5 max	0,25 or 15 per seminar

All the qualifications listed above are in relevance with the project requirements and objectives.

PhD Candidate / Electrical and Computer Engineering / up to 4.800€ / up to 31-12-2022

Project Description (D)

The work is about the designing hardware and software kernels to perform workload acceleration in disaggregated data centers. The implementation phase will emphasize on improving performance and energy consumption for the computationally intensive applications and tasks. The candidate is going to deal with the:

- Methodologies and software tools for rapid prototyping (reduce design time)
- Performance and energy optimization of computationally intensive kernels with GPUs.
- Performance optimization of computationally intensive kernels under maximum affordable error.

The above tasks will be implemented as part of the project's work packages:

- WP3: Hardware and Software Platforms for Enhanced Security.
- WP4: Cloud and Edge Acceleration.

Required Qualifications

- Degree of University (UE) in Electrical & Computer Engineering
- PhD candidate specializing in accelerating computationally intensive tasks with dedicated hardware accelerators.
 - *Proven by relevant document from university department.*
- Proven knowledge on accelerating computationally intensive tasks with GPUs.
 - *Knowledge proven by relevant bachelor's thesis or relevant courses during bachelor studies (analytical grading and if this is not proved directly from the course's title, then the analytical grading must be accompanied by the course description in the Studies Guidebook or by teaching relevant courses (institution certificate and / or contract).*
- At least knowledge of English (B2).

Additional Qualifications

- Relevant research experience in accelerating computationally intensive applications with GPUs.
- Additional knowledge of English.
- Publications in scientific journals about the acceleration of computationally intensive applications.
- Announcements in scientific peer reviewed conferences to the acceleration of computationally intensive applications.
- Participation in seminars and trainings for the acceleration of computationally intensive applications.

Qualifications Assessment

	Qualifications criteria	Credits (Researchers)
1	Bachelor's degree mark	mark * 40
2	Research experience* (per month) - 84 months max	7 (per month)
3a	Excellent knowledge C2	70
3b	Very good knowledge C1	50
4	Publications in scientific journals (per publication) – 6 max	40 (per publication)
5	Announcements in scientific conferences (per announcement) – 6 max	15 (per announcement)
6	Seminars - Trainings (per hour) – 300 hours max or 5 max	0,25 or 15 per seminar

All the qualifications listed above are in relevance with the project requirements and objectives.

PhD Candidate / Electrical and Computer Engineering / up to 4.800€ / up to 31-12-2022

Project Description (E)

The work is about the designing hardware and software kernels to perform workload acceleration in disaggregated data centers. The implementation phase will emphasize on improving performance and energy consumption for the computationally intensive applications and tasks. The candidate is going to deal with the:

- Performance and energy optimization of computationally intensive kernels with FPGAs and High-Level Synthesis tools (e.g. Xilinx HLS).
- Performance optimization of computationally intensive kernels under maximum affordable error.

The above tasks will be implemented as part of the project's work packages:

- WP3: Hardware and Software Platforms for Enhanced Security.
- WP4: Cloud and Edge Acceleration.

Required Qualifications

- Degree of University (UE) in Electrical & Computer Engineering
- PhD candidate specializing in accelerating computationally intensive tasks with dedicated hardware accelerators.
 - *Proven by relevant document from university department.*
- Proven knowledge on accelerating computationally intensive tasks with FPGAs and High-Level Synthesis tools.
 - *Knowledge proven by relevant bachelor's thesis or relevant courses during bachelor studies (analytical grading and if this is not proved directly from the course's title, then the analytical grading must be accompanied by the course description in the Studies Guidebook or by teaching relevant courses (institution certificate and / or contract).*
- At least knowledge of English (B2).

Additional Qualifications

- Relevant research experience in accelerating computationally intensive applications with FPGAs and High-Level Synthesis tools.
- Additional knowledge of English.
- Publications in scientific journals about the acceleration of computationally intensive applications with FPGAs.
- Announcements in scientific peer reviewed conferences to the acceleration of computationally intensive applications with FPGAs.
- Participation in seminars and trainings for the acceleration of computationally intensive applications.

Qualifications Assessment

	Qualifications criteria	Credits (Researchers)
1	Bachelor's degree mark	mark * 40
2	Research experience* (per month) - 84 months max	7 (per month)
3a	Excellent knowledge C2	70
3b	Very good knowledge C1	50
4	Publications in scientific journals (per publication) – 6 max	40 (per publication)
5	Announcements in scientific conferences (per announcement) – 6 max	15 (per announcement)
6	Seminars - Trainings (per hour) – 300 hours max or 5 max	0,25 or 15 per seminar

All the qualifications listed above are in relevance with the project requirements and objectives.

Required Documents:

1. Submission of Proposal - Statement (see appendix)
2. Detailed table data for the proof of experience, if needed (see appendix)
3. Detailed Curriculum Vitae
4. Copies of the Degrees (Note: In case the specialization / direction do not result from the Degree, the Detailed Score should be attached. In cases where the degree is a grading criterion and is not indicated in the copy of the degree then the detailed score is submitted additionally)
5. Copies of certificates and certifications of previous service, as well as any other document that will certify the information mentioned in the CV and which are related to the Required or Additional qualifications-criteria of this call for expression of interest.
6. Copy of certificate of military stats or discharge papers / Copy of deferral of enlistment (for male candidates)

*** Proof of Research Experience:**

Research or participation in research centers or programs can be counted as experience time provided that the proposal includes: certificate of the employer proving the period of employment, the subject of employment, the title and the Academic Head for each research program or project. If the object of the project does not result from the above then a relevant certification from the Academic Head is required for each research program, in which the object of the research will be mentioned.

All the above concerning the experience apply if the candidates during their participation held the required basic qualification or the required professional license or other professional license or certificate.

Male candidates must have fulfilled their military obligations or have been legally discharged from them or have been deferred for the entire duration of the project. In case the time for which a deferral of enlistment has been received does not cover in its entirety the duration of the project, ELKE AUTH is obliged to terminate the respective contract at the expiration time of the above deferral. Both the contractor of the Special Account and the Academic Head Officer of the project are obliged to immediately inform ELKE AUTH one (1) month before the end of the deferral.

Proposals and required documents should be submitted either via e-mail to **ksiop@auth.gr** or in person or by post to the following address Section of Electronics and Computers, Department of Physics, AUTH, 54124 Thessaloniki, Greece within hours 10:00 – 14:00 no later than 24/6/2022 Proposals will be attributed a reference number from the Secretariat of the Department of the Academic Head of the project.

For more information and questions regarding the position, candidates may refer to **00302310-998774** For information on the proposal submission process candidates may contact ELKE AUTH at **00302310-994082-22-09**.

Submitted proposals will be evaluated by a three-member Evaluation Committee based on the requirements/provisions of the call.

The candidate who wishes to submit an objection to the result (Decision for Approval of Results) is entitled to recourse either via e-mail to prosk@rc.auth.gr or in person or by post to the Special Account of Research Authorities of the Aristotle University of Thessaloniki (Research Committee AUTH, 1st floor, Office 101 - 3rd September Str., University Campus 546 36, Thessaloniki, Greece) within five (5) working days from the day following the posting of the Decision for Approval of Results on the website of ELKE AUTH and Diavgeia. The candidate has the obligation to be informed about the posting of the results from the website of ELKE <https://www.rc.auth.gr/JobPosition/List> in the online posting of this call for expression of interest in Diavgeia. Candidates are entitled to access the data of the individual proposal file and the assessment and evaluation papers of their own and of their other co-candidates, upon written request within five (5) working days of the day following announcement of the results on the website of Diavgeia and under the conditions of articles 5 of Law 2690/1999, 42 of Law 4624 / 2019 and 6 par. 1 lit. f of the GCC (EU 2016/679).

ELKE AUTH takes all appropriate measures for the protection of personal data during the evaluation process and it is strongly recommended that you read about the data protection policy and your rights on the AUTH website <https://www.auth.gr/gdpr>.

EVALUATION PROCEDURE – OTHER CONDITIONS

1. From all the proposals submitted according to the above specifications, the one that best meets the project's requirements will be selected and awarded a work contract on the basis of contractual freedom.
2. Only proposals / objections that will be received by the set date and time will be considered. In the case of postal submission, the deadline is judged on the basis of the date mentioned in the shipping file, provided that it will be received by ELKE AUTH no later than the announcement of the results. ELKE AUTH bears no responsibility for the content of the candidacy files that will be sent.
3. Changes to the proposals (replacements, corrections or submission of additional documents) are not allowed after the expiration of the deadline.
4. Any diplomas of higher education (undergraduate, postgraduate and doctoral) which are included in the Required or Additional Qualification and have been awarded by institutions abroad, must be accompanied by certificates of recognition by the Hellenic National Academic Recognition and Information Center (Hellenic NARIC). In case the diplomas mentioned above have not been recognized during the submission of the proposal, the relevant application for recognition by NARIC can be submitted. It is pointed out, however, that a contract cannot be concluded without the submission of the recognition of the academic titles by NARIC. In any case, ELKE AUTH reserves the right and discretion, depending on the needs of each research project and especially the time of its implementation, to finally contract with the next candidate that holds such certificates. In addition, when the call for expression of interest stipulates a grading/points scale of the degree, it is required to submit a certificate of the equivalent degree grade issued by NARIC. In the case that, all certificates for the recognition of a degree are provided but the certificate of the equivalent degree grade by NARIC is not submitted, the candidate's proposal will be accepted but no points for the degree will be awarded.
5. In case the diplomas of higher education have been awarded by institutions in Greece and the call requires a grading /points scale of the degree, it is required that the grade is indicated in the presented degree. If the grade is not indicated in the degree then the detailed course score is presented. In case the degree does not indicate the grade and a detailed course score has not been submitted, the proposal of the interested person is not rejected, but the specific required qualification is not graded.
6. It is pointed out that the procedure for submitting proposals for the conclusion of a project lease contract is not competitive, while the selection of a contractor has the character of accepting the proposal and not "recruitment". The evaluation process will be completed by compiling a ranking list and / or a list of excluded, while those selected will be notified individually. In case of a tie, the proposal of the interested person is selected in order a) with the longest experience, b) with the highest bachelor's degree mark, c) with the highest master's degree mark.
7. The proposal that is first in the ranking table and has the highest score in all the scoring criteria will be the one that will be selected. In case of obstruction of the person who submitted it, the next proposal is selected until the ranking order is exhausted.
8. Any submitted proposal that does not meet the criteria of the call of the expression of interest will not be examined any further and will be automatically rejected.
9. Throughout the duration of the project it is possible that the selected candidate(s) may be replaced, if necessary, by other candidate(s) of the present call and in accordance with the ranking list.
10. The contract may be extended without restriction, following a decision of the competent body of ELKE AUTH and if the required budget of the project allows it, without a new invitation, until the end date of the project (and in case of extension of the project until its new end date).
11. ELKE AUTH does not undertake any commitment to conclude a contract, as it is left to its full discretion to conclude or not contracts, as well as their number, excluding any claim of the interested parties.
12. The project assignment will take place in accordance with the provisions of the Program Implementation Guide.
13. For candidates, language knowledge shall be certified according to Article 1 of Presidential Decree 146/2007 "Amendment of provisions of Presidential Decree 50/2001 Defining qualifications for the appointments of posts in the public sector" (Government Gazette 185/3.8.2007/Issue A'), in conjunction with the last passage of paragraph 1 of Article 1 of the Presidential Decree 116/2006 "Amendment of Article 28 of Presidential Decree 50/2001" (Government Gazette 115/9.6.2006/Issue A'). For foreign candidates, there shall be equivalent language skills verification.
14. For candidates, computer skills shall be certified according to the Article 27 par.6 of Presidential Decree 50/2001 "Defining qualifications for the appointments of posts in the public sector" (Government Gazette 39/5.3.2001/Issue A', 24/30.01.2013 /Issue A' and 63/9.3.2005/Issue A').
15. Foreign documents must be accompanied by photocopies of their official translation into the Greek language.
16. It should be noted that the project assignment to candidates employed in the Public Sector, in Public and Private Bodies, etc. is subject to the provisions of paragraph 14 of Article 12 of YAKED 110427/EYTHY1020/01.11.2016

The President of the Research Committee

Efstratios A. Stylianidis
Vice Rector Research and Lifelong Learning AUTH

SUBMISSION OF PROPOSAL - STATEMENT*
(with consequences of law on false/inaccurate statement)

Mobile phone: E-mail: VAT number:

Please note in this proposal - statement and outside of the postal file the following

(To be completed by the candidate):

1. The protocol number of this call

2. The code of project object you would like to participate (A,B,C,D,E)

I affirm that the information given in
this proposal - statement is accurate and true

SIGNATURE

Date : ___/___/_____

Find attached : 1.
2.

**Incomplete filling of the proposal – statement constitutes a criterion for exclusion*

