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Project Code.: 99321

Thessaloniki, 03/03/2023  
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**TO BE PUBLISHED ONLINE**

### **CALL FOR EXPRESSION OF INTEREST**

The Research Committee (Special Account for Research Funds) of Aristotle University of Thessaloniki, in the framework of the project "**Next-MGT**, Next Generation of Micro Gas Turbines for High Efficiency, Low Emissions and Fuel Flexibility" funded under European Commission – HORIZON 2020, Marie Skłodowska-Curie, with Academic Head, Prof. Anestis I.Kalfas, invites candidates to submit applications for one **(1) position** (through the award of a work contract), for **8 months** (until 31/12/2023) with a total anticipated remuneration 32.003,92€ euro (VAT and taxes included).

**One (1) position (through the award of a work contract), with a total anticipated remuneration 32.003,92€ euro (VAT and taxes included) until 31/12/2023**

#### **Job Description ESR5**

- This work will be carried out in the context of **WP1**: Cycle Innovations and System Optimization

**Objectives:** The main objective of this ESR is to develop concepts for the design of core MGT system that can be utilized with a wide range of applications such as CHP, CCHP, automotive range extenders, concentrated solar power allowing for reduction in cost of production and maintenance using economy of scale

**Expected Results:** (1) Methodologies for the design of the MGT system based on parameterization of the core component design with specific attention to the turbomachinery. (2) Design optimization of the compressor and turbine with multiple objective functions including design point efficiency, overall power generated and cost of production. (3) Understanding of the effect of size variation on the resulting optimal design.

#### **\*Payments**

Maximum payment per month 4.000,49€  
Living allowance 2.900,49€  
Mobility allowance 600,00€  
Family allowance 500,00€

### Required Qualifications

- A school of Engineering degree
- A relevant master's degree or equivalent in Mechanical Engineering, Aerospace Engineering or Thermal Engineering sciences
- Excellent command of English (C2)
- **Mobility Criterion:** At the time of recruitment, he/she must not have resided or carried out your main activity (work, studies, etc.) in Greece for more than 12 months in the 3 years immediately before the reference date (indicative start of the contract, 1 May 2023). Compulsory national service and/or short stays such as holidays are not taken into account

This criterion is more flexible in case of candidates who are characterized as refugees, according to the Geneva Conventions. Specifically, for these candidates, the period before they are officially given the refugee status is not taken into account as a residence/work period in the host country. The residence/work period will be calculated from the day they were given the refugee status.

- Candidates should be Early-Stage Researcher (ESR), i.e. in case he/she have already gained prior work experience in academia, you shall be in the first four years (full-time equivalent research experience) of your research career at the time of recruitment by the host organization and have not been awarded a doctoral degree. Full-time equivalent research experience is measured from the date when you obtained the degree entitling you to embark on a doctorate, even if a doctorate was never started or envisaged. Part-time research experience will be counted pro-rata

**Conditional Acceptance:** Students in their final year of Master education may also apply and if qualified, receive a conditional offer. If the applicant has not completed her/his studies, she/he should include a written statement from the degree administration office (or equivalent department), confirming that she is enrolled on the final year of her education and stating the expected completion date. If the applicant receives a conditional offer, the candidate should present the degree certificate upon enrolment.

### Additional Qualifications

- Advanced skills in innovative thermodynamic cycle analysis and life cycle analysis regarding gas turbine systems
- Knowledge of CFD techniques and numerical methods (preferable software: ANSYS)
- Experience of CFD code development using high level programming languages (preferable languages: Python or MATLAB or Fortran 90/95)
- Knowledge of Mechanical Design with CAD software
- Excellent command knowledge of Microsoft Office suite

### Qualifications Assessment

|   | Qualification criteria  | Credits (Researchers) |
|---|---|-----------------------|
| 1 | Diploma Grade   | Grade * 40            |
| 2 | Knowledge in innovative thermodynamic cycle analysis and life cycle analysis regarding gas turbine systems                          | 10                    |
| 3 | Knowledge of CFD techniques and numerical methods (preferable software: ANSYS)  | 10                    |
| 4 | Experience of CFD code development using high level programming languages (preferable languages: Python or MATLAB or Fortran 90/95) | 10                    |
| 5 | Knowledge of Mechanical Design with CAD software  | 10                    |
| 6 | Knowledge of Microsoft Office suite   | 50                    |

**All the above qualifications should be in relevance with the project requirements and objectives.**

### **Required Documents:**

1. Submission of Proposal - Statement (see appendix)
2. Detailed Curriculum Vitae
3. 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)
4. 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.
5. Copy of certificate of military stats or discharge papers / Copy of deferral of enlistment (for male candidates)

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 [akalfas@auth.gr](mailto:akalfas@auth.gr) or in person or by post to the following address Secretariat of Department of Mechanical Engineering (Building D), Aristotle University of Thessaloniki, GR-54124 Thessaloniki, Greece, T: +30 2310 996071 within hours 8:00-14:00 no later than **13/03/2023** Proposals will be attributed a reference number from the Secretariat of the Department of the Academic Head of the project.

Proposals will be attributed a reference number from the Secretariat of the Department of the Academic Head of the project.

This Invitation will be published on the website of ELKE AUTH <https://rc.auth.gr/proskliseis-gia-apasholisi-se-erga> and on the website of "Diavgeia".

For more information and questions regarding the position, candidates may refer to 2310-996002 Mrs. Kalliopi Goulia-Maniou.

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](mailto: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) 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://rc.auth.gr/proskliseis-gia-apasholisi-se-erga> 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) 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. 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.
5. 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.
6. 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.
7. 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.
8. 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.
9. 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).
10. 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.
11. The project assignment will take place in accordance with the provisions of the Program Implementation Guide.
12. The knowledge of foreign languages is certified in accordance with the provisions of the Presidential Decree 85/2022 "Determining the qualifications for appointment to positions of public sector" (A' 232/17.12.2022), especially according to the articles 10, 14 par. 3 and 15 par. 7. Foreign documents must be accompanied by photocopies of their official translation into the Greek language except for English, French, German, Italian and Spanish language certificates which, if they meet the conditions of the P.D. 85/2022, are accepted without requiring their translation.
13. For candidates, computer skills shall be certified according to the Presidential Decree 85/2022 "Determining the qualifications for appointment to positions of public sector" (A' 232/17.12.2022), especially according to the article 9.
14. 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

Professor Efstratios Stylianidis  
Vice Rector Research and Lifelong Learning

**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):**

The protocol number of this call

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*