Call for expression of interest for one (1) position of Hardware R&D Engineer, in the Institute of Computer Science (ICS) Foundation for Research and Technology – Hellas (FORTH)

Position(s): One (1) position for The European PILOT project
Project: The European PILOT (GA 101034126) funded under H2020-JTI-EuroHPC-2020-1.
Duration: 6 months with possibility of extension
Location: Heraklion, Crete, Greece
Opening date: 19/06/2024
Closing date: 01/07/2024
Reference: "Project_EUPILOT_HWRD_Engineer_Jun2024"

Description
We seek one (1) recent graduate Hardware R&D Engineer for our team. The candidates should have proven experience with hardware design and FPGA prototyping. The candidate will participate in the R&D activities of FORTH-ICS in the context of the H2020-JTI-EuroHPC project The European PILOT. Accelerators provide the majority of performance in modern High-Performance Computing (HPC) systems and are the fundamental building blocks for Exascale systems. The European PILOT (Pilot using Independent Local & Open Technology) will be the first demonstration of two ALL European HPC and High-Performance Data Analytics (HPDA) (AI, ML, DL) accelerators, designed, implemented, manufactured, and owned by Europe. The European PILOT combines open-source software (SW) and open and proprietary hardware (HW) to deliver the first completely European full stack software, accelerator, and integrated ecosystem based on RISC-V accelerators coupled to any general purpose processor (CPU) via PCIe Gen 6.0 or CXL 3.0. This pilot will demonstrate key HPC and HPDA workloads and software stacks. The European PILOT is also the first to demonstrate an ALL European HPC ecosystem. The accelerators will be manufactured in the new European GlobalFoundries 12 nm advanced silicon technology, a major demonstration of European technology independence. The European PILOT combines cutting edge research utilizing SW/HW co-design to demonstrate HPC and HPDA accelerators running key applications and libraries in a full software stack including middleware, runtimes, compilers, and tools for the emerging RISC-V ecosystem. The European PILOT is able to produce a full stack (SW and HW) research prototype by leveraging and extending the work done in multiple European projects like: EPI, MEEP, POP2 CoE, EuroEXA, and ExaNeSt. This pre-production system can only be realized with a combination of existing IP, HW emulation using FPGAs, and real ASIC prototypes that demonstrate the full stack feasibility of the hardware and software. Finally, while the applications we use span AI to HPC, the aggressive ASIC implementation (chiplet size and small
geometry) will be the smallest technology node manufactured in Europe and can easily be adapted for a near-future HPC implementation.

**Required qualifications:**
- Diploma in Computer Science or Computer Engineering.
- Experience with RTL design using Verilog or VHDL hardware description languages.
- Experience with system development or acceleration using FPGAs.
- Experience with Xilinx FPGA tools such as: Vivado Design Suite or Vitis HLS.
- Experience with interfaces such as: AXI and PCIe.
- Willingness and ability to work cooperatively within a team, to learn, and adapt to the projects.
- Physical presence at FORTH, Heraklion, Crete for the duration of the position.
- Fluent knowledge of English.
- Names of at least three professional references

**Desired qualifications:**
Knowledge of and/or experience in and/or strong interest to learn:
- Experience with test-driven development and verification.
- Familiarity with Linux, low-level software, and understanding of the HW/SW interactions.

**Application Submission**
Interested candidates can submit their applications via [http://www.ics.forth.gr/jobs/en/](http://www.ics.forth.gr/jobs/en/) using the link “Apply for the position” under the announcement. Applications must include:
- Detailed CV, including qualifications and interests in the above areas, and proof thereof
- Scanned copies of academic titles
Promising candidates may be invited for an interview before a decision is made.

**Contact Information**
- For information and questions regarding the application and selection procedure, please contact: webmaster@ics.forth.gr
- For information and questions about the advertised positions, the activities of the group, or the Institute, please contact Nikolaos Papadopoulos (nickpap@ics.forth.gr) and Stelios Louloudakis (slouloudak@ics.forth.gr).

**Selection Announcement**
The result of the selection will be announced on the website of ICS-FORTH. Candidates have the right to appeal the selection decision, by addressing their written objection to the ICS secretariat within five (5) days since the results announcement on the web. They also have the right to access (a) the files of the candidates as well as (b) the table of candidates’ scores (ranking of candidates results). All the above information related to the selection procedure will be available at the secretariat of ICS-FORTH in line with the Hellenic Data Protection Authority. Access to personal data of co-candidates shall be limited to personal data (and relevant data) and supporting documents which have been the basis of the evaluation of the candidates for the specific post(s). Prior to the announcement of the personal data and/or documents of the co-candidates to the applicant, FORTH will inform the data subjects in an appropriate way.

FORTH is compliant with all legal procedures for the processing of personal data as defined by the Regulation EU/2016/679 on the protection of natural persons with regard to the processing of personal data. FORTH processes the personal data and relevant supporting documents that you have submitted to us. Processing of that data is carried out exclusively for the needs and purposes of this specific call. Such data shall not be transmitted to or communicated to any third party unless required by law. FORTH retains the above data up to the announcement of the final results of the call, unless further process and reservation is required by law or for purposes of exercise, enforcement, prosecution of certain one’s legitimate legal rights, as defined in the Regulation EU/2016/679 and/or in national law. We inform you that under the Regulation EU/2016/679 you have the rights to be informed about your personal data, access to, rectification and erasure, restrictions of process and objection to as provided
by applicable regulation and national laws. We acknowledge also to you, that you have the right to file a complaint to the national Data Protection Authority. For any further information regarding exercise of your personal data protection rights, you may contact the Data Protection Officer at FORTH at dpo@admin.forth.gr. You have the right to withdraw your application and consent for the processing of your personal data at any time. We inform you that, in this case, FORTH shall destroy such documents and/or supporting documents submitted and shall delete the related personal data.