Call for expression of interest for one (1) position of a 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.

Location: Heraklion, Crete, Greece

Opening date: 15/02/2024

Closing date: 26/02/2024

Reference: “Project_EUPILOT_HWRD_Engineer_Feb2024”

Description

We seek one (1) Hardware R&D Engineer for our team. The candidates should have proven experience on hardware RTL design and validation with a background in European Research Projects. 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.

Requirements:
• MSc degree in Computer Science or Computer Engineering or Electrical Engineering.
• Documented professional experience in related roles after the MSc degree.
• Experience in SystemVerilog RTL design and interfaces such as: AXI or AMBA5 CHI.
• Experience in FPGA systems development and Xilinx Vivado Design Suite.
• Experience in European Research Projects.
• Physical presence at FORTH, Heraklion, Crete for the duration of the position.
• Fluent knowledge of the English language.
• Names of at least three professional references.

Desired qualifications:
Knowledge of and/or experience in and/or strong interest to learn:
• RISC-V architectures, DMA engines, and system components.
• Test-driven development and validation

Application Submission
Interested candidates can submit their applications via 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 and other 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.
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.