## Kamyar Givaki

Ph.D. IN COMPUTER ENGINEERING - COMPUTER SYSTEMS ARCHITECTURE

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Computer Arithmetic, Stochastic and approximate Computing, Low-Power Design, Machine Learning

## **School of Computer Science**

INSTITUTE FOR RESEARCH IN FUNDAMENTAL SCIENCES (IPM)

## **Cover letter**

Dear Selection Committee,

I am thrilled to apply for the post-doctoral position at the School of Computer Science of the Institute for Research in Fundamental Sciences (IPM). I am a computer engineer with a Ph.D. in computer engineering - Computer Systems Architecture from the University of Tehran with a passion for facing new challenges in Ultra-low power & resilient designs, and Computer Arithmetic.

My doctoral research focused on developing innovative techniques for designing and optimizing ultralow power computing components including multiplier and multiply-and-accumulate (MAC) units, which are extensively utilized in many real-world applications such as machine learning models and digital filters. The proposed computational elements enable the hardware-efficient implementation of computationally intensive applications in devices with constraints in hardware budgets. During this period, I have obtained valuable experience in RTL designs, performance analysis, and data analytics.

Moreover, I have published several papers in prestigious journals and conferences, such as IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems (TCAD) and the Design Automation Conference (DAC), demonstrating my ability to produce high-impact research outputs. Additionally, I secured a research grant from Eurolab-4-HPC, a two-year H2020-funded project, showing my skills in obtaining research funding. As part of this project, I was awarded a grant of 5,000 Euros to conduct a research visit at the Barcelona Supercomputing Center (BSC).

I have had the privilege of collaborating with researchers from various disciplines and countries, which has enabled me to develop robust communication and team-building competencies. For instance, I have co-authored a paper titled 'On the resilience of deep learning for reduced-voltage FPGAs' with researchers from the Barcelona Supercomputing Center (BSC), as well as several other papers with researchers from the University of Louisiana at Lafayette and Chosun University.

Thank you for considering my application. I have attached my CV and research statement with this letter. I am excited about the opportunity to be a post-doctoral researcher at IPM and look forward to discussing my qualifications further in an interview. Thank you for your time and consideration.

Sincerely,

## Kamyar Givaki