

Amin Foshati

Ph.D., Department of Computer Engineering
Sharif University of Technology
Email: a.foshati@{sharif.edu,gmail.com}

Search Committee

School of Computer Science
Institute for Research in Fundamental Sciences

Dear Members of the Search Committee,

I hold a Ph.D. in Computer Engineering from Sharif University of Technology (SUT) and currently teach undergraduate courses at this university. My research focuses on the intersection of **embedded systems, Cyber-Physical Systems (CPS), fault tolerance, and cost-effective strategies** to ensure dependability in safety-critical domains such as automotive systems and Internet of Things (IoT). Over the past decade, I have combined academic research with industry-driven problem-solving, contributing to more than twenty interdisciplinary projects.

I have published in *IEEE Transactions on Intelligent Vehicles* and *IEEE Internet of Things Journal*, and I have additional manuscripts **under review**. These publications demonstrate my ability **to conduct research and effectively present results**. My hands-on experience includes implementing AI models on FPGAs, accelerating signal-processing algorithms on GPUs, and developing simulation tools independently and in teams. I am proficient in C, C++, Python, Verilog, System Verilog, and CUDA, enabling rapid prototyping across diverse hardware platforms.

Beyond research, I have taught undergraduate courses in **Digital Systems Design, Computer Architecture, and Interface Circuit Design**. Furthermore, I have **supervised six master's students** to strengthen my mentoring and leadership skills. I am confident that my combination of research experience, cross-platform hardware expertise, and practical system design skills will allow me to contribute effectively to your team.

Thank you for considering my application. I look forward to the opportunity to discuss how my skills and experience align with the role of a post-doctoral researcher at IPM.

Sincerely,
Amin Foshati