Department Directory & Research Overview

Engaging with global academic partners for high-caliber research collaborations at the frontiers of science and technology

Academic Year 2026–2027

University of Isfahan
Faculty of Computer Engineering
Department of Computer Architecture



Faculty Profile: Kamal Jamshidi



Kamal Jamshidi

Professor

Research Interests & Expertise

- **Cyber-Physical Systems**: Real-time embedded control, system integration, and fault tolerance.
- **Industrial IoT and Robotics**: Networked industrial automation, robotics architectures, and sensor integration.
- **AI Controller and Smart Maintenance**: Intelligent feedback control, predictive maintenance, and condition monitoring.
- **Embedded AI**: Hardware-efficient machine learning algorithms for real-time edge microcontrollers.

Teaching Portfolio & Contact

Courses: Real-Time Embedded Systems, Microprocessor-Based Circuits, Control Systems, Electrical and Electronic Circuits

Scholar: `Google Scholar Profile`

Email: `jamshidi@eng.ui.ac.ir` · `jamshidi1964@yahoo.com`

Faculty Profile: Mohammad Reshadinezhad



Mohammad Reshadinezhad

Associate Professor

Research Interests & Expertise

- **VLSI Design & In-Memory Computing**: Computation-in-memory & arithmetic circuits.
- **Quantum Computing**: Reversible arithmetic circuits & logic synthesis.
- **Approximate Computing**: Approximate arithmetic circuits for energy efficiency.
- **Emerging Nanotechnologies**: Circuit design using novel nanoscale devices.

Teaching Portfolio & Contact

Courses: Advanced VLSI, Computer Arithmetic, Electrical & Electronic Circuits, Logic Circuits, Computer Programming, VLSI

Scholar: `Google Scholar Profile`

Email: `m.reshadinezhad@eng.ui.ac.ir` · `reshadinezhad@gmail.com`

Faculty Profile: Ali Bohlooli



Ali Bohlooli

Associate Professor

Research Interests & Expertise

- **Cyber-Physical Systems**: Reliability assessment & integrated computing.
- **Internet of Things**: IoT data management & edge caching/routing.
- **Embedded AI**: Lightweight ML & vision models for edge devices.
- **IIoT Security**: Anomaly detection in industrial IoT & SDN.

Teaching Portfolio & Contact

Courses: IoT Devices Programming, Advanced Optimization, Computer Systems Performance Evaluation, Embedded Artificial Intelligence

Scholar: `Google Scholar Profile`

Email: `bohlooli@eng.ui.ac.ir` · `ali.Bohlooli@gmail.com`

Faculty Profile: Zohre Beiki



Zohre Beiki

Assistant Professor

Research Interests & Expertise

- **DNA Computing & Molecular Programming**: DNA logic circuits & strand displacement.
- **Design Automation**: Automated design flows & architectures for DNA circuits.
- **Bioinformatics**: Computational analysis of miRNA biomarkers & Boolean disease models.
- **Molecular Diagnostics**: DNA-based processors for cancer & viral (HPV) detection.
- **DNA Nanotechnology**: Self-assembly tiles & biosensing platforms.

Teaching Portfolio & Contact

Courses: Molecular and Biocomputing, Nano Circuit Design, Computer Architecture, Digital Logic Design, Programming (C++)

Scholar: `Google Scholar Profile`

Email: `z.beiki@eng.ui.ac.ir` · `z.beigi@gmail.com`

Faculty Profile: Mahdi Kalbasi



Mahdi Kalbasi

Assistant Professor

Research Interests & Expertise

- **Hardware Accelerators**: Domain-specific compute architectures.
- **FPGA-Based Systems**: Prototyping & reconfigurable computing.
- **Edge AI**: Low-power deep learning inference engines.
- **AIoT**: Convergence of AI and IoT hardware systems.

Teaching Portfolio & Contact

Courses: Hardware Description Language (HDL), Computer Architecture, FPGA Architecture & Design, Digital Systems Synthesis, Embedded Systems and Microprocessors

Scholar: `Google Scholar Profile`

Email: `m.kalbasi@comp.ui.ac.ir` · `mahdikalbasi.ui@gmail.com`

Faculty Profile: Seyed Erfan Fatemieh



Seyed Erfan Fatemieh

Assistant Professor

Research Interests & Expertise

- **Memristive In-Memory Computing**: Overcoming von Neumann bottleneck.
- **Digital VLSI Design**: Focused on energy-efficient circuit design.
- **Cryptography**: Hardware implementations of secure primitives.
- **Computer Arithmetic**: Efficient algorithms and hardware structures.
- **Emerging Technologies**: Circuit design applying emerging devices.

Teaching Portfolio & Contact

Courses: Advanced VLSI, Computer Arithmetic, Discrete Mathematics, Digital Electronics, Parallel Programming, VLSI Systems

Scholar: `Google Scholar Profile`

Email: `erfanfatemieh@eng.ui.ac.ir` · `erfanfatemiehui@gmail.com`

Fostering International Academic Exchanges & Research Collaborations

We welcome joint research initiatives, international guest lectures, and student/faculty exchanges in related research areas.

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