Hatam Abdoli

PHD in Computer Engineering,

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Faculty of Engineering, Bu-Ali Sina University, Hamedan, Iran

Personal Data

Name: Hatam Abdoli

Fields of Expertise

Programming: C, C++, Pascal, VHDL, Verilog, Java, HTML, ...
System: Intel Assembly Programming
Simulation: OPNET Modeler, SimuLink, OptiSystem
Operating Systems: Linux, and Windows
Tools: Matlab, Quartus, Xilinx ISE, ModelSim, Synopsys, HSpice, Cadence, Proteus, OptiSystem, Xilinx Vivado
Network: Wireless technology, TCP/IP, Network Administration, Network Programming, ...
Digital Design: VHDL, Verilog, …
Hardware: FPGAs, Intel Microprocessors, AVR Microcontrollers, …

Current Research and Interest

Computer Arithmetic, Approximate Arithmetic, Low Power Digital Design, Signal Processing, Hardware Accelerator for Deep Learning, Computer Networks, Cyber Physical Systems & IoT.

Professional Experience

Sep 2003 - Now
Bu-Ali Sina University, Hamedan – Lecturer (from Jul. 2018 Assistant Professor)
Doing research Activities and teaching computer courses for B.Sc. and master students: Computer networks, Computer networks Lab, Microprocessor, Digital design, Assembly language, Embedded systems, Computer Arithmetic, and Network processor architecture.

Sep. 2001 - Sep 2003
Payam Mashregh Company - research engineer
Sarvnet Company - researcher
Work at part-time.
Analysis, Design and Implementing Digital systems.
Analysis, Design and Implementing Network protocols and algorithms.

May 2021 - Now
Computer Department Head, Engineering Faculty, Bu-Ali Sina University, Hamadan, Iran

Education & Research	**Short-Term Postdoc Researcher:** CITI lab, INSA-Lyon, Lyon, France, Oct. 2019-Dec. 2019.
	PHD: Computer System and Architecture, University of Isfahan, Isfahan, Iran, 2011-2017.
	Visiting Researcher: CITI lab, INSA-Lyon, Lyon, France, Oct. 2014-June 2015.
	M. Eng., Computer Architecture, Isfahan University of Technology, Isfahan, Iran, 2000-2003.
	B. Eng.: Computer Engineering (Hardware), Isfahan University of Technology, Isfahan, Iran, 1995-1999.
	Diploma: Mathematics and Physics, Seifieyeh exemplary High School, Malayer, Iran, 1991-1995.

Courses Taught (B. Eng. & M. Eng. courses) (Sep 2003 - Now)	**Computer Networks,** Bu-Ali Sina University, Hamedan, Iran **Microprocessors,** Bu-Ali Sina University, Hamedan, Iran. **Intel Assembly Language,** Bu-Ali Sina University, Hamedan, Iran. **Computer Programming in C,** Bu-Ali Sina University, Hamedan, Iran. **Digital Design,** Bu-Ali Sina University, Hamedan, Iran. **Machine Language and system programming,** University of Isfahan, Iran. **Computer Networks Lab**, Bu-Ali Sina University, Hamedan, Iran. **Digital Design Lab**, Bu-Ali Sina University, Hamedan, Iran. **Computer Architecture Lab**, Bu-Ali Sina University, Hamedan, Iran. **Microprocessors Lab**, Bu-Ali Sina University, Hamedan, Iran. **Embedded and Real-Time Systems**, Bu-Ali Sina University, Hamedan, Iran. **Computer Arithmetic**, Bu-Ali Sina University, Hamedan, Iran. **Network Processor Architecture**, Bu-Ali Sina University, Hamedan, Iran.

Teacher Assistant	**Computer Architecture**, Undergraduate, Isfahan University of Technology, 1999-2000. **Computer Networks Lab**, Undergraduate, Isfahan University of Technology, 2000-2001.

Publications & Researches

Journal Papers:

[1] H. Abdoli, "Three Different Designs for Packet Classification", In WSEAS TRANSACTIONS ON COMPUTERS, Issue 9, Vol. 8, Pages 1494-1503, September 2009.

[2] H. Abdoli, H. Nikmehr, N. Movahedinia, F. Dinechin, "Improving Energy Efficiency of OFDM Using Adaptive Precision Reconfigurable FFT", Circuits, Systems, and Signal Processing, vol. 36, no 7, pp 2742-2766, July 2017.

[3] H. Abdoli, H. Nikmehr, "A Flexible CO-OFDM Using Reconfigurable Multi-Precision FFT," in IEEE Communications Letters, vol. 21, no. 9, pp. 1997-2000, Sept. 2017. (doi: 10.1109/LCOMM.2017.2706675.)

[4] A. Gholami, M. Nassiri, H. Abdoli, "A Transmission Power Control Mechanism for 802.15.4+RPL-Operated Wireless Sensor Network", in SWCC, vol. 10, pp. 197-206, 2020.

[5] S. Asadrooz, M. Nassiri, M. Abbasi, H. Abdoli, "A Traffic-Aware Packet Classification Method to Reduce Memory Accesses", in IJECE, vol. 18, no 3, pp 185-196, 2020.

[6] M. Abassi, Sh. Maleki, G. Jeon, M. R. Khosravi, H. Abdoli, "An Intelligent Method for Reducing the Overhead of Analyzing Big Data Flows in OpenFlow Switch", IET Communications, 2022.

[7] M. Abbasi, S. Vakilian, S. Vakilian, M.R. Khosravi, & H. Abdoli, (2022). Layered methods for updating AIoT-compatible TCAMS in B5G-enabled WSNs. EURASIP Journal on Wireless Communications and Networking, 2022(1), 1-19.

[8] M. Akbari Kohnehshahri, R. Mohammadi, H. Abdoli, & M. Nassiri, (2022). An Efficient Method for Online Detection of DRDoS Attacks on UDP-Based Services in SDN Using Machine Learning Algorithms. Mobile Information Systems, 2022.

[9] Ghafari, M., et al. (2023). "Speeding up the execution-time of Crystals-Kyber PQC Algorithm on FPGA." Electronic and Cyber Defense 10(4): 101-110.

[10] Babaeipour, R., et al. (2023). "Empirical Study on Detecting COVID-19 in Chest X-ray Images using Deep Learning-Based Methods." Current Signal Transduction Therapy 18(1): 54-61.

[11] Mohammadi, R., et al. (2023). "EQAFR: an energy and QoS aware fuzzy routing for internet of underwater things using SDN." Earth Science Informatics 16(4): 3563-3577.

Conference Papers:

[1] H. Abdoli, and H. Saidi, "Packet Classification Algorithm for No-Uniform Classifiers". In proceedings of 14th International Conference in Electrical Engineering (ICEE'2006), Amirkabir University, Tehran, Iran, May 2006. (in Persian)

[2] H. Abdoli, and H. Saidi, "A hybrid scheme for packet classification algorithm". In proceedings of 15th International Conference in Electrical Engineering (ICEE'2007), Research Institute for ICT, Tehran, Iran, May 2007. (in Persian)

[3] H., Abdoli, "Balanced HiCuts: an optimized packet classification algorithm", In Proceedings of the WSEAES 13th international conference on Computers, Rodos, Greece, July 2009.

[4] H., Abdoli, M., Garousi, M. D., Amiri, "Fractality and Generative Thought", 12th generative art conference, Milan, Italy, Dec. 2009.

[5] H., Abdoli, H., Nikmehr, N., Movahedinia, "Approximate Arithmetic: A new approach in Digital Signal Processors for Trading Accuracy with Energy Efficiency ", 2nd CCSE, Najafabad, Iran, October 2014 (in Persian).

[6] H., Abdoli, H., Nikmehr, N., Movahedinia, F., Dinechin, "Energy-Efficiency Improvement of OFDM Through Reconfiguring Approximate Arithmetic Units", CITI lab, Lyon, France, April 2015 (Poster).

[7] A., Karimi, H., Abdoli, M., Nassiri, "Evaluating and improving LoRA protocol by choosing appropriate configuration", CSICC 2019, Sharif University of Technology, Tehran, Iran, March 2019 (in Persian).

[8] P., Fooladnia, H., Abdoli, "Improving Energy Efficiency of Software Defined Wireless Sensor Networks", 4th International Conference on Smart Cities, Internet of Things and Applications, Ferdowsi University of Mashhad, Mashhad, Iran, Sep. 2022(in Persian).

[9] N. Shiri, H. Abdoli, "improving performance of BR-LWE Based Post-Quantum Cryptography in IoT devices", 7th International Conference on Internet of Things and Its Application, Isfahan University, Isfahan, Iran, Sep. 2023(in Persian).

Languages

Persian (Farsi): Mother Tongue
English (Second Language): Fluent
   IELTS: 6.5 (Overall)
Arabic: Elementary
French: Elementary

References

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