

# Curriculum Vitae

## Shekoofeh Azizi

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### RESEARCH INTEREST

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- ◆ Digital Signal, Image and Video Processing
- ◆ Digital Watermarking and Steganography
- ◆ Medical Imaging
- ◆ FPGA
- ◆ High Performance Computing and Acceleration
- ◆ GPU and CUDA programming
- ◆ Network Security and Cryptography Algorithms
- ◆ VLSI Design

### EDUCATION

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#### M.Sc., Computer Engineering / Computer Architecture

Isfahan University of Technology (IUT), Isfahan, Iran, 2011- 2013

**Thesis Title:** Robust Adaptive Watermarking and Accelerating Contourlet Transform [19.75/20]

**Supervisor:** Prof. Shadrokh Samavi

**Advisor:** Dr. Nader Karimi

**GPA:** 18.57/20

#### B.Sc., Computer Engineering / Hardware Engineering

Isfahan University of Technology (IUT), Isfahan, Iran, 2007- 2011

**Thesis Title:** Robust Digital Image Watermarking in Spatial Domain [20/20]

**GPA:** 17.55/20

#### High School Diplomas in Mathematics and Physics

Granted from Iran's National Organization for Development of Exceptional Talents (NODET)

**GPA:** 19.25/20

### PUBLICATIONS

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#### Journal Articles:

- [1] M. Mohrekesh, **S. Azizi**, S. Samavi and S. Shirani "Hierarchical watermarking framework based on analysis of local complexity variations," *Submitted to IEEE Transactions on Information Forensics and Security*, October 2013.

#### Conference Papers:

- [1] **S. Azizi**, S. Samavi, M. Mohrekesh and S. Shirani, "Cascaded transform space watermarking based on analysis of local entropy variation," *In proceeding of International Conference on Multimedia and Expo Workshops (ICMEW)*, pp. 1-6, San Jose, California, July 2013.
- [2] **S. Azizi**, M. Mohrekesh, S. Samavi, "Hybrid image watermarking using local complexity variations," *In proceeding of Iranian conference on Electrical Engineering (ICEE)*, pp. 1-6, May 2013.
- [3] M. Mohrekesh, **S. Azizi** and S. Samavi, "Accelerating GPU implementation of contourlet transform," *In proceeding of Iranian conference on Machine Vision and Image Processing (MVIP)*, September 2013.
- [4] M. Karimi, M. Mohrekesh, **S. Azizi** and S. Samavi, "Transparent watermarking based on psychovisual properties using neural networks," *In proceeding of Iranian conference on Machine Vision and Image Processing (MVIP)*, September 2013.
- [5] S. Akhavan, N. Karimi, **S. Azizi** and S. Samavi, " Stereo Image Watermarking Method Based on Binocular Just Noticeable Difference ," *Submitted to Iranian conference on Electrical Engineering (ICEE)*, December 2013.

### HONORS AND ACHIEVEMENTS

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- ◆ Ranked 1<sup>st</sup> among computer architecture design students in Isfahan University of Technology, 2013.
- ◆ Awarded by IUT's excellent students organization, all semesters of studying, 2007-2013.
- ◆ Received scholarship for the graduate studies in the school of computer engineering, Isfahan University of Technology, 2011.
- ◆ Membership of computer's olympiad team, Isfahan University of Technology, Isfahan, Iran, spring 2011.
- ◆ Ranked 1<sup>st</sup> among hardware engineering students in Isfahan University of Technology, 2011.
- ◆ Ranked 6<sup>th</sup> among computer engineering students in Isfahan University of Technology, 2011.
- ◆ Ranked in the upper 0.5% among more than 400,000 applicants in the Iranian nationwide university entrance exam, summer 2007.

## TECHNICAL REPORTS AND PROJECTS

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- [1] **S. Azizi**, "Robust Adaptive Watermarking and Accelerating Contourlet Transform," *M.Sc. Thesis*, ECE Dept., Isfahan University of Technology, 2013.
- [2] **S. Azizi**, "A Study on Decimal Fully Parallel and Pipelined Floating Point Multipliers," *Technical Report*, ECE Dept., Isfahan University of Technology, 2012.
- [3] **S. Azizi**, "Barcode Decoding using Hough Transform," *Final project of image processing course: Dr. B. Nazari*, ECE Dept., Isfahan University of Technology, 2012.
- [4] **S. Azizi**, "Implementation of FIR Using VHDL for Bandpass Filtering," *Final Project of VHDL programming course: Prof. S. Samavi*, ECE Dept., Isfahan University of Technology, 2012.
- [5] **S. Azizi**, "Hardware Transactional Memory for GPU Architectures," *Technical Report*, ECE Dept., Isfahan University of Technology, 2012.
- [6] **S. Azizi**, "Robust Digital Image Watermarking in Spatial Domain," *B.S. Thesis*, ECE Dept., Isfahan University of Technology, 2011.
- [7] **S. Azizi**, "Design and Analysis of 128x128 Array of SRAM cells," *Final project of VLSI design course: Dr. K. Bazargan*, ECE Dept., Isfahan University of Technology, 2011.
- [8] **S. Azizi**, "Introduction to Monitoring Systems," *Technical Report*, Isfahan University of Technology and Behineh Niroo Spadan Engineering Co., 2010.
- [9] **S. Azizi**, "Network Security: Cryptography Algorithms," *Final project of computer networks course: Dr. P. Khadivi*, ECE Dept., Isfahan University of Technology, 2010.

## TEACHING EXPERIENCES

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### Lab Instructor, Isfahan University of Technology, Iran

- ◆ Undergraduate Course, Computer Architecture, Supervisor: Prof. S. Samavi, 2012- till now
- ◆ Undergraduate Course, Digital System Design II, Supervisor: Dr. N. Karimi, fall 2013

### Teaching Assistant, Isfahan University of Technology, Iran

- ◆ Data Communication and Networking, Instructor: Dr. F.S. Tabataba, 2011-2013
- ◆ Data Communication and Networking, Instructor: Dr. A. Jamali, fall 2010
- ◆ Signals and Systems, Instructor: Dr. B. Nazari, 2010-2011

## PROFESSIONAL ACTIVITIES

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**Graduate Research Assistant in Hardware Design and Image Processing Lab (HaDIP)**, IUT, October 2011 till now

**Senior member of Students Scientific Society**, ECE Dept., IUT, 2011-2012

**Membership of junior RoboCup team**, NODET High School, Isfahan, Iran, June 2003 - April 2006

## WORK EXPERIENCE

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### Behineh Niroo Spadan Engineering Co., Isfahan, Iran, summer 2010

Summer Internship, Supervisor: Dr. Pejman Khadivi

Job-content: Learning LabVIEW graphical development environment and working with MySQL server  
Designing a language learning monitor using LabVIEW graphical programming environment.

### Ertebatat Payam Mashregh Engineering Co., Isfahan, Iran, December 2013 till now

Computer Engineer, Job-content: Design and Implementation of RFID systems, Application design

## PROFESSIONAL SKILLS

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**Programming Languages and Tools**: Pascal, Assembly, C, C++, QBasic, MATLAB, Python, Java, Java Script

**Hardware Languages**: VHDL, Verilog

**EDA Tools**: Tanner L-Edit, Xilinx ISE, H-Spice, Cadence OrCAD

**Operating Systems**: Windows, Linux, MAC OSX

**Graphics Tools**: Macromedia Flash, Adobe Photoshop, 3D Max

**Other Libraries and Tools**: OpenCL, CUDA, OpenCV, LabVIEW

## LANGUAGE SKILLS

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**Farsi**: Native speaker

**English**: Fluent

TOEFL iBT Score: 96/120 (October 2013)

Reading: 23, Listening: 28, Speaking: 20, Writing: 25

**Turkish**: Familiar

**Arabic**: Familiar

References available upon request