

CURRICULUM VITAE

AMIN ASGHARI

- E-MAIL: a.asghari@semnan.ac.ir

SPECIAL INTERESTS

- Gate Drive Circuits/ Voltage Regulation Modules (VRMs) for CPUs/ Power ICs/ Soft Switching Techniques in DC–DC Converters/ Synchronous Rectification Techniques in Low and medium Voltage Converters.
- Fault Tolerance and Error Detection Techniques/ Industrial Networks.
- Analysis and Design of Analog and Digital Circuits/ Computer Architecture.

EDUCATION

- 2015** Ph.D. in Electrical Engineering
Isfahan University of Technology, Isfahan, IRAN
- Total GPA: 19.34/20.
 - Ph.D. Thesis: “*New Driving Schemes and ZVT Power Circuit for Synchronous Buck Converter in Low and Medium Voltage applications*,” Supervisor: Prof. Hosein Farzanehfard.
- 2008** M.Sc. in Electrical Engineering
Amirkabir University of Technology (Tehran Polytechnic), Tehran, IRAN
- Total GPA: 17.69/20.
 - M.Sc. Thesis: “*Refinement of the Embedded Processors Dependability to Implement in Critical Environments*,” Supervisor: Prof. S.A. Motamedi.
- 2005** B.Sc. in Electrical Engineering
Shiraz University, Shiraz, IRAN
- Total GPA: 17.35/20.
 - B.Sc. Thesis: “*Markov Models, Hidden Markov Models and Selected Applications in Speech Recognition*,” Supervisor: Dr. A. Zolghadr Asli.

PUBLICATIONS

- [1] “Synchronous Rectifier Driving Circuit Based on Voltage-Driven Method with Energy Recovery,” *IET Power Electron.*, Vol. 7, Iss. 4, pp. 765–774, 2014.
- [2] “A Driving Scheme Using a Single Control Signal for a ZVT Voltage Driven Synchronous Buck Converter,” *Journal of Power Electronics*, Vol. 14, No. 2, pp. 217-225, March 2014.
- [3] “Effective RTL Method to Develop On-Line Self-Test Routine for the Embedded Processors Using the Wavelet Transform,” *7th IEEE International conference on Computer and Information Science, Portland, Oregon, USA*, May 2008.

- [4] “Effective Self-Test Routine for On-Line Testing of Processor Cores Implemented In Harsh Environments,” *IEEE International Conference of Industrial Technology (ICIT), Chengdu, China*, April 2008.
- [5] “Fast and Accurate Iris Recognition Method Using the Complex Inversion Map and 2DPCA,” *7th IEEE International conference on Computer and Information Science, Portland, Oregon, USA*, May 2008.
- [6] “Three Dimensional Face Recognition Using SVM Classifier,” *7th IEEE International conference on Computer and Information Science, Portland, Oregon, USA*, May 2008.
- [7] “Fast and Accurate Personal Identification Method Based on Human Iris Analysis,” *IEEE International Conference of Industrial Technology (ICIT), Chengdu, China*, April 2008.

RESEARCHES

- Design, simulation and implementation of a new ZVT synchronous buck converter with tapped inductor for low and medium voltages applications.
- Design, simulation and implementation of a new synchronous rectifier driving circuit with energy recovery.
- Design, simulation and implementation of a driving scheme using a single control signal for a ZVT synchronous buck converter.
- Design, simulation and implementation of a half bridge converter.
- Simulation and implementation of PARWAN processor using VHDL.
- Simulation of robot tracking using LABVIEW.
- Research on transient detection in COTS processors using software approach, *project of Reliability Digital System Design Course*.
- Research on hetero junction bipolar transistors (Structure of HBTs, DC and RF properties of HBTs, vertical and lateral design of HBTs, fabrication of HBTs, ...), *project of Solid State Devices Course*.
- Research and design of a CAN bus using 80196kb and CAN bus controller 82527, *project of Microprocessor in Industry Course*.
- Research on dataflow computers, *project of Parallel Processing Course*.
- Research and design of an 80386 minimum system, *project of Advanced Microprocessors Course*.
- Design and implementation of serial and parallel connection between PC and 8086 experimental board, *project of Microprocessor Lab. Course*.
- Research on error detection and recovery in microprocessors, *final presentation of Microprocessor in Industry Course*.
- Research on smart cards, *final presentation of Advanced Microprocessors Course*.

TEACHINGS

2015 - present Electronics, Electrical Circuits, Industrial Electronics, Electronics Lab, in Semnan University, Lecturer.

COMPUTER SKILLS

ELECTRICAL ENGINEERING

OrCAD, PSIM, ModelSim, LABVIEW,
PSpice, HSpice,
VHDL, Verilog,
C, C++, MATLAB,
80c196kb and 80c51 family Assembly language, Intel processors family Assembly language (8086, 80286, 80386, Pentium).

PUBLISHING and PRESENTATION

LaTEX, Adobe Acrobat, Microsoft Office (Word, Visio, Power Point, Excel), Microsoft FrontPage, Microsoft Publisher.