## Dr. Abobaker M. Elhouni

Full Professor

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## Position:

- Head of Onboard Computer Department at R&D Center from 2001 to 2005

- Head of Electrical and Computer Engineering Department at Libyan academy from 2008 to 2010

- Responsible for quality assurance system in the school of engineering science

- Staff member at the Electrical and Computer Engineering Department at Libyan academy until Now.
- Head of Electrical and Computer Engineering Department at Libyan academy from 2017.

## Highlights

25+ years experience in design and implementation of complex Digital system design and verification of high-speed digital circuits in the Automated Test Equipment industry. Oversaw design, layout, testing, and verification using several Hardware Description languages such as Verilog, SystemC and VHDL Languages. Familiar with board and ASIC design/simulation tools, and computer Networks

## Education

•University of Belgrade, Serbia.  Phd. of Computer Engineering, 2001.
  *Thesis Title:*
       Reconfigurable coprocessor Board for Control and Guidance Algorithms,
       (designed and implemented by using VHDL and Muxplus + II Package)
•University of Nottingham, Nottingham, UK, Master of Science in Modern Electronics
  and Complex Digital Design Systems, 1992.
• University of Tripoli, Tripoli, Libya. Bachelor of Science in Computer Engineering,
   "Computer Engineering Department" 1987.

# Lectures

## Msc Student

- Complex digital system Design with VHDL(Advanced course)
  Tripoli University, Electrical Eng. Department

- Real Time Programming Using Microcontroller Board 8051
  Technical Studies and Research Center, Tripoli
- Complex digital system Design Using Verilog Development Tools
  Technical Studies and Research Center, Tripoli
- Complex digital system Design with Verilog (Advanced course)
  Academy of Graduate Studies, Jhanzoor.
- Real Time Control Systems.
  Academy of Graduate Studies, Jhanzoor.
- Supervisin for more than 10 Msc Thesis in Deferent Universites,
  Includes the Libyan Academy.

## Bsc Student

- Microprocessor I, Microprocessor II, at High Institute of Computer
  Technology.                        -
- Digital Design Circuits, at High Institute of Computer Technology
- Data acquisition System, at High Institute of Computer Technology


- Electronic Circuits: Operational Amplifiers, and Op-amp Applications
- Digital Signal Processing.
- Advanced Microprocessors, DSP, and Microcontrollers.
- Embedded Systems: OBC, and ASIC Systems
- Reconfigurable Systems, CPLD,  and FPGA Chips.
- Image Algorithms.

I run many training Courses in Digital Signal Processors, Assembly languages
for different machines, VHDL, and Verilog Packages.


# Work Experience

Center for Research and Industrial in Tripoli.
Various functions including:
-Took over responsibility for several high-speed digital circuit boards used in
OBC systems. This included submitting schematics entry, place and route
supervision, and prototype design verification.

-Designed an On Board Computer based on four DSP Processor Controlled by
80486  Processor, It uses in industrial area Which has a complex Mathematical
Operations.

- Developed a Self test programs for DSP21065 Boards from Analog Device Company, and Handshaking Protocols between the slaves, the master boards and The Host PC.

- Designed and implemented the Control Box Elevator based on Motorola DSP Processor for 20  floors.

-  Designed a Talking Digital Multimeter  based on Two processor namely, Z80 and Speech Synthesizer processor(Voice Processor) .

-  Designed and Implemented Traffic Lights Control Board based on Altera 10K20 FPGA Chips (Verilog ).

- Designed and implemented Timing and control servo motors board based on 8086 Processor and 8254 Timer.

- I have experience in SCADA Tools. In order to control and monitoring the processes in factories by using these tools.

## Software & Environments
•Verilog , HSPICE, Verilog-XL, NC-Verilog, SignalScan, SimVision, Microsoft Office, and MS-DOS/Windows.
•C++, and Matlab.
•VissualDSP++4 (Development Package for Analog Device Products, CHARC DSP Procssors)
•VHDL  Hardware Description language.
•ModelSim, Max+plus II, Synplify Pro, Quartus II, Active HDL 7.1, SOPC Builder and DSP builder Tools.
•Some familiarity with PSPICE, Synopsys, and AutoCAD, WorkBench.

## Publishing
**Abobaker M. Elhouni** "Issues in FPGA-Based Configurable Computer Design for Operating Systems and  Multimedia Applications".
  Proceedings of the HICSS-99,Mauna Lani, Hawaii, USA,January 1999.

**Abobaker M. Elhouni** "Configurable Computer Design for Guidance and Control Algorithms" Proceedings of the  IT99, Zabliak, Serbia, Feburary 1999.

**Abobaker M. Elhouni;** Idres Al Fgi: Hsain Abu Aisha " Content-Based Image Retrieval Based on Efficient Fuzzy Color Signature  Academy of Higher Studies, Tripoli-Libya, journal 2007

**Abobaker M. Elhouni** ;Fgee El-Bahlul; Abdoelbari  Elalo, William J. Phillips[1], " Using Routing Optimization in next generation network to achieve high QoS**",** 8th Annual

Communication Networks and Services Research Conference, Montreal, Canada May 2010, pages 261- 267.

**Abobaker M. Elhouni;** Fgee, El-Bahlul and William J. Phillips1, " Testing a new proposed IPv6 QoS management Model in Inter and Intra Domains", International Conference on Advances in Computer Tools for Engineering Applications. ACTEA 2009 15-17 July 2009 Page(s):219 - 224.

**Abobaker M. Elhouni** Fgee, El-Bahlul and Hassen Abakar " Enhancement of Educational Institutions Dynamic Websites by adding Security and Accesibility**",** 4th International Conference on Next Generation Mobile Applications Services and Applications, Amman, Jordan, July 2010, pages 96- 101.

**Abobaker M. Elhouni** Tarek Abubaker Abulifa,"Using Verilog Hardware Description Language to teach Computer Architecture Courses", International Conference of Education Technology ICOET 2008**,** Omman March 2008**.**

**Abobaker Elhouni** ;Adel Smeda, Mourad Oussalah, and El-Bahlul Fgee " COSABuilder: an Extensible Tool for Architectural Description, , In Proceedings of the 3d IEEE International Conference on Information & Communication Technologies: from Theory to Applications (ICTTA'08), April 7-1 2008, Damascus, Syria.

**Abobaker Elhouni** Bader Najep Amer and Adel Smeda "A Comparative Study of Architecture Description language (ADLs)", The 3rd National Conference on Basic Sciences, April 25-27 2009, Gharian, Libya.

**Abobaker Elhouni,** El-Bahlul Fgee, W.J. Philips "A Scalable Mathmatical QoS Model for IPNetworks"

**Abobaker Elhouni,** Adel Sanosi and El-Bahlul Fgee "Technology enhanced Learning" International Conference on computer related knowledge (ICCRK2012),july 5-7-2012,soussa, Tunisia.

**Abobaker Elhouni** , El-Bahlul Fgee, Mohamed A lsak and Khaled Ben Ammer " Study of Security Mechanisms Implemented in Coud Computing", Word Congress on Computer Applications and Information Systems (WCCAIS'2014, Hammamet, Tunisia, January 17-19, 2014. WCCAIS'2014 Number 32903.

**Abobaker Elhouni** ,Adel Smeda and Mohamed Elaloul " Study the Influence of Various Factors in Neural Networks", Word Academy of Science, Engineering and Technology June 78 2013, Paris

**Abobaker Elhouni** and El-Bahlul Fgee " My Security For Dynamic Websites in Educational Institution" **Note: Under publication**.

**Abobaker Elhouni** and El-Bahlul Fgee " Achieving High QoS in IP Networks Using an Enhanced RED Algorithm" **Note: Under  publication**.

**Ahmed ARARA, Abobaker Elhouni, and Salha ARARA** " Orchestration and e-Governance of e-services in banking Applications-Waha bank case study " **Note: Under  publication**.

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**References available on request.**