

Tarek Eldeeb

R&D MANAGER · FPGA EXPERT

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Scan to Update

“Servant leader, lecturer, creative geek with roots in electronics engineering, and an entrepreneurial mindset.”

Education

Executive Masters of Business Administration

Nile University

GRADUATED WITH GPA 3.78 (48 CREDIT HOURS)

2018 - 2020

- The EMBA program is designed in collaboration with IESE Business School, University of Navarra, Spain.

B.Sc. in Electronics and Communications Engineering

Cairo University

GRADUATED WITH GRADE GOOD

2001 - 2006

- Graduation project was graded Excellent. On the IEEE's annual EED event, the project was awarded as 'Best Project'.
- Passed several post-graduate classes including: Advanced Computer Networks, Computer Architecture, Computer Arithmetic, and Advanced Mathematics.

Skills

Management	Business development, Budgeting, Agile Project Management, Visionary Leadership
Electronics	VHDL/Verilog, AXI-based SoC, Xilinx flows, Microblaze, MGC Questa, PCB
Programming	ANSI C, RTOS, Linux drivers, Java, Matlab, Tensorflow, Bash, TCL, CI/CD, Git
Languages	Arabic, English

Experience

FPGA Expert

Valeo

A BUSINESS GROUP LEVEL SECONDARY TITLE

Apr. 2019 - Current

- Provides consultations and training to several product lines.
- Architect, Lead engineer and product owner of Valeo's internal SW validation Hardware In then Loop 'HIL' Test bench.

Senior SW R&D Manager

Valeo

COMFORT & DRIVING ASSISTANCE BUSINESS GROUP

Oct. 2016 - Current

- Put the strategy for Valeo's SW validation test bench, securing funds, and aligning plans execution across different sites.
- Conduct a frequent analysis exercise to assess our rivals, enhance our quality and secure the supply chain.
- Lead and manage a test bench service-line serving 700 engineer worldwide.
- Parallel Agile Projects Management, do resource planning and enhance customer satisfaction.
- Successfully deliver HIL test benches to 50+ projects at 6 R&D sites and 3 production sites.

Senior Team Lead

Valeo

COMFORT & DRIVING ASSISTANCE BUSINESS GROUP

July. 2013 - Sep. 2016

- Implement HD video streams, high-performance ultrasonic sensors simulation, Ethernet, Flexray and CAN bus communication using FPGA IPs in VHDL/Verilog
- Design test boards; PCB schematics design and layout
- Develop and maintain an RT kernel with firmware and drivers, in addition to a Java-based Test-Automation Environment
- Enable Automotive SW Validation for automatic self-parking cars, Laser Radars, Video surround views and many advanced driver assistance systems

Cofounder and Digital Design Engineer

SilMinds

A 6-YEAR STARTUP JOURNEY

May 2007 - Jun. 2013

- Design and implement decimal floating-point arithmetic IP cores comforting the IEEE754-2008 standard [🔗](#).
- VHDL implementation, data path optimization, static timing analysis, FPGA tailoring, and writing automation scripts for EDA tools.
- Consultant at two VLSI companies (Si-Vision [🔗](#) and VarkonSemi [🔗](#)) to develop a configurable dynamic testing environment for their next generation chips using FPGAs.










- Executed test scripts to automate hardware-in-loop validation for our wireless 802.11 a/b/g/q chips.
- SysDSOft was acquired by Intel (2011) [↗](#), then sold to Apple (2019) [↗](#).

Publications

2018	Research Article , “Dynamic Code Loading to a Bare-metal Embedded Target”	ICSIE, Cairo
2014	Patent , “Decimal Floating-Point Fused-Multiply-Add Unit”	USPTO, US
2014	Patent , “Decimal Floating-Point Square-Root Unit Using Newton-Raphson iterations”	USPTO, US
2014	Patent , “Rounding Unit for Decimal Floating-Point Division”	USPTO, US
2014	Patent , “Parallel Redundant Decimal Fused-Multiply-Add Circuit”	USPTO, US
2014	Patent , “Decimal Elementary Functions Computation”	USPTO, US
2012	Patent , “DPD/BCD To BID Converters”	USPTO, US
2012	Patent , “Decimal Floating-Point Processor”	USPTO, US
2011	Book Chapter , “Massively Parallelized DNA Motif Search on FPGA”	IntechOpen, UK
2010	Research Article , “Decimal Floating Point for future processors”	ICM, Cairo
2010	Research Article , “Algorithm and architecture for on-line decimal powering computation”	ASILOMAR, CA, US
2010	Research Article , “A Decimal Floating-point Fused-Multiply-Add Unit”	MWSCAS, WA, US
2009	Research Article , “Energy and Delay Improvement via Decimal Floating Point Units”	Comp. Arith., OR, US
2008	Research Article , “A decimal fully parallel and pipelined floating point multiplier”	ASILOMAR, CA, US

According to Google Scholar Profile [↗](#), there are 146 citation to my work.

Training

2022	Change Management , Logic Training	Certificate 
2021	Embedded Linux , Linux Hotel	Certificate 
2020	Managing Remotely , Impact Learning and Development	Certificate 
2019	Certified KPI Professional , KPI Institute	Certificate 
2018	Deep Learning Specialization , DeepLearning.ai (coursera)	Certificate ↗
2018	Develop Collaborative Management - Hofstede Model Approach , Hostede Insights	Certificate 
2017	Leadership Program , Redrock International	Certificate 
2017	Linux Kernel Driver Programming with Embedded Devices , Udemy	Certificate ↗
2014	Advanced Time Management , Brilliance Business School	Certificate 
2013	Train the Trainer , Brilliance Business School	Certificate 
2010	Agile Project Management , The International Consortium for Agile	Certificate 
2009	Project Management Program , RS Management Consulting House	—