# CURRICULUM VITAE

## PERSONAL INFORMATION

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| **Full Name** | AMEL NEIFAR |
| **Date/Place of Birth** | 19/ 03/1986, Sfax, Tunisia |
| **Marital Status** | Married |
| **Grade** | Assistant professor |
| **Discipline** | Electrical Engineering |
| **Field of specialization** | Electronics and microelectronics |
| **Establishment** | National Engineering School of Sfax, University of Sfax, Tunisia |
| **Mobile** | 0021622763055 |
| **E-mail** | amel.neifar@enis.tn |
| **Link to online properties** | Google scholar: https://scholar.google.com/citations?hl=fr&user=70jM4jQAAAAJ <br> ResearchGate: https://www.researchgate.net/profile/Amel-Neifar |

## UNIVERSITY DEGREES AND QUALIFICATIONS

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| **2016** | PhD degree in Electrical Engineering, National Engineering School of Sfax, Tunisia, with very honorable distinction. <br> Title: Contribution to the design of an ultra-wideband pulse transmitter |
| **2011** | Master's degree in electronics and communication, National Engineering School of Sfax, Tunisia, with very honorable distinction. <br> Title: Design of a demodulator for autonomous RF sensor system. |
| **2010** | Electronics engineer diploma, National Engineering School of Sfax, Sfax, Tunisia, with highest honors. |
| **2007** | Preparatory cycle degree, Preparatory Engineering cycle Institute of Sfax, Tunisia. |
| **2005** | Baccalaureate: Mathematics, Secondary School Abou Kacem Chebbi Sfax, Tunisia. |

## TEACHING AND PROJECTS SUPERVISION

### Teaching experience

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| **Since 2022** | Assistant Professor of Electronics and microelectronics, National Engineering School of Sfax, University of Sfax, Sfax, Tunisia. |
| **2017-2022** | Assistant Professor of Electronics and microelectronics, Microelectronics and nanotechnology research center in Sousse, Sousse, Tunisia. |

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| **2016-2017** | Contractual Assistant of Electronics, Higher Institute of Industrial Management of Sfax, Sfax, Tunisia. |
| **2014-2016** | Temporary Teacher of Electronics, Private University of Advanced Sciences of Sfax, Department of Electrical Engineering, Sfax-Tunisia. |
| **2013-2014** | Temporary Teacher of Electronics National School of Electronics and Telecommunications of Sfax University of sfax, Sfax,Tunisia. |

**Areas of Teaching Interests**

- Communication electronics
- Electronic Circuits
- Electronics Functions
- VHDL Language
- Analog and Digital Electronics
- Analog and Digital Integrated Circuit Design
- Electrical Circuits
- Integrated Circuits Technologies
- RF circuits Design
- PCB Design
- Process fabrication of integrated circuits
- Test of integrated circuit
- Semiconductors
- Signal processing
- DAC/ADC
- Data acquisition chain
- Electronic Instrumentation
- Data Transmission
- FPGA and Embedded Systems Design
- Logic design
- Python language
- Microprocessors and Microcontrollers

**Pedagogic Productions**

- Course in "analog and Modular Electronics " for the 2nd year Electrical Engineering degree, National Engineering School of Sfax, Sfax, Tunisia.
- Course in "Active Component Electronics" for the 1st year Electrical Engineering degree, National Engineering School of Sfax, Tunisia, Sfax, Tunisia.
- Course in " Design for testing integrated circuits" for the 1st year master's degree: Embedded systems, National Engineering School of Sfax, Tunisia, Sfax, Tunisia.
- Course in " Electronics" for the 2nd year Electrical Engineering degree, Private university of advanced sciences, Sfax, Tunisia.
- Course in "VHDL programming language" for the 2nd year Electrical Engineering degree, National Engineering School of Sfax, Sfax, Tunisia.

## SCIENTIFIC PUBLICATION

**Research interest**

Design of analog, digital and radio frequency integrated circuits:
- RF circuits design: Mixer, Amplifiers, oscillators, filters….
- Ultra-wideband circuits design
- RF circuits design for medical and IoT applications
- Microelectronics: IC design and layout
- Analog and mixed signal electronics
- Memristor-based digital and analog programmable circuits
- Digital and analog Memristor emulator

Photonics:
- Single photon detection
- Avalanche diodes

**Research Articles in International Scientific Journals**

1. M.Bouraoui, A. Neifar, I. Barraj and M. Masmoudi, "A Low-Power WLAN CMOS LNA for Wireless Sensor Network Wake-Up Receiver Applications" , Journal of Sensors, Volume 2023.

2. Barraj, A. Neifar, H.Mestiri, H. Trabelsi and M. Masmoudi, "3-5 GHz FSK-OOK Ultra Wideband Transmitter based on Memristive Ring Oscillator", Analog Integrated Circuits & Signal Processing, Vol 111, N° 3, pp. 325-338, 2022.

3. I. Barraj, A. Neifar, and M. Masmoudi, "Three to Five Gigahertz UWB Transmitter for Vital Sign Monitoring Systems", BioNanoScience, September 2016, Volume 6, Issue 3, pp 193-204.

4. A. Neifar, G. Bouzid, I. Barraj and M. Masmoudi, "A 3-5 GHz Low Power UWB Mixer Using Tunable Active Inductors", International Review on Modelling and Simulations, Vol 11, No.3 (2016).

5. A. Neifar, G. Bouzid and M. Masmoudi, "Modeling, Design and Optimization Methodology of a Low Power UWB Mixer in 0.18μm Technology", International Review on Modelling and Simulations (I.RE.MO.S), Vol. 8, N. 3 June 2015.

6. A. Neifar, G. Bouzid and M. Masmoudi, "Design of Modulator and Demodulator for a 863-870 MHz BFSK Tranceiver", International Journal of Advanced Computer Science and Applications (IJACSA), Volume 7 Issue 7 July 2016.

7. A. Neifar, H. Trabelsi and M. Masmoudi, "An FSK Demodulator Design for RF Wireless Sensor Applications Using Zigbee Protocol" International Journal of Electronics and Electrical Engineering Vol. 3, No. 4, August 2015.

**Articles in International Conferences with proceedings**

1. M.Bouraoui, I. Barraj, **A. Neifar** and M. Masmoudi, "An Ultra-Wideband noise-reduction LNA With Variable Gain for Wireless Wake-up Receivers, 2022 IEEE International Conference on Design & Test of Integrated Micro & Nano-Systems (DTS), June 2022.

2. H. Dhouib, **A. Neifar**, A. Bouzid and M. Masmoudi, "Study of a single-photon Avalanche Diode Models". 2020 IEEE International Conference on Design & Test of Integrated Micro & Nano Systems (DTS), 7-10 June 2020.

3. **A. Neifar**, G. Bouzid and M. Masmoudi, "A 3-5 GHz fully differential power amplifier for low power medical applications", 13th International Multi-Conference on Systems, Signals & Devices (SSD), Leipzig 21-24 March 2016.

4. I. Barraj, **A. Neifar**, H. Trabelsi and M. Masmoudi, "On/off wide tuning range voltage-controlled ring oscillator for UWB pulse generator", 13th International Multi-Conference on Systems, Signals & Devices (SSD), Leipzig 21-24 March 2016.

5. **A. Neifar**, G. Bouzid and M. Masmoudi, "Improvement of the Linearity and Conversion Gain of an Ultra Wideband Up-conversion Mixer in CMOS 0.18 μm Technology", 12th International Multi-Conference on Systems, Signals & Devices (SSD), Mahdia 16-19 March 2015.

6. **A. Neifar**, G. Bouzid, H. Trabelsi and M. Masmoudi, "Design of Ultra Wideband Oscillator in 0.18 μm standard CMOS technology", 1st International Conference on Advanced Technologies for Signal and Image Processing (ATSIP), Sousse 17-19 March 2014.

7. **A. Neifar**, H. Trabelsi, G. Bouzid and M. Masmoudi, "Design of a zero crossing BFSK Demodulator for a wireless sensor", 7th International Conference on Design & Technology of Integrated Systems in Nanoscale Era (DTIS), Gammarth 16-18 May 2012.

## DIVERS ACTIVITIES

**Organization of scientific events**

− Local arrangement chair, IEEE International Conference on Design, Test and Technology of Integrated Systems (DTTIS'2023), November 1-4, 2023, Gammarth, Tunisia.

− Member of the organization committee, IEEE international conference on Design & Test of integrated micro & nano-Systems » (DTS'2022), June 6-9, 2022, Cairo, Egypt.

− Member of the organization committee, International Conference on SPACE STAR; Science, Technology, Applications & Regulation, October 27-29, 2022, Sousse, Tunisia.

− Local arrangement chair, IEEE international conference on Design & Test of integrated micro & nano- Systems » (DTS'2021), June 7-10, 2021, Sfax, Tunisia (Virtual Event).

− Member of the organization committee, IEEE international conference on Design & Test of integrated micro & nano-Systems » (DTS'2020), June 7-10, 2020, Hammamet, Tunisia

− Member of the organization committee, IEEE international conference on Design & Test of integrated micro & nano-Systems » (DTS'2019), April 28 to May 1, 2019, Gammarth, Tunisia.

**Reviewing activities**

Regular reviewer of:
- ✓ IEEE international conference on Design & Test of integrated micro & nano-Systems DTS' 2019, DTS'2020, DTS'2021 & DTS'2022
- ✓ IEEE International Conference on Design, Test and Technology of Integrated Systems DTTIS'2023 & DTTIS'2024.

**Expertise activities**

- Member of the scientific committee of master's degree in embedded Systems, National Engineering School of Sfax.
- Member of the FACT project pilot commission "Fabrication and Application of CubeSats in Tunisia"

**Training Workshop**

- 2020: organization of an "ActInSpace" hackathon in collaboration with the National Center for Space Studies (CNES) and the European Space Agency (ESA)
- 2019: Participation in C++ Programming Language training, Sfax, Tunisia
- 2018: Participation in the "1st Tunisia-China Space Tech Workshop" Mission design for remote sensing & FACT kick-off as part of the launch of the FACT collaborative project: "Manufacture and Application of CubeSats in Tunisia".
- 2018: Participation in Python training, 2018, Sfax-Tunisia.
- 2014: Participation in pedagogical training session in English as part of the dissertation training sessions, National Engineering School of Sfax -Tunisia.
- 2013: Participation in pedagogical seminar as part of the Master's training sessions, National Engineering School of Sfax -Tunisia.
- 2011: Attending a training organized as part of the continuous training in English, "English for Academic Purpose: Reading Research Articles", National Engineering School of Sfax -Tunisia.
- 2011: Participation in « Cadence tutorial for analog and digital design » workshop, National Engineering School of Sfax -Tunisia.
- Training in English and obtaining the TOEFL ITP Diploma.

**PRIZES AND DISTINCTION**

Third Price: Competition for the best research in the field of TIC at the service of CULTURE & HEALTH, Sfax-Tunisia.

Project title: Prototype development of a wireless actimeter for healthcare monitoring applications.

**SOFTWARE SKILLS**

- Languages: Matlab, C/C++, Verilog-a, VHDL , Pspice, Python
- Design: Cadence/Virtuoso, ADS: Cadence/Spectre,
- Layout verification: Calibre DRC/LVS, ASSURA DRC/LVS
- Technology: TSMC90nm, AMS-H35, ST 65nm, TSMC 0.18µm
- Electronic CAD: Cadence/ Vivado/ QUartus
- PCB layout: Cadence, Eagle, Altium designer
- Boards: Arduino, Raspberry PI, STM32
- OS: UNIX/Linux, Windows

**LANGUAGES**

**Arabic**: Native language.
**English:** Fluent, Speaking, reading, and writing.
**French:** Fluent, Speaking, reading, and writing.