Arian **NOWBAHARI**
Electronic Engineer

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Tønsberg, Norway

Education

Present November 2019	**PhD | Micro- and Nano-systems, IMS, University of South-Eastern Norway (USN)** › Thesis : Low Power Circuits and Architectures for Wireless Sensor Networks
October 2019 September 2017	**Msc | Electronic Engineering, DET, Polytechnic University of Turin** › Electronic Micro and Nanosystems › Thesis : Design of a Low Cost Single Gate Planar Junctionless Transistor over FD-SOI Wafer › Final Mark : 110/110
July 2017 September 2014	**Bsc | Electronic Engineering, DET, Polytechnic University of Turin**

Publications

Conference

- **A. Nowbahari**, L. Marchetti and M. Azadmehr, "**A Delay-Based Wake-Up Receiver for Wireless Sensor Networks**," 2021 International Conference on Electrical, Communication, and Computer Engineering (ICECCE), 2021, pp. 1-5, doi:10.1109/ICECCE52056.2021.9514246.
- **A. Nowbahari**, L. Marchetti and M. Azadmehr, "**An Ultra Low Power Multivibrator Based Wake up Receiver for Wireless Sensor Networks**," 2021 IEEE 7th World Forum on Internet of Things (WF IoT), 2021, pp. 380 384, doi:10.1109/WF IoT51360.2021.9595159.
- **A. Nowbahari**, L. Marchetti and M. Azadmehr, "**An Oscillator Based Wake Up Receiver for Wireless Sensor Networks**," 2021 IEEE Sensors Applications Symposium (SAS), 2021, pp. 1 5, doi:10.1109/SAS51076.2021.9530093.
- **A. Nowbahari**, L. Marchetti and M. Azadmehr, "**Nano Power Monostable Based Wake Up Mechanism for Wireless Sensor Networks**," 2022 11th International Conference on Communications, Circuits and Systems (ICCCAS), 2022, pp. 187-191, doi : 10.1109/ICCCAS55266.2022.9825344
- **A. Nowbahari**, L. Marchetti and M. Azadmehr, "**Weak Inversion Model of an Inverting CMOS Schmitt Trigger**," 2022 11th International Conference on Communications, Circuits and Systems (ICCCAS), 2022, pp. 1-5, doi : 10.1109/ICCCAS55266.2022.9824290
- M. Azadmehr, **A. Nowbahari**, L. Marchetti and R. Langøy, "**A Low Power Front-End for Resistive Sensors based on Switch-Cap Current Reuse**," 2022 IEEE 15th Dallas Circuit And System Conference (DCAS), 2022, pp. 1-5, doi : 10.1109/DCAS53974.2022.9845572.

Journal

- **A. Nowbahari**, A. Roy and L. Marchetti. "**Junctionless transistors : State-of-the-art**". Electronics. 2020; 9(7):1174. doi:10.3390/electronics9071174
- **A. Nowbahari**, A. Roy, M. Nadeem Akram, and L. Marchetti. "**Analysis of an Approximated Model for the Depletion Region Width of Planar Junctionless Transistors**" Electronics. 2019; 8(12):1436. 10.3390/electronics8121436

Skills

Software	**Cadence Virtuoso** (Schematic, Parasitic Extraction, Post-Layout), **Comsol** (Semiconductor Module), **LTspice**, **JLCPCB** (PCB Design), **MATLAB**, **C**, **VHDL**, **Assembly**
Hardware	**ASIC**, **FPGA** (Altera), **µC** (Arduino)
Laboratory	**Electronic Equipment** (e.g. Oscilloscope & Network Analyzer), **Clean Room** (basic training), **Acoustics** (Piezoelectric Transducer, Hydrophone)

Research Projects

2019 | **Device Modeling, DET, Polytechnic University of Turin**
2018 | **Workshop Innovative System** : Equivalent Circuit Modeling of a STT-MRAM (Spin-Transfer-Torque-Magnetoresistive-RAM) for Binary Neural Network. Circuit description through LTspice. Hierarchical description through MATLAB.

2018 | **Hardware Developer, DET, Polytechnic University of Turin**
2017 | **Ambient Intelligence Project** : Design of an *intelligent* dispenser for campus dormitories. µC programming and signal conditioning circuit design (heat sensors, ultrasound sensors, and servomotors).

2016 | **Hardware Developer, DIMEAS, Polytechnic University of Turin**
2015 | **H_2O** : PCB design (schematic and layout) of a sensor board for hydrogen fuel cell car. Signal conditioning circuit design (temperature, speed, and humidity sensors). Components soldering.

Certifications

2020 **Quantus Transistor-Level T1 : Overview and Technology Setup v19.1 Exam**, issued by Cadence Design Systems
Quantus Transistor-Level T2 : Parasitic Extraction v19.1 Exam, issued by Cadence Design Systems
Physical Verification System v16.1 Exam, issued by Cadence Design Systems

$ Grants

2021 **HiSilicon Sponsorship Program for MPW Prototyping (IMEC)** : 6000€ grant sponsored by HiSilicon and IMEC to fabricate an ASIC in AMS 0.35µ CMOS process through EUROPRACTICE.

Peer Review Experience

2021-2022 IEEE Sensors Applications Symposium (SAS) 2022 : 2 conference articles.
Journal of Applied Research and Technology : 1 journal article.
Facta Universitatis-Series Electronics and Energetics : 2 journal articles.

Student Supervision

June 2022 | **MSc Thesis Co-supervisor, IMS, University of South-Eastern Norway**
November 2021 | › Thesis : *Design of a Parabolic Reflector for Underwater Acoustic Applications*

Honors and Awards

2022 **Certificate of Excellent Oral Presentation** issued by the ICCCAS 22 Conference Technical Commitee for presenting the following article : *A. Nowbahari, L. Marchetti and M.Azadmehr, "A Nano-Power Monostable-Based Wake-Up Mechanism for Wireless Sensor Networks"* at the 11th International Conference on Communications, Circuits and Systems (ICCCAS), Singapore, May 13-15, 2022.

Volunteering

2019 **Charity Painting Solo Exhibition** : 20 canvas from my collection "Chromatism from the Abyss" have been exposed at the Archeological Museum of Olbia, Italy. All the raised funds (~1k$) were donated to *Cooperativa Sociale Villa Chiara*, a social cooperative committed to helping people with disabilities.

</> Languages

Italian ●●●●●
English ●●●●●
Persian ●●●●○

Forces

› Pragmatic
› Autonomous
› Cooperative