

Arian NOWBAHARI

Electronic Engineer

[in linkedin.com/in/arian-nowbahari](https://www.linkedin.com/in/arian-nowbahari) [Website](#)
@ arian.nowbahari@usn.no
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
 - **A. Nowbahari, L. Marchetti, and M. Azadmehr, "Analysis of a Low Power Inverting CMOS Schmitt Trigger Operating in Weak Inversion,"** International Journal of Electrical and Electronic Engineering & Telecommunications, Vol. 11, No. 6, pp. 392-397, November 2022. doi : 10.18178/ijeetc.11.6.392-397

SKILLS

Software	Cadence Virtuoso (Schematic, Parasitic Extraction, Post-Layout), Comsol (Semiconductor Module), LTspice , JLPCB (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. μ C programming and signal conditioning circuit design (heat sensors, ultrasound sensors, and servomotors).
- 2016 | **Hardware Developer, DIMEAS, Polytechnic University of Turin**
2015 | **H₂O** : 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 0.35 μ CMOS process through EURO PRACTICE.

PEER REVIEW EXPERIENCE

- 2021-2022 | IEEE Sensors Applications Symposium (SAS) 2022 : 2 conference papers.
Journal of Applied Research and Technology : 1 journal article.
Facta Universitatis-Series Electronics and Energetics : 2 journal articles.
International Conference on Energy Engineering and Environmental Protection : 1 conference paper.

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 ICCAS 22 Conference Technical Committee 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