

Ahmad Yarahmadi

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Education:

Ph.D. in Electrical and electronics Engineering, Tarbiat Modares University (TMU), February,2023

Thesis: Analysis and Design of Wideband True Time Delay Cell in CMOS Technology for Array of Antennas

Supervisor: Dr. Abumoslem Jannesari

M.Sc. in Electrical and electronics Engineering, Tarbiat Modares University (TMU), February,2015

Thesis: Low power Multi-stage CMOS Low Noise Amplifier for 10-12GHz frequency band applications

Supervisor: Dr. Abumoslem Jannesari

B.Sc. in Electrical and electronics Engineering, University of Kurdistan (UOK), January,2012

Thesis: LASER TRANSCIEIVER

Supervisor: Dr. M. Razaghi

Work Experience:

- **Adjunct Professor at Ayatollah Boroujerdi University (Jan 2022 - present)**
- **Taught courses such as:**
Electrical Circuits I, Electrical Circuits II, Electronic Circuits I, Electronic Circuits II, Linear Control Systems, Introduction to Electrical Engineering, Filter and Synthesis of Analogue Filters, Industrial Control Systems, Physics of Electronic Devices, CMOS integrated Circuits, Power Electronic I, AVR Microprocessor, Signals and systems.
- **Supervised laboratory sessions on:**
Linear Control Systems LAB, Electro technique Lab, Telecommunication Circuits LAB, Electronic Circuits LAB, Electrical Circuits and Measurement LAB, Power Electronic LAB, AVR Microprocessor LAB.
- **Research Assistant Tarbiat Modares University (Sep 2012 – Feb 2023)**
- **Educational consultant, CEO and operational manager at MoshavereBargh.ir (Apr 2018 - present)**
- **CEO and Operational Manager at MoshavereBargh.ir (Apr 2018 - Present)**
- **Provided consultancy and managed educational content on electronics and circuit design**

Qualifications & Skills:

- In-depth knowledge of electrical and electronics analogue design, especially in RF circuits.
- Sound Knowledge of basic operating systems and software like Microsoft Windows, Excel, Word, PowerPoint, etc.
- Familiar with CAD tools like ADS and Cadence (special for RF circuit design), MATLAB, Proteus, Aress, Altium designer (Protel), Hspice, Pspice, etc.
- Proficient in MCU programming: AVR, Arduino
- Expertise in Peripherals: Timers, I2C, USART, USB, ADC, SPI, etc.
- Schematic and PCB Design: Skilled in Altium Designer
- Hardware Debugging: Practical experience with oscilloscope and test equipment
- GUI Programming: Familiarity with Python
- Analogue Design: Extensive experience in RF and analogue circuit design

Other skills:

- Fast learner, Enthusiastic, pleasant and energetic all the time.
- Committed, creative, reliable and patient in work hours.
- Ability to complete all projects to an excellent standard, on time and to budget.
- goal oriented and ability to work under pressure.
- Strong multi-tasking skills, decision making and flexible in all fields of job.
- Motivated, hardworking, easy-going person and self-driven professional with team cohesiveness and excellent interpersonal and communication skills.

Relevant Projects:

- Air Quality Monitoring System:
 - Developed a microcontroller-based system to monitor gas concentration, temperature, and humidity
 - Used sensors (DHT11, MQ series) and displayed results via LCD and mobile app
 - Designed firmware to ensure real-time monitoring and Bluetooth communication
- RFID Attendance System:
 - Designed a system using ATmega MCU and RFID module for secure attendance tracking
 - Implemented LCD-based display and real-time data logging
- Intelligent Parking System:
 - Created a smart parking solution with sensors to detect empty slots and manage vehicle flow
- Developed a wireless communication system for real-time updates
- Line follower robot design and implementation.
- Smart temperature control system.
- Digital signal generator for LAB usages.
- Smart security system design and implantation
- Alcohol detector system.

Publication:

Book:

1. Yarahmadi, Ahmad, "Chapter title: Wideband True Time Delay Cells" in "Book title: UWB Technology - New Insights and Developments, ISBN 978-1-83768-548-6, edited by: Rafael Vargas-Bernal, 2023

Journals:

1. Yarahmadi, Ahmad, and Abumoslem Jannesari. "Two-path inverter-based low noise amplifier for 10–12 GHz applications." *Microelectronics journal* 50 (2016): 76-82.
2. Yarahmadi, Ahmad, and Abumoslem Jannesari. "Design of a highly linear gain stage with complementary derivative superposition technique." *Wireless Personal Communications* 107 (2019): 1709-1716.
3. Yarahmadi, Ahmad, and Abumoslem Jannesari. "Wideband inductorless true time delay cell based on CMOS inverter for timed array receivers." *Circuits, Systems, and Signal Processing* 40 (2021): 3703-3726.
4. Yarahmadi, Ahmad, and Abumoslem Jannesari. "A PVT resilient true - time delay cell." *IET Circuits, Devices & Systems* 17: 2 (2023): 95-110
5. Yarahmadi, Ahmad, and Abumoslem Jannesari. " Combined True Time Delay System" under review in *International Journal of Electronics*

Conference:

1. Yarahmadi, Ahmad, and Abumoslem Jannesari "A Complementary Self-Biased CMOS Amplifier for Very Low Noise X-Band Amplification," 1ST International Conference on Advances Research on Electrical and Computer Engineering, Tehran, Iran (2016)

International responsibilities and Reviews:

Reviewer for:

AEÜ, *International Journal of Electronics and Communications*,

Circuits, Systems, and Signal Processing journal

Archives of Advanced Engineering Science

International Program Committee Member and Reviewer for:

11th International Conference on Embedded Systems and Applications (EMSA 2022) [link](#)

International Conference on Electrical, Computer and Energy Technologies (ICECET 2021), [link](#)

7th International Conference on Signal Processing and Pattern Recognition (SIPR 2021), ([link](#))

9th International Conference on Signal, Image Processing and Pattern Recognition (SIPP 2021), ([link](#))

1st, 2nd, and 3rd, 4th and 5th International Conference on Microelectronic Devices and Technologies (MicDAT 2020) ([link1](#)) ([link2](#))

Live Sessions and speeches:

1. live session for Researcher-app, title: " Researcher Live: RFIC Design " [link](#)
2. live session for ITS university, under R2SEP Fall 2021 program, title ""literature review, latest tools and methods" [link](#), (*The Most interactive speaker in R2SEP 2021 program at ITS university*)

Social Media:

Web of Science ResearcherID: Q-5162-2019: <https://www.webofscience.com/wos/author/record/Q-5162-2019/>
Scopus Author ID: 57147909700, <https://www.scopus.com/authid/detail.uri?authorId=57147909700>
ORCID 0000-0001-7311-0532: <https://orcid.org/0000-0001-7311-0532>
LinkedIn: <https://ir.linkedin.com/in/ahmadyarahmadi>
Google Scholar: <http://scholar.google.com/citations?user=GE461UYAAAAJ&hl=en>
ResearchGate: https://www.researchgate.net/profile/Ahmad_Yarahmadi