Reza Shokri

EDUCATION

MSc University of Tehran, Electrical Engineering
Thesis: "Circuit Design and Simulation of Front-End of Neural
Recording System" Advisor: Dr. Samad Sheikhaei
Start Date: Sep 2015 End Date: Sep 2018

BSc Tabriz University, Electrical Engineering   September 2010
Thesis: "Implementation of Digital Pen with an Accelerometer"
Advisor: Dr. Manuchehr Bahrami
Start Date: Sep 2010 End Date: May 2015

Pre University   Physics & Math

HONORS AND AWARDS

Ranked 2th among more than 1500 participants in the Electrical Engineering PhD
Entrance Exam in Iran.

Ranked 65th among more than 30000 participants in the Electrical Engineering MSc
Entrance Exam in Iran

RESEARCH EXPERIENCE

- DC-DC converters for the biomedical application
- VCO based low power low area biomedical ADC
- High speed, medium resolution ADC
- Automotive control modules
- Neural recording and stimulation systems
- Quantum phase estimation algorithms

TEACHING ASSISTANT

- Teaching Assistant, University of Tehran, Electronics Lab.
- Teaching Assistant, University of Tehran, Filter and Circuit Synthesis.
- Teaching Assistant, Tabriz University, Microprocessor Lab

WORK EXPERIENCE

Feb 2022 – Present   **Analog integrated circuit designer- System designer**   **The University of Tehran**
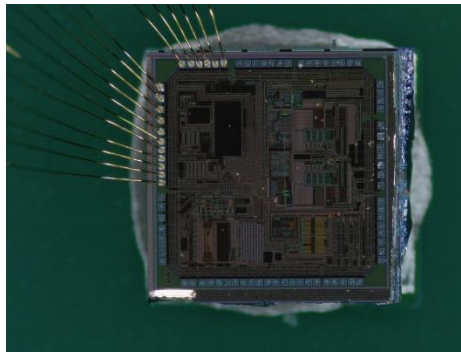
Main duties performed: Design and layout of integrated multipolar arbitrary waveform stimulator for the DBS (Deep Brain Stimulation) systems (will be fabricated)

Sep 2021 – Mar 2023   **Hardware designer**   **Niktek Company**

Main duties performed: Design of discrete desktop isolated power 30 nA resolution arbitrary waveform stimulator

Apr 2019 – Dec 2019   **Analog integrated circuit designer**   **The University of Tehran**
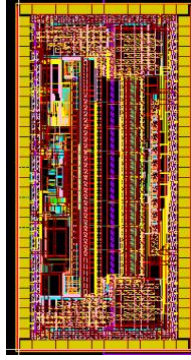
Main duties performed: Design and layout of integrated SIMO DC-DC converter for the DBS (Deep Brain Stimulation) systems (was fabricated)

Die photograph of SIMO DC-DC converter

Oct 2018 – Apr 2019   **Analog integrated circuit designer**   **The University of Tehran**

Main duties performed: Design of Digital parts and layout of different a 1GS/s 8 bit flash ADC in 0.13μm CMOS technology for automotive radar applications.

Layout of 8bit 1GS/s flash ADC

Oct 2018 – present   **IT administrator**   **The University of Tehran**

Main duties performed: System administration, Installation of IC Design CAD tools

May 2017 – Sep 2018   **Hardware designer and validator**   **IKCO (Iran Khodro)**

Main duties performed: Project Control and Design and Validation of Multiplex Projects and Automobile Electrical and Electronic Parts **(During my master program)**

PUBLICATIONS AND PENDING RESEARCH PAPERS

- Yarollah Koolivand, Reza Shokri, and Omid Shoaei, "Multipolar arbitrary waveform stimulator for the DBS application" US Patent. (Will be submitted)

- Reza Shokri, Yarollah Koolivand and Omid Shoaei, "Multipolar stimulator with fast active charge balancing for the DBS application" US Patent. (Will be submitted)

- Reza Shokri, Yarallah Koolivand, Omid Shoaei, Orazio Aiello, and Daniele Caviglia "A Nonlinear, Low-Power, Low-Area, VCO-based ADC for Neural Recording Application" *2023 the 5th Iranian International Conference on Microelectronics (IICM).*(Accepted)

- Reza Shokri, Yarallah Koolivand, Omid Shoaei, Orazio Aiello, and Daniele Caviglia "Multipolar Stimulator for DBS Application with Concurrent Imbalance compensation" *2023 the 30th International Conference on Electronics, Circuits and Systems (ICECS).*(Accepted)

- R. Inanlou, Reza Shokri, O. Shoaei, and A. Baschirotto, "A buck converter based on dual mode asynchronous pulse width modulator," *AEU - International Journal of Electronics and Communications*, vol. 114, p. 152998, Feb. 2020, doi: https://doi.org/10.1016/j.aeue.2019.152998.

SELECTED COURSES

- Design and Analysis of CMOS Integrated Circuit.
- Design and Analysis of CMOS RFIC.
- Analog to Digital Converters.
- Quantum Computing
- VLSI Circuit Design.
- Advanced Electronic Instrumentation.
- Theory and Technology of Device Fabrication.
- Communication Circuits (course and lab)
- Biomedical Instrumentation
- etc.

COURSES' PROJECTS

- Design and Simulation 10bit, 20MS/s pipeline ADC.
- Design and Simulation 10bit, 1MS/s, SAR ADC for Biomedical Application.
- Implementation of RSSI measurement by using ADF7020-1
- etc.

LANGUAGE

- **English**   **Level : Intermediate**
- **Persian**   **Level : Native**
- **Turkish**   **Level : Native**

CAD SKILLS

- **Cadence Virtuoso**
- **Altium Designer**
- **ADS**
- **MATLAB**
- **Python**
- **ISE Design Tools**
- **Keil**
- **Cadence OrCAD**
- **HSPICE**
- **COMSOL**
- **etc.**

REFERENCES

Dr. Omid Shoaei, Professor
School of Electrical and Computer Engineering
University of Tehran, Iran

Dr. Yarallah Koolivand, Assistant Professor
School of Electrical and Computer Engineering
K. N. Toosi University of Technology, Tehran, Iran

Dr. Shahin Jafarabadi Ashtiani, Associate Professor
School of Electrical and Computer Engineering
University of Tehran, Iran

Dr. Samad Sheikhaei, Associate Professor
School of Electrical and Computer Engineering
University of Tehran, Iran

Dr. **Manuchehr Bahrami**, Assistant professor
School of Electrical and Computer Engineering
University of Tabriz, Iran