

# Curriculum Vitae



## Sina Mahdavi

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Marital Status: Single

## *Educational Background*

### **M.Sc. in Electrical Engineering (Microelectronics) 2014-2016**

- Urmia Graduate Institute, Urmia, Iran
- Overall GPA 17.78 out of 20.
- Thesis: **Design and Implementation of a 14-bit 10MS/s 48mW Successive Approximation Analog to Digital Converter in 0.5 $\mu$ m CMOS Technology**  
/ Design and Implementation of a 12-bit 16MS/s 32mW Successive Approximation Analog to Digital Converter in 0.5 $\mu$ m CMOS Technology (both of the thesis are design and implemented)  
**Supervisor of the Thesis: Prof. Khayrollah Hadidi**

### **B.Sc. in Electrical Engineering (control) 2010-2012**

- Azerbaijan University of Applied Science and Technology, Tabriz, Iran
- Overall GPA 16.72 out of 20.
- Thesis: Design and Implementation of Control Industrial Process by Using of DATA ACQUISITION Card

### **A.Sc. in Electrical Engineering (Power Electrical) 2008-2010**

- Technical and Vocational University of Tabriz, Tabriz, Iran
- Overall GPA 17.82 out of 20.

### **Diploma. in Electrical Engineering (Power Electrical) 2006-2008**

- Technical and Vocational Industrial School, Meshginshahr, Ardabil, Iran
- Overall GPA 17.19 out of 20.

## *Research Interests*

- Analog and Digital Integrated Circuits Design
- Data Converter Circuits and Systems
- OPAMP Design Techniques
- High Resolution-High Speed Analog to Digital and Digital to Analog Converters
- VLSI
- Fuzzy systems
- Linear and Non-linear Control Systems
- Mechatronics

- PLC
- Electric Motor
- English Teaching
- Management
- Pharmacology
- Life Insurance

## *Publication Papers (article and conference Papers)*

### *-Articles Papers*

1. **Sina Mahdavi**, Arefeh Soltani, Maryam Poreh and Tohid Moradi “An Ultra High speed Low power Low settling time error and wide dynamic range voltage Continuous-time Common-Mode Feedback Circuit in 0.18 $\mu$ m CMOS”, Bulletin de la Société Royale des Sciences de Liège, Vol. 85, 2016, pp: 1457 – 1464.
2. **S. Mahdavi**, A. Soltani, M. Jafarzadeh and T. Moradi Khanshan, “A Novel Method to Design Variable Gain Amplifier”, Journal of Fundamental and Applied sciences, Algeria Vol.8, No.45, pp. 1003-1015, 19 June 2016
3. **Sina Mahdavi**, Faeze Noruzpur, Leyla Alizadeh, Maryam Jalilzadeh and Farahnaz judy “A 0.88nS Settling Time 115 $\mu$ V Settling Error with 68.18dB SNDR Continuous-time Common-Mode Feedback (CMFB) Circuit in 180nm CMOS Technology”, International Journal of Mechatronics, Electrical and Computer Technology (IJMEC), Vol. 7, Issue 26 (Oct. 2017), PP. 3696-3707.
4. **Sina Mahdavi** “A 12 bit 76MS/s SAR ADC with a Capacitor Merged Technique in 0.18 $\mu$ m CMOS Technology”, Journal of Electrical and Computer Engineering Innovations (JECEI), (accepted to online publish) in press.
5. **Sina Mahdavi**, Faeze Noruzpur, Esmail Ghadimi and Tohid Moradi Khanshan “A Novel High-Swing High-Speed With 187 $\mu$ W Power Consumption Common-Mode Feedback Block (CMFB) Based on Rail-to-Rail Technique”, International Journal of Microelectronics and Computer Science, Poland, in press
6. **Sina Mahdavi**, Maryam Poreh, Leyla Alizadeh, Baran Moradkhani and Rezvan Ebrahimi “A 1.25GS/s 12bit and 2.27mW Digital to Analog Converter (DAC) With 70.22 SNDR Based on New Hybrid R-C Procedure in 180nm CMOS”, International Journal of Microelectronics and Computer Science, Poland, in press

### *-Conference Papers*

7. Sarang Kazemina, **Sina Mahdavi** and Khayrollah Hadidi “Digitally-assisted Offset Cancellation Technique for Open Loop Residue Amplifiers in High-resolution and High-speed ADCs”, MIXDES 2016, 23st International Conference "Mixed Design of integrated Circuits and Systems", June 23-25, 2016, Lodz Poland
8. Sarang Kazemina and **Sina Mahdavi**, “A 800MS/s, 150 $\mu$ V Input-referred Offset Single-stage Latched Comparator”, MIXDES 2016, 23st International Conference "Mixed Design of Integrated Circuits and Systems", June 23-25, 2016, Lodz, Poland
9. Mehdi Ghasemzadeh, **Sina Mahdavi**, Abolfazl Zokaei and Khayrollah Hadidi “A New Ultra High Speed 5-2 Compressor with a New Structure”, MIXDES 2016, 23st International Conference "Mixed Design of Integrated Circuits and Systems", June 23-25, 2016, Lodz, Poland
10. Mehdi Ghasemzadeh, **Sina Mahdavi**, Abolfazl Zokaei and Khayrollah Hadidi “A New Adaptive PLL to Reduce the Lock Time in 0.18 $\mu$ m Technology”, MIXDES 2016, 23st International Conference "Mixed Design of Integrated Circuits and Systems", June 23-25, 2016, Lodz, Poland
11. Sarang Kazemina, **Sina Mahdavi** and Reza Gholamnejad “Bulk Controlled Offset Cancellation Mechanism for Single-stage Latched Comparator”, MIXDES 2016, 23st International Conference "Mixed Design of Integrated Circuits and Systems", June 23-25, 2016, Lodz, Poland
12. Ramin Khayatzaeh, Mehdi Ghasemzadeh and **Sina Mahdavi**“ A New Current Mode Min-Max Circuit Using CMOS Technology for Fuzzy Applications”, MIXDES 2016, 23st International Conference "Mixed Design of Integrated Circuits and Systems", June 23-25, 2016, Lodz, Poland
13. **Sina Mahdavi**, Faeze Noruzpur , Esmail Ghadimi ,Tohid Moradi Khanshan “A New Fast Rail-to-Rail Continuous-time Common-Mode Feedback Circuit ”, MIXDES 2017, 24st International Conference "Mixed Design of integrated Circuits and Systems", June 22-24, 2017, Bydgoszcz Poland
14. Ali Baradaran Rezaei, Faeze Noruzpur and **Sina Mahdavi** “A Novel APS Pixel Level Rearrangement to Increase the Fill Factor and SNR in 0.35 $\mu$ m CMOS Technology”, MIXDES 2017, 24st International Conference "Mixed Design of integrated Circuits and Systems", June 22-24, 2017, Bydgoszcz Poland
15. Ali Baradaran Rezaei, **Sina Mahdavi** , Kazem Dadashi and Tohid Moradi,” A Novel Feedback Architecture in Folded Cascode Amplifier for High-Linearity High-Resolution Applications Qualified for Different Corners”, 2016 1st International Conference on New

Research Achievements in Electrical and Computer Engineering, Amirkabir University of technology, Iran (April2016)

16. **Sina Mahdavi**, Tohid Moradi and Ali Baradaran Rezaei “A -8 to 42dB Wideband Dynamic Range and low power Variable Gain Amplifier in 0.18 $\mu$ m CMOS”, 2016 1st International Conference on New Research Achievements in Electrical and Computer Engineering, Amirkabir University of technology (April2016)
17. Ali Baradaran Rezaei, Kazem Dadashi and **Sina Mahdavi**, “Gain-Bandwidth Enhancement in Folded-Cascode Op-Amp”, 2016 1st International Conference on New Research Achievements in Electrical and Computer Engineering, Amirkabir University of technology, Iran (April2016)
18. Ali Baradaran Rezaei, **Sina Mahdavi**, Abdollah Amini, Taher Aspokeh and Maryam Poreh “A New High Resolution Calibration Technique Based on Counter - DAC Combination to Eradicate Mismatch Effect of the Current Sources in 0.18 $\mu$ m CMOS”, 3rd International Conference on Engineering and Applied Sciences, Frankfurt University, Germany (September 2016)
19. **Sina Mahdavi**, Kazem Dadashi , Tohid Moradi , Ali Baradaran Rezaei and Leyla Alizadeh, “A Novel Method to Design Variable Gain Amplifiers”, International Conference on Engineering & Applied science UAE-DUBAI .(March 2016)
20. Ali Baradaran Rezaei, Abdollah Amini, Taher Aspokeh, **Sina Mahdavi** and Maryam Poreh “A Novel Technique to Eliminate Mismatch Effects of the Current Sources Based on Offset Cancellation Method”, 3rd International Conference on Engineering and Applied Sciences, Frankfurt University, Germany (September 2016)
21. **Sina Mahdavi**, Arefeh Soltani, Maryam Poreh and Tohid Moradi “An Ultra High speed Low power Low settling time error and wide dynamic range voltage Continuous-time Common-Mode Feedback Circuit in 0.18 $\mu$ m CMOS”, 3rd International Conference on Recent Innovations in Electrical Engineering and Computer, Tehran University, Iran (September 2016)
22. **Sina Mahdavi**, Farnaz Raheli, Baran Moradkhani and Arefeh Soltani “A 41MHz 63dB and 1.22mW Variable Gain Amplifier in 0.18 $\mu$ m CMOS”, 3rd International Conference on Knowledge-Based Engineering and Innovation (KBEI-2016), December 30th, 2016, Tehran province, Payame Noor University, Tehran, Iran.
23. **Sina Mahdavi**, Faeze Noruzpur, Leyla Alizadeh, Maryam Jalilzadeh and Farahnaz judy “A Novel and Reliable High accurate High linear Very low power and High speed Continuous-time Common-Mode Feedback Circuit in 0.18 $\mu$ m CMOS”, 3rd International Conference on Knowledge-Based Engineering and Innovation (KBEI-2016), December 30th, 2016, Tehran province, Payame Noor University, Tehran, Iran.

24. **Sina Mahdavi**, Rezvan Ebrahimi, Ainaz Daneshdoust and Arefeh Ebrahimi “A 12bit 800MS/s and 1.37mW Digital to Analog Converter (DAC) Based on Novel R-C Technique”, IEEE International Conference on Power, Control, Signals and Instrumentation Engineering (ICPCSI-2017) Saveetha Engineering College, Thandalam, Chennai, Tamil Nadu, India, in press.

25. **Sina Mahdavi**, Baran Moradkhani, and Faeze Noruzpur “A -38 to 57dB 26.6MHz 1.96mW with 73.22dB SNDR Variable Gain Amplifier in 0.18 $\mu$ m CMOS”, IEEE International Conference on Power, Control, Signals and Instrumentation Engineering (ICPCSI-2017) Saveetha Engineering College, Thandalam, Chennai, Tamil Nadu, India, in press.

## Management Papers

26. Alireza Emam Doost, **Sina Mahdavi**, Hossein Tosheh and Farzin Shahbazi” The relationship between automation and client's satisfaction”, International conference on modern researchers in Management, Economic, Accounting, Berlin University, Germany (July 2016)

27. Rahman Leysi, Mir Mohammad Seyyed Abbaszadeh and **Sina Mahdavi**” The Efficiency of Meditation and learning methods in students educational progress”, 2nd International conference on science and Engineering, Istanbul University, Turkey (March 2016)

## Future Works...

1. A 14 bit 17 MS/s 80dB SNDR and 95dB SFDR Low Power Fully Differential SAR ADC With New Energy-Efficient Switching Procedure in 0.5 $\mu$ m CMOS Process

2. Offset Cancellation in a 800MS/s Single-Stage Comparator by Analog Trimming on the Body Voltage of PMOS Devices

3. Offset-Cancelled Single-Stage Latched Comparator Scheduled by Analog Trimming on Body Voltages of PMOS Devices

4. A 2.49 fJ/Conversion-Step 12-bit 154MS/s and 884 $\mu$ W SAR ADC

## Publication Book

-Sea for you and Wave for me

## Teaching Experiences

Electronic Circuits, Electronic (I, II, III) , Circuit Theory and Technology, Analog and Digital integrated circuits, Computer Architecture, VLSI, HSPICE, Cadence software, Mathematics, Physics, English.

### *Honors & Awards*

- Top Student in degree of Diploma in the Technical and Vocational Industrial School, Meshginshahr, Ardabil, Iran
- Top Student in degree of A.Sc in the Technical and Vocational University of Tabriz, Tabriz, Iran
- Top Student in degree of M.Sc. in the Urmia Graduate Institute Urmia, Urmia, Iran.
- Getting the best paper Award in KBEI2016 Conference

### *Computer Skills + Other Skills*

- Expert user of **Microsoft Office** (Word, PowerPoint, Excel, Outlook, Visio) (Pages, Numbers, Keynotes)
- Good knowledge of **Matlab** (programming, Simulink,)
- Good knowledge of **ModelSim, ActiveHDL.**
- Good knowledge of **Codevision AVR, Proteus, ...**
- Good knowledge of **Cadence Virtuoso** (Dracula, Virtuoso Layout, Analog Artist, Calibre, Spectre and some other tools like “VerilogA”)
- Expert user of **HSpice and Spice Explorer**
- Expert user of **Corel Draw** (Mainly for publications)
- Good knowledge of FPGA
- Good knowledge of discrete circuit design (especially analog circuits)
- Good knowledge of English (speaking, writing, reading...)
- I have English and ICDL Certificate of Completion
- I have Mechatronic, pneumatic and hydraulic Certificate of Completion from Iran Technical and Vocational Training Organization Tabriz, Iran (during 1200 hours), etc.
- I am very open to any new software and it is a joy for me to learn them if they are applicable in my research.

### *Extracurricular Activates*

- Student Member of the IEEE
- Reviewer Member of the Journal of Electrical and Electronic Engineering (JEEE)
- Member of the Executive Committee of KBEI2017 conference
- Member of the Young Researchers and Elite Club, Tabriz Branch, Islamic Azad University
- Member of the Iranian Consortium of Academics Specialists (IRCAS)
- Member of the Tabriz Engineering System Organization, East Azerbaijan
- Member of the Robotic Group Arad Company
- Member of the Iranian Teachers Group
- Member of Scientific and cultural Meeting in Urmia Graduate Institute
- Member of the Saman Life insurance Company
- Playing Football and volleyball
- Hiking and Mountain Climbing