EMRE ARSLAN

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Birth Date	**:**25/04/1976
Birth Place	**:**Istanbul/Turkey
Sex	**:**Male
Marital Status	**:**Married (2006)
Nationality	**:**Republic of Turkey
Military Status	**:**Completed

EDUCATION

Date	Degree	GPA
2003-2011	PhD, Electrical and Electronics Engineering, Bogaziçi University	3,87
1999-2003	MSc, Electrical and Electronics Engineering, Bogaziçi University	3,60
1994-1999	BSc, Electrical Engineering, Istanbul Technical University	3,33

PhD

Design of Low Noise CCII Based Current Mode Circuits to be Used in High Frequency Applications

Advisor: Prof. Avni Morgul

MSc

Novel Circuit Applications Using First and Third Generation Current Conveyors
Advisor: Prof. Oguzhan Cicekoglu

BSc

Three Phase Inverter Design Supplied by Solar Energy
Specialization: Power Electronics

WORK EXPERIENCE

Associate Professor, Marmara University Department of Electrical & Electronics Engineering, (2016-…)

Assistant Professor, Marmara University Department of Electrical & Electronics Engineering, (2013-2016)

Research & Teaching Assistant, Bogazici University Department of Electrical & Electronics Engineering, (2001-2011)

Served as a staff member in the BETA VLSI Lab at Bogazici University. During the PhD research, high frequency (multiple hundreds of MHz), very low noise (noise minimization by the proposed techniques) and high order current mode circuits (especially CCII based) are studied. Novel high performance and wideband CMOS circuits were proposed, laid-out and noise reduction techniques are applied. High frequency, high order current mode applications with low input referred noise values are proposed. More than 8 journal and conference papers are published during the PhD research.

For the Master thesis research, CMOS circuit structures of current mode circuits are studied. Some of the high performance CMOS circuits are selected and they are laid-out using Mentor Graphics IC Station layout editor. Their HSpice simulations are performed and performance

parameters are obtained. Some newly proposed current mode structures (such as grounded and floating inductance simulators, voltage-mode and current-mode filter applications) are implemented using these CMOS structures.

Three phase inverter design supplied by solar energy was the BSc study under the specialization of power electronics in Istanbul Technical University.

TECHNICAL SKILLS & RESEARCH INTERESTS

Analog VLSI Design, Hardware Implementations of Analog and Digital Signal Processing Circuits, Digital System Design (FPGAs and VLSI architectures), Signal Processing and Applications, High Frequency and Low-Noise Current-Mode Design, Nanocircuits with DG-MOSFETs.

COMPUTER EXPERIENCE

Programming Languages: C, Matlab, Mathematica
Operating Systems: Windows, UNIX
Microelectronics Softwares: Verilog, VHDL, Altera MaxPlusII and Quartus FPGA Tools, Mentor Graphics CAD Tools, Cadence CAD Tools, HSpice, PSpice, Magic Layout Editor, Uncle Layout Editor.

PROJECTS

Title: VLSI design and implementation of programmable architectures based on multi-valued logic circuits (TUBITAK, 2009)
Budget: 200k USD
Supervisor: Turgay Temel, PhD

HONORS

10th among 200 students in Istanbul Technical University, 1999.

PUBLICATIONS

JOURNAL PAPERS

1. ÖZENLİ DENİZ, YEŞİL ABDULLAH, **ARSLAN EMRE**, KUNTMAN HULUSİ HAKAN (2018). Novel First Order Current Mode MOS-C PhaseShifters. Elektronika Ir Elektrotechnika, 24(1), 31-35., Doi: 10.5755/j01.eie.24.1.20157

2. **ARSLAN EMRE** (2017). A high performance differential input CMOS current buffer. AEU - International Journal of Electronics and Communications, 82, 1-6., Doi: 10.1016/j.aeue.2017.07.037

3. YEŞİL ABDULLAH, ÖZENLİ DENİZ, **ARSLAN EMRE**, KAÇAR FIRAT (2017). Electronically tunable MOSFET-only current-mode biquad filter. AEU - International Journal of Electronics and Communications, 81, 227-235., Doi: 10.1016/j.aeue.2017.07.019

4. YEŞİL ABDULLAH, ÖZENLİ DENİZ, **ARSLAN EMRE**, KUNTMAN HULUSİ HAKAN (2017). Current mode single-input multi-output MOSFET-only filter. AEU - International Journal of Electronics and Communications, 80, 157-164., Doi: 10.1016/j.aeue.2017.06.037

5. YEŞİL ABDULLAH, ÖZENLİ DENİZ, **ARSLAN EMRE**, KAÇAR FIRAT (2016). Noise Minimization in CMOS Current Mode Circuits That Employ Differential Input Stage. ADVANCES IN ELECTRICAL AND COMPUTER ENGINEERING, 16(2), 19-24.

6. **ARSLAN EMRE**, Pal Kirat, Herencsar Norbert, METİN BİLGİN (2016). Design of Novel CMOS DCCII with Reduced Parasitics and its All Pass Filter Applications. Elektronika ir Elektrotechnika, 22(6), 46-50.

7. **ARSLAN EMRE**, METİN BİLGİN, ÇİÇEKOĞLU MEHMET OĞUZHAN (2015). MOSFET only multi function biquad filter. AEU - International Journal of Electronics and Communications, 69(12), 1737-1740., Doi: 10.1016/j.aeue.2015.07.018

8. **ARSLAN EMRE**, Yıldız Merih, Minaei Shahram (2015). A compact rail to rail CMOS buffer amplifier with very low quiescent current. International Journal of Electronics, 102(6), 982-992., Doi: 10.1080/00207217.2014.947637

9. **ARSLAN EMRE** (2013). Self biasing high precision CMOS current subtractor for current mode circuits. Advances in Electrical and Computer Engineering, 13(4), 19-24., Doi: 10.4316/AECE.2013.04004

10. **ARSLAN EMRE**, Minaei Shahram, MORGÜL AVNİ (2013). On the realization of high performance current conveyors and their applications. Journal of Circuits Systems and Computers, 22(3), 1-23., Doi: 10.1142/S0218126613500151

11. **ARSLAN EMRE**, METİN BİLGİN, ÇİÇEKOĞLU MEHMET OĞUZHAN, MORGÜL AVNİ (2013). High performance CMOS CCI in a 0 35 m CMOS technology and a new all pass filter application. Turkish Journal of Electrical Engineering and Computer Sciences, 21(1), 1584-1594., Doi: 10.3906/elk-1110-68

12. **ARSLAN EMRE**, METİN BİLGİN, Herencsar Norbert, koton jaroslav, MORGÜL AVNİ,ÇİÇEKOĞLU MEHMET OĞUZHAN (2012). High performance wideband CMOS CCI and its application in inductance simulator design. Advances in Electrical and Computer Engineering, 12(3), 21-26., Doi: 10.4316/AECE.2012.03003

13. **ARSLAN EMRE**, MORGÜL AVNİ (2012). Self biasing current conveyor for high frequency applications. Journal of Circuits, Systems and Computers, 21(5), 1-20., Doi: 10.1142/S0218126612500399

14. **ARSLAN EMRE**, METİN BİLGİN,KUNTMAN HULUSİ HAKAN,ÇİÇEKOĞLU MEHMET OĞUZHAN (2012). MOS only second order current mode LP BP filter. Analog Integrated Circuits and Signal Processing, 74(8), 105-109., Doi: 10.1007/s10470-012-9930-8

15. YILDIZ MERİH, Minaei Shahram, **ARSLAN EMRE** (2011). High slew rate low quiescent current rail to rail CMOS buffer amplifier for flat panel displays. Journal of Circuits, Systems and Computers, 20(7), 1277-1286., Doi: 10.1142/S0218126611007888

16. METİN BİLGİN, **ARSLAN EMRE**, ÇİÇEKOĞLU MEHMET OĞUZHAN (2009). Dual output filter topology with a single NIC for pole frequency sensitive applications. International Journal of Electronics, 96(7), 699-710., Doi: 10.1080/00207210902791728

CONFERENCE PAPERS

1. METİN BİLGİN, ATASOYU MESUT, **ARSLAN EMRE**, Herencsar Norbert, ÇİÇEKOĞLU MEHMET OĞUZHAN (2017). A tunable immitance simulator with a voltage differential current conveyor. 2017 IEEE 60th International Midwest Symposium on Circuits and Systems (MWSCAS), Doi: 10.1109/MWSCAS.2017.8053029

2. **ARSLAN EMRE**, ÇİNİ UĞUR (2015). A High Gain and Low Offset Current Mode Instrumentation Amplifier Using Differential Difference Current Conveyors. 2015 IEEE International Conference on Electronics, Circuits, and Systems

3. **ARSLAN EMRE**, METİN BİLGİN, Herencsar Norbert, Koton Jaroslav, ÇİÇEKOĞLU MEHMET OĞUZHAN (2012). High performance wideband CMOS CCI with high voltage swing. 11th International Conference on DEVELOPMENT AND APPLICATION SYSTEMS, Suceava, Romania, May 17-19, 2012, 107-110.

4. **ARSLAN EMRE**, METİN BİLGİN, KUNTMAN HULUSİ HAKAN, ÇİÇEKOĞLU MEHMET OĞUZHAN (2011). MOS only current mode LP BP filter. 7th International Conference on Electrical and Electronics Engineering (ELECO), 99-101.

5. METİN BİLGİN, **ARSLAN EMRE**, Herencsar Norbert, ÇİÇEKOĞLU MEHMET OĞUZHAN (2011). Voltage mode MOS only all pass filter. 2011 34th International Conference on Telecommunications and Signal Processing (TSP), 317-318., Doi: 10.1109/TSP.2011.6043718

6. **ARSLAN EMRE**, MORGÜL AVNİ (2008). Wideband self biased CMOS CCII. Research in Microelectronics and Electronics, PRIME, 217-220.

7. **ARSLAN EMRE**, MORGÜL AVNİ (2007). Wideband current conveyor with rail to rail input stage. International Conference on Electrical and Electronics Engineering (ELECO), 1-5.

8. **ARSLAN EMRE**, METİN BİLGİN, ÇİÇEKOĞLU MEHMET OĞUZHAN (2005). Multi input single output cascadable current mode universal filter topology with a single current conveyor. International Circuits, Signals and Systems Conference (IASTED), 62-66.

9. **ARSLAN EMRE**, METİN BİLGİN, çakır cem, ÇİÇEKOĞLU MEHMET OĞUZHAN (2003). A novel grounded lossless inductance simulator with a CCI. International Turkish Symposium on Artificial Intelligence and Neural Networks - (TAINN), 1-3.

10. METİN BİLGİN, **ARSLAN EMRE**, ÇİÇEKOĞLU MEHMET OĞUZHAN (2003). All pass sections realized with single first generation current conveyor. SCS 2003. International Symposium on Signals, Circuits and Systems. Proceedings (Cat. No.03EX720), 561-563., Doi: 10.1109/SCS.2003.1227114