

Aminghasem Safarian

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Education

- 2003-2006 Ph.D., University of California, Irvine, Electrical Engineering,
Thesis: **Integrated Circuits for Ultra-Wideband (UWB) Radio**
- 2000-2002 M.S., Sharif University of Technology, Electrical Engineering
Thesis: **Low Power Σ/Δ Modulator for Audio Applications**
- 1996-2000 B.S., Sharif University of Technology, Electrical Engineering

Work Experience

2015 - Present Assistant Professor, Electrical Engineering, Sharif University of Technology.

2005 - 2015 Principal Staff Scientist at Broadcom Corporation, Irvine, California.

2003 - 2006 Graduate Research Assistant at University of California, Irvine.

2000 - 2003 Design Engineer at Emad Semicon, Tehran, Iran.

Books

1. Aminghasem **Safarian** and Payam Heydari, Silicon-Based RF Front-Ends for UWB Radios, Springer Publishing, Jan. 2008.

Journal Articles

1. **Safarian**, A. ; Shameli, A. ; Rofougaran, A. ; Rofougaran, M. ; De Flaviis, F. , "RF Identification (RFID) Reader Front Ends With Active Blocker Rejection", IEEE Transactions on Microwave Theory and Techniques, vol. 57, no. 5, part 2, pp. 1320-1329, May 2009.
2. Shameli, A. ; **Safarian**, A. ; Rofougaran, A. ; Rofougaran, M. ; Castaneda, J. ; De Flaviis, F., "A UHF Near-Field RFID System With Fully Integrated Transponder", IEEE Transactions on Microwave Theory and Techniques, vol. 56, no. 5, part 2, pp. 1267-1277, May 2008.
3. Shameli, A. ; **Safarian**, A. ; Rofougaran, A. ; Rofougaran, M. ; De Flaviis, F. , "A

Two-Point Modulation Technique for CMOS Power Amplifier in Polar Transmitter Architecture", IEEE Transactions on Microwave Theory and Techniques, vol. 56, no. 1, pp. 31-38, Jan. 2008.

4. **Safarian**, A.; Lei Zhou ; Heydari, P. , "CMOS Distributed Active Power Combiners and Splitters for Multi-Antenna UWB Beamforming Transceivers", IEEE Journal of Solid-State Circuits, vol.: 42, no. 7, pp. 1481-1491, Jun 2007.
5. Shameli, A. ; **Safarian**, A. ; Rofougaran, A. ; Rofougaran, M. ; De Flaviis, F. , "Power Harvester Design for Passive UHF RFID Tag Using a Voltage Boosting Technique", IEEE Transactions on Microwave Theory and Techniques, vol. 55, no. 6, part 1, pp. 1089-1097, Jun 2007.
6. Tzeng, F.; Deyi Pi ; **Safarian**, A. ; Heydari, P., "Theoretical Analysis of Novel Multi-Order LC Oscillators", IEEE Transactions on Circuits and Systems II: Express Briefs, vol. 54, no. 3, pp. 287-291, Mar. 2007.
7. **Safarian**, A. ; Anand, S. ; Heydari, P. , "On the Dynamics of Regenerative Frequency Dividers", IEEE Transactions on Circuits and Systems II: Express Briefs, vol. 53, no. 12, pp. 1413-1417, Dec. 2006.
8. **Safarian**, A. , Sahandi, F. , Heydari, P. , Atarodi, M., "A Low-Power, Second-Order Sigma/Delta Modulator Using A Single Class-AB Op-Amp for Voice-Band Applications," Journal of Analog Integrated Circuits and Signal Processing, vol. 49, no. 2, pp. 199-211, Nov. 2006.
9. Zhou, L. ; **Safarian**, A. ; Heydari, P., "CMOS wideband analogue delay stage", Electronics Letters , vol. 42, no. 12, pp. 1213-1214, Oct. 2006.
10. **Safarian**, A. ; Yazdi, A. ; Heydari, P., "Design and analysis of an ultrawide-band distributed CMOS mixer", IEEE Transactions on Very Large Scale Integration (VLSI) Systems, vol. 13, no. 5, pp. 618-629, May 2005.

Issued Patents

1. Antenna Driver Circuit for NFC Reader Applications (US 8929808 issued on Jan. 6, 2015)
2. Multi-stage gain control in receivers and other circuits (US 8983418 issued on Mar. 17, 2015)
3. Multi-mode analog-to-digital converter. (US 8,519,878 B2 issued on Aug. 27, 2013)
4. Distributed Direct Conversion Receiver (DDCR) for UWB Systems (US 8,112,056 B2 issued on Feb. 7, 2012)
5. Integrated blocker filtering RF front end (US 8,094,025 B2 issued on Jan.

- 10, 2012)
6. Integrated blocker filtering RF front end (US 7898418 B2 issued on Mar. 1, 2011)
 7. Distributed RF Front-End for UWB Receivers (US 7,792,513 B2 on Sep. 7, 2010)
 8. Receiver architecture for canceling blocking signals (US 7471204 B2 issued on Dec. 30, 2008)

Conference Papers

1. **Safarian**, A. ; Shameli, A. ; Rofougaran, A. ; Rofougaran, M. ; De Flaviis, F. , "An Integrated RFID Reader ",IEEE Solid-State Circuits Conference,ISSCC. pp. 218 - 598, Sep. 2007
2. **Safarian**, A. ; Lei Zhou ; Heydari, P., "A Current-Equalized Distributed Receiver Front-End for UWB Direct Conversion Receivers ",IEEE Custom Integrated Circuits Conference, pp. 535 - 538, Sept. 2007
3. **Safarian**, A. ; Shameli, A. ; Rofougaran, A. ; Rofougaran, M. ; De Flaviis, F. , "Integrated Blocker Filtering RF Front Ends ",IEEE Radio Frequency Integrated Circuits (RFIC) Symposium, pp.13-16,Jun 2007.
4. Shameli, A. ; **Safarian**, A. ; Rofougaran, A. ; Rofougaran, M. ; De Flaviis, F. ,"An RFID System with Fully Integrated Transponder " IEEE Radio Frequency Integrated Circuits (RFIC) Symposium, pp. 285 - 288, Jun 2007.
5. **Safarian**, A. ; Lei Zhou ; Heydari, P. , "Distributed Active Power Combiners and Splitters for Multi-Antenna UWB Transceivers", IEEE European Solid-State Circuits Conference, pp. 138 - 141, Sept. 2006.
6. Shameli, A. ; **Safarian**, A. ; Rofougaran, A. ; Rofougaran, M. ; De Flaviis, F."A Novel DAC Based Switching Power Amplifier for Polar Transmitter", IEEE Custom Integrated Circuits Conference, pp. 137 - 140, Sep 2006.
7. **Safarian A.**, Lei Zhou, Payam Heydari, "A Distributed RF Front-End for UWB Receivers," IEEE Custom Integrated Circuits Conference (CICC), pp. 805-808, Sept. 2006.
8. **Safarian** A. and Payam Heydari, "A Study of High-Frequency Regenerative Frequency Dividers," IEEE Int'l Symposium on Circuits and Systems (ISCAS), vol. 3, pp. 2695-2698, May 2005.
9. **Safarian** A. and Payam Heydari, " Design and and Analysis of a Distributed Regenerative Frequency Divider Using a Distributed Mixer," IEEE Int'l Symposium on Circuits and Systems (ISCAS), vol. 1, pp. 992-995,

May 2004.

10. Mehrmanesh, S. ; Atarodi, M. ; Aslanzadeh, H.A. ; Saeedi, S. ; **Safarian, A.**, "A new full CMOS 2.5 V two-stage line driver with variable gain for ADSL applications", International Symposium on Circuits and Systems, pp. 405-408, May 2004
11. **Safarian, A.** ; Sahandi, F. ; Atarodi, S.M. , "A new low-power sigma-delta modulator with the reduced number of op-amps for speech band applications", International Symposium on Circuits and Systems, ISCAS. pp. 1033-1036, May 2003
12. **Safarian, A.** ; Aslanzadeh, H.A. ; Mehrmanesh, S. ; Vahidfar, M.B. , "An enhanced dynamic range low-power delta-sigma modulator for portable voice band applications", Southwest Symposium on Mixed-Signal Design, pp. 263 - 268, May 2003.
13. Aslanzadeh, H.A. ; Mehrmanesh, S. ; Vahidfar, M.B. ; **Safarian, A.** , "A low power 25 MS/S 12-bit pipelined analog to digital converter for wireless applications", Southwest Symposium on Mixed-Signal Design, pp. 38-42, May 2003.
14. Aslanzadeh, H.A. ; Mehrmanesh, S. ; Vahidfar, M.B. ; **Safarian, A.** ; Lotfi, R. , "A 1-V 1-mW high-speed class AB operational amplifier for high-speed low power pipelined A/D converters using 'Slew boost' technique", International Symposium on Low Power Electronics and Design, ISLPED pp. 340-344, May 2003
15. **Safarian, A.** ; Vahidfar, M.B. ; Aslanzadeh, H. ; Mehrmanesh, S. , "A new low power 2-2 cascaded sigma-delta modulator with the reduced number of op-amps for GSM transceiver applications", IEEE International Conference on Electronics, Circuits and Systems, pp. 26-271, 2003.
16. **Safarian, A.** ; Sahandi, F. ; Atarodi, S.M. "A new single-loop single-stage low power sigma-delta modulator", International Conference on Microelectronics, ICM, pp. 215-218, 2002