

Sung Min Park

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EDUCATION

Ph. D. in EE ENG., May 2000, Imperial College London, U.K.

Thesis Title: “Low-Noise Optical and RF Receivers in Sub-Micron CMOS Technologies” (Supervisor: Prof. Chris Toumazou)

M.Sc. in EE ENG., Aug. 1994, Univ. College London, U.K.

B.S. in EE ENG., Aug. 1993, KAIST, Korea.

PROFESSIONAL EXPERIENCE:

Professor, Mar. 2013 – Present, Ewha Womans University, Korea.

Associate Professor, Mar. 2008 – Feb. 2013, Ewha Womans University, Korea.

Head of Department, Feb. 2009 – Jan. 2011, Ewha Womans University, Korea.

Assistant Professor, Mar. 2004 – Feb. 2008, Ewha Womans University, Korea.

Assistant Professor, Mar. 2003 – Feb. 2004, University of Ulsan, Korea.

Research Assistant Professor, Sep. 2001 – Feb. 2003, KAIST, Korea.

Senior Researcher, Oct. 2000 – Aug. 2001, SaTReC, Korea.

PUBLICATIONS

SELECTED JOURNAL ARTICLES

1. Y. He, J. Kim, and S. M. Park, “A CMOS Read-Out IC for Cyanobacteria Detection with 40 nApp Sensitivity and 45 dB Dynamic Range,” *IEEE Sensors J.*, to be published in 2020.
2. S. Kim, C. Hong, Y. Eo, J. Kim, and S. M. Park, “40-GHz Mirrored-Cascode Differential Transimpedance Amplifier in 65-nm CMOS,” *IEEE J. of Solid-State Circuits*, May 2019.
3. C. Hong, S. Kim, S. Cha, and S. M. Park, “A 10-meter Active Optical Cable Utilizing POF with 4 x 10-Gb/s CMOS Transceiver Chipsets,” *IEEE Photonics J.*, Apr. 2019.
4. M. Park and S. M. Park, “A CMOS symmetric self-biased voltage reference,” *Microelectronics J.*, Oct. 2018.
5. C. Hong, S. Kim, J. Kim, and S. M. Park, “A Linear-Mode LiDAR Sensor Using a Multi-Channel CMOS Transimpedance Amplifier Array,” *IEEE Sensors J.*, Sep. 2018.
6. “Portable Fluorometer for Cyanobacteria Detection,” S. Kim, Y. He, E. Lee, J. Kim, and S. M. Park, *IEEE Sensors J.*, Apr. 2017.
7. S. Kim, S. Cho, and S. M. Park, “A dual-mode CMOS feed-forward transimpedance amplifier for LADARs,” *IET Electronics Letters*, Nov. 2014.
8. C. Zhang, Z. Wang, and S. M. Park, “A 15 GHz,-182 dBc/Hz/mW FOM, Rotary Traveling Wave VCO in 90 nm CMOS,” *IEEE Microwave and Wireless Component Letters*, Apr. 2012.

9. J. Han, B. Choi, J. Yun, M. Seo, W. Oh, and S. M. Park, "A Low-Power Gigabit CMOS Limiting Amplifier Using Negative Impedance Compensation and Its Application," *IEEE Tran. VLSI Systems*, Mar. 2012.
10. D. Lee, J. Han, G. Han, and S. M. Park, "An 8.5-Gb/s Fully Integrated CMOS Optoelectronic Receiver Using Slope-Detection Adaptive Equalizer," *IEEE J. of Solid-State Circuits*, Dec. 2010.
11. J. Han et al., "A 20-Gb/s Transformer-Based Current-Mode Optical Receiver in 0.13- μ m CMOS," *IEEE Tran. Circuits & Systems II*, May 2010.
12. S. Park et al., "Low-crosstalk 10-Gb/s flip-chip array module for parallel optical interconnects," *IEEE Photonics Tech. Lett.*, Jul. 2005.
13. S. M. Park, J. Lee, and H. -J. Yoo, "1-Gb/s 80-dB Omega fully differential CMOS transimpedance amplifier in multichip on oxide technology for optical interconnects," *IEEE J. of Solid-State Circuits*, Jun. 2004.
14. S. M. Park and H. -J. Yoo, "1.25-Gb/s Regulated Cascode CMOS Transimpedance Amplifier for Gigabit Ethernet Applications," *IEEE J. of Solid-State Circuits*, Jan. 2004.

SELECTED BEST CONFERENCE PUBLICATIONS

1. "An **8.5Gb/s CMOS OEIC** with On-Chip Photodiode for Short-Distance Optical Communications", *IEEE Tech. Digest of ISSCC 2010*, San Francisco, Feb. 2010.
2. "A **4Gb/s Current-Mode Optical Transceiver** in 0.18 μ m CMOS", *IEEE Tech. Digest of ISSCC 2009*, San Francisco, Feb. 2009.
3. "A **2.5Gb/s ESD_Protected Dual-Channel Optical Transceiver Array**", *IEEE A-SSCC 2007 (Asia Solid-State Circuits Conference)*, Nov. 2007
4. "A 1.2V 5.2mW 40dB **2.5Gb/s Limiting Amplifier** in 0.18 μ m CMOS Using Negative-Impedance Compensation", *IEEE Tech. Digest of ISSCC 2007*, pp. 56-57, Feb. 2007.

ISSUED US PATENTS:

1. "Feedforward Ring Oscillator" → US 8,742,855
2. "Transimpedance Amplifier" → US 9,843,295
3. "Differential Transimpedance Amplifier" → US10,348,261
4. "Differential Transimpedance Amplifier" → US10,396,734

SOCIETY: IEEE Senior member (from 2013).

ACTIVITIES: TPC of IEEE ISSCC (2004-2009), TPC of IEEE A-SSCC (2007-2008), and many other conference committees

HORNORS AND AWARDS

- Co-recipient of the Best Student Award (IEEE ISSCC 2009 Silkroad Award)
- Co-recipient of the Silver Award (Korea Semiconductor Design Contest 2009).
- Best Teaching Award (Ewha Womans University 2014).
- Co-recipient of 14 Best Paper Awards from Domestic Conferences.