Debajit Basak (Thesis Advisor: K.P. Pun, CUHK)
Analog IC Design, Electronic Engineering

Education History

- Ph.D. in Electronic Engineering (The Chinese University of Hong Kong), 08/2014 – 09/2018.
- B. Tech in Electronics and Communication Engineering (National Institute of Technology Silchar, India), 06/2008 – 05/2012.

Publications

- H. Wang, D. Basak, Y. Zhang and K.P. Pun, " A 0.59-mW 78.7-dB SNDR 2-MHz bandwidth active-RC delta-Sigma modulator with relaxed and reduced amplifiers," *IEEE Transactions on Circuits and Systems I: Regular Papers*, vol. 68, no. 3, pp. 1114 - 1122, March 2021.
- D. Basak, S. Kalani, Y. Zhang, and K.-P. Pun, "An automatic on-chip calibration technique for static and dynamic DAC errors in high-speed continuous-time delta-sigma modulators," *IEEE Access*, vol. 7, pp. 172097 – 172109, Nov. 2019.
- Y. Zhang, D. Basak and K.P. Pun, " A highly linear multi-level SC DAC in a power-efficient Gm-C continuous-time delta-sigma modulator," *IEEE Transactions on Circuits and Systems I: Regular Papers*, vo.66, no.12, pp.4592-4605, Dec. 2019.
- Y. Zhang, D. Basak and K.P. Pun, " Power-efficient Gm-C DSMs with high immunity to aliasing, clock jitter, and ISI," *IEEE Transactions on VLSI Systems*, vol. 27, no. 2, pp.337-349, February 2019.
- D. Li, D. Basak, Y. Zhang, Z. Fu and K.P. Pun, " Improving power efficiency for active-RC delta-sigma modulators using a passive-RC low-pass filter in the feedback," *IEEE Transactions on Circuits and Systems II: Express Briefs*, vol. 65, no.11, pp.1559-1563, Nov. 2018.
- D. Basak, D. Li and K.-P. Pun, "A Gm-C delta-sigma modulator with a merged input-feedback Gm circuit for nonlinearity cancellation and power efficiency enhancement," *IEEE Trans. Circuits Syst. I*, Reg papers, vol. 65, no. 4, pp. 1196–1209, Sep. 2018.
- D. Basak, S. Kalani, P. Kinget and K.-P. Pun, "An on-chip static and dynamic DAC error correction technique for high speed multibit delta-sigma modulators," *in Proc. of IEEE ISCAS*, Florence, Italy, May 2018.
- D. Basak and K.-P. Pun, "Gm-cell nonlinearity compensation technique using single-bit quantiser and FIR DAC in Gm-C based delta-sigma modulators," *in Proc. IEEE ISCAS*, Montreal, Canada, May 2016, pp. 1510–1513.

Thesis Topic

- Improving linearity of Gm-C based continuous-time delta-sigma ADC

Hobbies

- Travelling, hiking and playing cricket