SUSTech Southern University of Science and Technology

Zhenhao Li

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EDUCATION

Southern University of Science and Technology (SUSTech) - Shenzhen, China Sep 2018 - Jun 2022

- B.Eng. in Microelectronics Science and Engineering, School of Microelectronics (Honor Class)
- GPA: Cumulative 3.86/4.00, Major 3.84/4.00, Ranking 2/60
- Relevant Coursework: Analog Integrated Circuit Design, Advanced Digital CMOS IC Design, Introduction to VLSI technology, Introduction to Power Electronics, Fundamentals of Power IC Design, Signals and Systems, etc.

The Hong Kong Polytechnic University (PolyU) - Kowloon, Hong Kong SAR Aug 2021 - Dec 2021

- (Exchange Programme) B.Eng. (Hons) in Electrical Engineering, Department of Electrical Engineering
- Relevant Coursework: Computer System Principles, Systems and Control

PROJECT EXPERIENCE

An Ultra-Low Power Consumption Dual-Output Subthreshold CMOS Voltage Reference Dec 2020 - Feb 2021

A dual-output subthreshold CMOS voltage reference (CVR) with ultra-low power consumption and low temperature coefficient (TC) is presented. The first voltage reference (VR) employs a complementary-to-absolute-temperature (CTAT) voltage, produced by the NMOS with different threshold voltages, and a proportional-to-absolute-temperature (PTAT) voltage, implemented by NMOS with different aspect ratios. The second voltage is generated by a 3.3-V NMOS with a PTAT current. The proposed circuit has been fabricated with a standard 0.18-um CMOS process, which shows a good performance.

A Voltage-Mode PWM-Controlled Buck Converter with Type-III Compensation Sep 2020 - Oct 2020

A voltage-mode buck with PWM control is designed to achieve high switching frequency (6MHz) and low output voltage ripple (0.036%@200mA). With a load current ranging from 200mA to 500mA, the circuit can work perfectly in CCM mode. Due to the utilization of type-III compensation, the simulation gives a the satisfactory stability, UGF and PM.

A 75.79dB DC-Gain and 106.72MHz bandwidth CMOS Op-Amp with RC Miller Compensation Sep 2020 - Nov 2020

A classical OTA+CS amplifier is designed, and the RC Miller circuit is added to compensate the frequency. A wideband and high-DC-gain operational amplifier is realized.

RPi-based Travel-Assistant Wearable Devices for the Blind May 2020 - Oct 2020

The product is to achieve local navigation, acquaintance recognition, obstacle avoidance, by the application of image processing and AI. Responsible for Python-based image processing code writing, overall product assembly and testing.

Intelligence System of Water Dispatching and Irrigation based on AIoT Devices Jun 2020 - Jul 2020

Responsible for investigating the present situation of agricultural water dispatch in irrigation season and related regulations in China. Participated in the proposal of smart agriculture (water resource scheduling) framework using Huawei AIoT equipment.

PUBLICATION

[1] Li, Z., Zhan, C. and Wang, L., "An Ultra-Low Power Consumption Dual-Output Subthreshold CMOS Voltage Reference," in *4th IEEE International Conference on Integrated Circuits, Technologies and Applications (ICTA)*. Nov. 2021. (accepted: website)

INTERNSHIP

SHENZHEN PANGO MICROSYSTEMS CO.,LTD. - Place & Route Engineer Jun 2021 - Jul 2021

- Provide support for the place and route of the logic resource on the unreleased product.
- Generate technical documentation of the related algorithm.

HONORS & AWARDS

National Encouragement Scholarship (Ministry of Education of the P.R.C.) 2020

1st Prize, National UG Electronics Design Contest (Guangdong Province Office of Education) 2020

1st Prize, Outstanding Student Scholarship (SUSTech) 2019

SME Scholarship of Longsys (top 5% per year, School of Microelectronics) 2020

LEADERSHIP EXPERIENCE

SUSTecher Volunteer Teaching in Lianping - Organizer & Participant @YCL of Shuren College Jul 2019 - Aug 2019

- Organized a team of more than 40 people from Southern University of Science and Technology to conduct a 14-day volunteer teaching activity in the Middle School of Dahu Town, Lianping County, Heyuan City, Guangdong Province. The activity went smoothly and was highly praised by the school, local students, parents and participating students.

SKILLS, CERTIFICATIONS & OTHERS

- **Skills:** Cadence Virtuoso, Altium Designer, Python, Verilog, Visio, AutoCAD, COMSOL, Java, Linux, etc.
- **Languages:** English (CET-4 590, CET-6 526, & TOEFL iBT 102) and Chinese (Mandarin & Cantonese)
- **GRE:** 323 (Verbal 153 + Quantitative 170)