



**Chih-Cheng Hsieh** received the B.S., M.S., and Ph.D. degrees from the Department of Electronics Engineering, National Chiao-Tung University, Hsinchu, Taiwan, in 1990, 1991, and 1997, respectively.

In 2007, he joined the Department of Electrical Engineering, National Tsing-Hua University, Hsinchu, Taiwan, where he is currently an Associate Professor. From 1999 to 2007, he was with an IC design house, the Pixart Imaging Inc., Taiwan, and involved in the development of CMOS image sensor ICs for PC, consumer, and mobile phone applications. He led the Mixed-Mode IC Department as a Senior Manager and helped the company to successfully become an IPO in 2007. He has proposed many inventions to improve the function and quality of CMOS image sensor ICs and has been granted 14 U.S. patents and 23 R.O.C. (Taiwan) patents. His research interests include low-voltage low-power CMOS image sensor IC, ADC, and mixed-mode IC development for IoT, biomedical, space, robot, and customized applications.

#### **EDUCATION**

1991-1997	Ph.D. Electronics Engineering, National Chiao-Tung University, Hsinchu, Taiwan <b>Thesis:</b> "The design and analysis of new cryogenic CMOS current readout integrated circuits for infrared detector arrays and their image applications on thermal systems." <b>Advisor:</b> Prof. Chung-Yu (Peter) Wu
1990-1991	M.S., Electronics Engineering, National Chiao-Tung University, Hsinchu, Taiwan
1986-1990	B.S., Electronics Engineering, National Chiao-Tung University, Hsinchu, Taiwan

#### **EMPLOYMENT EXPERIENCES**

2017 ~	Full Professor / Department of Electrical Engineering / National Tsing Hua University
2013 ~ 2017	Associate Professor / Department of Electrical Engineering / National Tsing Hua University
2007 ~ 2013	Assistant Professor / Department of Electrical Engineering / National Tsing Hua University
1999 ~ 2007	PixArt Imaging Inc.

#### **RESEARCH INTERESTS**

1. CMOS imaging sensor IC: Low noise, Low power, High sensitivity, High dynamic range, and High frame rate.
2. Low-voltage SAR ADC, Hybrid-ADC, CT & DT-SDM, Hybrid I-SDM
3. Smart sensor with image application: IoT, Biomedical, Space telescope, Depth sensing, 2D (3D) Object identification & tracking, Edge detection & enhancement.
4. Analog front end (AFE) & mixed-mode IC: Serial output, Parallel output, Low noise sampling & gain stage.

#### **SERVICES**

2008~	Session Chair : VLSI Design / CAD Symposium
2008~	TPC : VLSI Design / CAD Symposium
2012~	Session Chair : Symposium on VLSI-DAT and Biology Applications
2011~	TPC : SEMBA/BioPro Symposium on Engineering Medicine
2011	Organizing committee : The Workshop on CMOS Applications in Astronomy and Space Sciences
2008~2013	National Applied Research Lab. (NARL), Chip Implementation Center (CIC), Associate researcher
2014~2016	National Program for Intelligent Electronics, Bridge Program, Co-Principal Investigator
2017~	IEEE Solid-State Circuit Letter, Guest Editor

#### **Reviewer**

IEEE JSSC, TCASI, TED, TCASH, TVLSI, IEEE Sensors, IEEE VLSI Symposia, IEEE ISCAS, Integration the VLSI journal, Analog IC and Signal Processing.