國立清華大學第十一屆傑出產學研究獎得獎人簡介

電機工程學系 謝志成教授

謝教授的研究內容主要為【影像感測器之應用單晶片與讀出電路設計】以及【低壓低功耗之類比數位轉換器與調變器開發】兩個領域，各自的研發成果目前皆保持世界領先的地位。2007 年成立訊號感測與應用實驗室(Signal Sensing and Applications Lab (SiSAL))，為國際知名專研低壓低功耗類比電路設計實驗室。因應智慧感測的技術發展與人工智慧世代來臨，影像應用市場蓬勃發展，國內相關產業需求若渴。近五年受邀參與產學計畫，合作對象包括台積電、聯發科技、神盾科技、聯詠科技、敦泰電子、益華科技、奕景科技、映智科技等公司以及工研院。幫助產業界建立影像感測技術與架構，突破現有產品瓶頸並提高產業效益。

謝教授因低功耗高效能類比數位轉換器與智慧感測器雙領域之傑出研究結果，為國內唯一學者受邀三次 (2018 & 2019 & 2024) 到 IC 設計全球旗艦會議 (Top#1) ISSCC 給予 Forum talk。近五年共發表高影響因子國際期刊論文 18 篇(包括 1 篇 Science, 1 篇 Nature, 15 篇 JSSC)、國際會議論文 28 篇(16 篇 ISSCC、2 篇 VLSI Symposia、3 篇 A-SSCC、2 篇 ISCAS)、國內會議論文 10 篇與專利獲證 8 件、專利申請 2 件。獲得科技部特優計畫獎、國家新創獎(4 次)、旺宏金矽獎(3 次)、國研院 TSRI 設計獎(6 次)、科技部傑出研究獎 (2019)、中國工程師學會傑出電機工程教授獎 (2020)、產學合作績效獎(2023)、清華－台達傑出人才講座教授(2024)等殊榮。

Professor Hsieh's research primarily focuses on two areas: "Monolithic Image Sensor Applications and Readout Circuit Design" and "Development of Low-Voltage, Low-Power Analog-to-Digital Converters (ADC) and Modulators." His achievements in both fields are currently at the forefront of global innovation. In 2007, he established the Signal Sensing and Applications Lab (SiSAL), which has since become an internationally renowned laboratory specializing in low-voltage, low-power analog circuit design.

In response to advancements in smart sensing technologies and the rise of the artificial intelligence era, the image application market is flourishing, with domestic industries in high demand. Over the past five years, Professor Hsieh has been invited to participate in academia-industry collaboration projects, working with companies such as TSMC, MediaTek, Egis Technology, Novatek, FocalTech, Elan Microelectronics, iCatch Technology, VistaPeak, and Etron Technology, as well as the Industrial Technology Research Institute (ITRI). His contributions have helped the industry establish imaging sensor technology and architectures, overcoming product bottlenecks and enhancing industrial efficiency.

Due to his outstanding research in low-power, high-performance ADCs and smart sensors, Professor Hsieh is the only scholar in Taiwan to be invited three times (2018, 2019, and 2024) to deliver a forum talk at the world's leading IC design conference, ISSCC. In the past five years, he has published 18 high-impact international journal papers (including 1 in Science, 1 in Nature, and 15 in JSSC), 28 international conference papers (16 at ISSCC, 2 at VLSI Symposia, 3 at A-SSCC, and 2 at ISCAS), 10 domestic conference papers, and has been granted 8 patents with 2 more patent applications in progress.

Professor Hsieh has been honored with numerous awards, including the Ministry of Science and Technology's Outstanding Project Award, the National Innovation Award (4 times), the Macronix Golden Silicon Award (3 times), the National Applied Research Laboratories' TSRI Design Award (6 times), the Ministry of Science and Technology's Outstanding Research Award (2019), the Chinese Institute of Engineers' Outstanding Electrical Engineering Professor Award (2020), the Industry-Academia Collaboration Excellence Award (2023), and the Tsing Hua-Delta Distinguished Chair Professor Award (2024).