

國立清華大學第十屆傑出產學研究獎得獎人簡介



資訊工程學系 黃能富特聘教授

現任國立清華大學資訊工程學系特聘教授。黃教授曾擔任國立清華大學電機資訊學院院長 (2016/8/1-2022/7/31)，國立清華大學資訊工程系系主任，電腦與通訊科技研究中心主任，中央研究院資訊科技創新研究中心合聘研究員，力旺電子學術講座。

黃教授為威播科技(資安公司)創辦人(2013 趨勢科技(國際知名資安企業併購)、磨課師平台學聯網 ShareCourse (www.sharecourse.net) 創辦人(思銳科技併購)、學力科技 (人工智慧學力分析服務平台) 創辦人。

黃教授曾擔任國科會多項大型(整合型)計畫總主持人，包含“CPS 物聯網智慧農業研究計畫”主持人、國科會“LPWAN 物聯網網路技術與應用產學小聯盟計畫”主持人、國科會“基于人工智能發展多元國家考試類型與評測工具之研製計畫”主持人。

黃教授之研究專注于 AIoT/5G 物聯網技術與應用、智慧農業、區塊鏈破權服務平台之開發、LPWAN 長距離低功耗無線傳輸網路、人工智慧學習大數據分析、網路安全等等。黃教授共發表國際著名期刊論文與國際會議論文 **250 餘篇** (包含 IEEE INFOCOM/ICC/GLOBECOM 旗艦型國際會議論文 50 篇)，已申請及獲得之發明專利超過 **60 件** (美國專利 18 件)。黃教授曾獲得國科會甲等研究獎十二次、優等研究獎一次、國科會「研究計劃第一級主持人獎助」、國科會特殊優秀人才獎勵(2010-2023)、國立清華大學「傑出教學教師獎」三次、國立清華大學「傑出產學研究獎」兩次、中華民國資訊月傑出資訊人才獎、教育部大學暨獨立學院教學特優獎、教育部「大學教師與產業界合作研發績效卓越獎」、教育部「磨課師標竿課程獎」(2018)、教育部「教學實踐計畫—亮點計畫獎」(2019)、國科會資訊工程學門「年度優良計畫執行成果獎」(2022)、國立清華大學「社會

實踐優良教師獎」(2022)、教育部「教學實踐計畫—績優計畫獎」(2023)、<遠見>USR 大學社會責任獎--楷模獎 (2023)、潘文淵文教基金會「物聯網創新應用獎」(2023)、國立清華大學「傑出產學研究獎」(2023)。黃教授現為國際電機電子工程師協會資深會員 (Senior member of IEEE) 以及英國計算機學會會士 Fellow of BCS (British Computer Society)。

黃教授積極協助提升國內智慧農業的發展，建立 5G/AIoT 人工智慧物聯網關鍵技術與具體落地，協助數十個農場建置導入 AIoT 智慧科技，提升產值與外銷營收，獲得多項獎項、多項專利、以及提升國際競爭力。黃教授近五年專利 32 件，產學合作 32 件，智慧農業產學合作成效豐碩。

Nen-Fu (Fred) Huang received the Ph.D. degree in computer science from National Tsing Hua University (NTHU), Taiwan, in 1986. Since 2008, he is a Distinguished Professor of NTHU. He was the Dean of College of Electrical Engineering and Computer Science, NTHU, during 2016/8-2022/7. From 1997-2000, he was the Chairman of Department of Computer Science, NTHU and From 2015-2016, he was the director of Computer and Communication Research Center (CCRC) of NTHU. His current research interests include AIoT technologies and applications, Smart Agriculture, Agriculture Digital Twins, Blockchain based Food traceability, AI-based crops grading/classification technologies, LPWAN (LoRaWAN/NB-IoT) transmission technologies and applications, AI-based Data Analysis for Digital Learning, and network security.

He received the Outstanding Teaching Award from the NTHU in 1993, 1998, and 2008, the Outstanding University/Industrial Collaboration Award from Ministry of Education, Taiwan in 1998, and Outstanding IT people Award from ITmonth, ROC in 2002. He received the Technology Transfer Award from National Science Council (NSC) of Taiwan in 2004. He received the Technology Creative Award from Computer and Communication Research Center (CCRC), NTHU in 2005, and the Outstanding University/Industrial Collaboration Award from the NTHU in 2010 and 2023. He is the founder of Broadweb Corp., (www.broadweb.com) and from 2002 to 2006, he served as the CEO/Chairman of Broadweb, which was acquired by TrendMicro, an international security company, in 2013. He is also the founder of ShareCourse, an AI-based digital learning platform (www.sharecourse.net), which provides digital courses including IoT, AI, Big Data Analysis, FinTech, Robot related courses. Dr. Huang has published more than 250 journal and conference papers, including more than 50 papers in IEEE INFOCOM/ICC/GLOBECOM flag-ship conferences. Dr. Huang also has granted/pending near 60 patents, including 18 US patents. He is a Fellow of the BCS (British Computer Society) and a senior member of the IEEE.

Dr. Huang apply 5G/AIoT technologies into the smart agriculture field and help more than 40 farms in Taiwan to establish AIoT-based smart farms. For the past five years, he executed 32 agriculture related industrial collaboration projects.

Prof. Lee's research focuses on multimodal machine intelligence for human-centered processing" with signal processing and machine learning as its core components. His research interests include speech processing, affective computing, and health analytics. He has published over 170 papers, accumulated over 6400 citations. Prof Lee has received 5 times conference best paper awards and has won the ComparE Challenge, an international competition, twice. He is one of the few researchers in Taiwan leading interdisciplinary research teams.

Prof. Lee is actively engaged internationally, having led 28 industry-academic cooperation projects in the past five years, including collaborations with top companies both domestically and abroad, such as Johnson & Johnson, Qualcomm, C-media, Allianz President Life Insurance, E.SUN Commercial Bank, and TransGlobe Life Insurance. He has developed three patents in partnership with National Taiwan University Hospital and the University of Pittsburgh School of Medicine. Additionally, he jointly established a large multilingual speech database with the University of Texas at Austin's MSP Lab, expanding his research endeavor across the globe.

Prof. Lee is involved in international academic service. He currently serves as an associate editor for top journal such as IEEE Transactions on Affective Computing and Journal of Computer Speech and Language. He has also been an organization committee member for top conferences such as ICASSP, INTERSPEECH, and ICMI. Prof. Lee has is hosting the IEEE Workshop on Automatic Speech Recognition and Understanding (ASRU) 2023 in Taiwan, further enhancing Taiwan's international visibility in the field of speech AI.

He is currently an IEEE Senior Member and has received numerous awards, including the 8th the Foundation of Outstanding Scholar's Young Innovator Award, the IICM K. T. Li Young Researcher Award (2020), the CIEE Outstanding Young Electrical Engineer Award (2020), the NTHU Industry Collaboration Excellence Award (2021, 2023), the Outstanding Industry-Academia Research Award (2023), the MOST Futuretek Breakthrough Award (2018, 2019), and the Merry Electroacoustics Thesis Award (2019, 2021), among others. His efforts have been widely recognized.