Stanford

Hugo Chen

Ph.D. Student in Electrical Engineering, admitted Autumn 2022

Bio

BIO

Hugo "Jiun-Yu" Chen is currently pursuing his Ph.D. degree in the Department of Electrical Engineering at Stanford University. He earned his M.S. in Photonics and Optoelectronics from National Taiwan University in 2019 and his B.S. in Materials Science and Engineering from National Dong Hwa University in 2017.

Prior to joining Stanford, Hugo worked as an R&D engineer at Taiwan Semiconductor Manufacturing Company (TSMC) in the High Power Program and Analog Power/RF Specialty Technology from 2019 to 2022. His research experience includes investigating GaN high electron mobility transistors (HEMTs) for high power converter applications, oxide-based thin-film transistors (TFTs) for CMOS inverter applications, and III-V quantum dots molecular beam epitaxy (MBE) material growth.

As the first author, Hugo has published two peer-reviewed journal articles, six conference papers, and one US/KR/TW/CN/DE patent. He is currently advised by Professors H.-S. Philip Wong and Kwabena Boahen, and his research focuses on developing ferroelectric field-effect transistors (FeFETs) for dendritic-centric learning.

In his leisure time, Hugo enjoys biking, playing badminton, and watching dramas.

EDUCATION AND CERTIFICATIONS

- M.S., National Taiwan University , Photonics & Optoelectronics (2019)
- B.S., National Dong Hwa University , Materials Science & Engineering (2017)

PATENTS

- Jiun-Yu Chen. "United States Patent US20220375875A1 Crack stop ring trench to prevent epitaxy crack propagation", Taiwan Semiconductor Manufacturing Co, Nov 24, 2022

Professional

WORK EXPERIENCE

- R&D Engineer - Taiwan Semiconductor Manufacturing Company (10/21/2019 - 9/1/2022)

Publications

PUBLICATIONS

- **Multi-gate FeFET Discriminates Spatiotemporal Pulse Sequences for Dendrocentric Learning** *2023 International Electron Devices Meeting (IEDM)*
  Chen, H., Beauchamp, M., Toprasertpong, K., Huang, F., Le Coeur, L., Nemec, T., Boahen, K.
  2023: pp. 1-4

- **Effects of substrate pre-nitridation and post-nitridation processes on InN quantum dots with crystallinity by droplet epitaxy** *SURFACE & COATINGS TECHNOLOGY*

  Chen, H., Su, Y., Yang, D., Huang, T., Yu, I.

  2017; 324: 491-497

- **Formation and Temperature Effect of InN Nanodots by PA-MBE via Droplet Epitaxy Technique** *NANOSCALE RESEARCH LETTERS*

  Chen, H., Yang, D., Huang, T., Yu, I.

  2016; 11: 241