陳瓊安
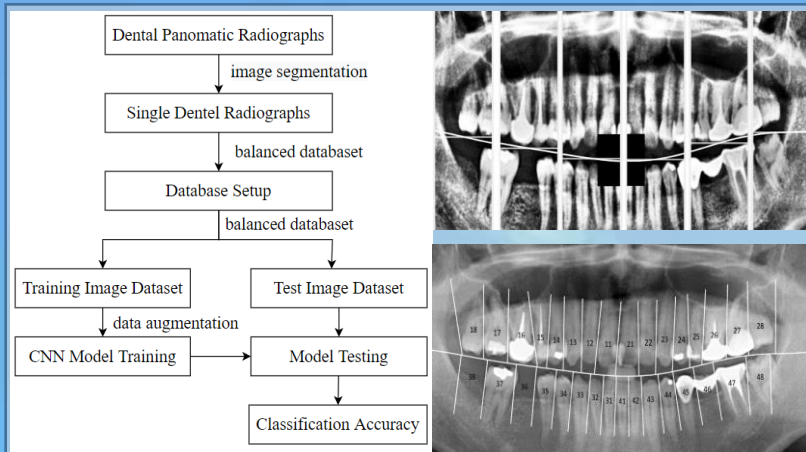
Position：Associate Professor

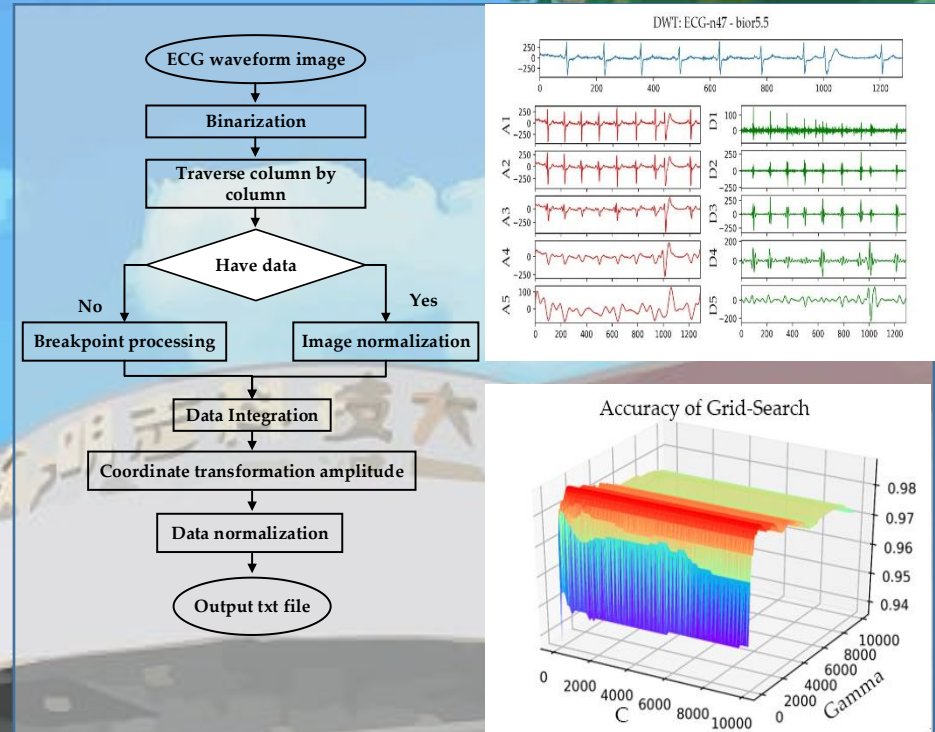Phone：+886-2-2908-9899 Ext.4813

E-Mail：joannechen@mail.mcut.edu.tw

Education ：Ph.D., National Cheng Kung University.

Research ：Digital Integrated Circuit Design, System on a Chip, Biomedical Circuit System, Data Compression.

	This work			Lin et al. [33]	Çelik et al [34]	Park et al. [15].
	Google Net	Squeeze Net	Alex Net			
Missing teeth	97.20%	92.90%	92.90%	96.18%	NA	59.09%
Restoration	99.00%	99.90%	97.10%	84.30%	97.10% highest	NA
Accuracy	97.10%	96.20%	95.20%	90.24%	92.24%	59.09%

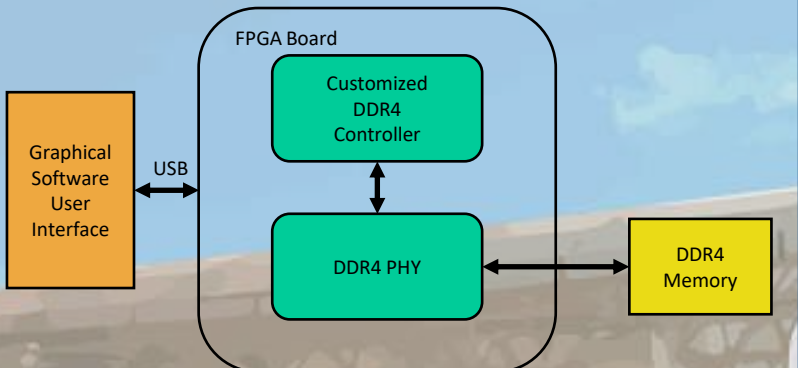**Biomedical Circuit and System**
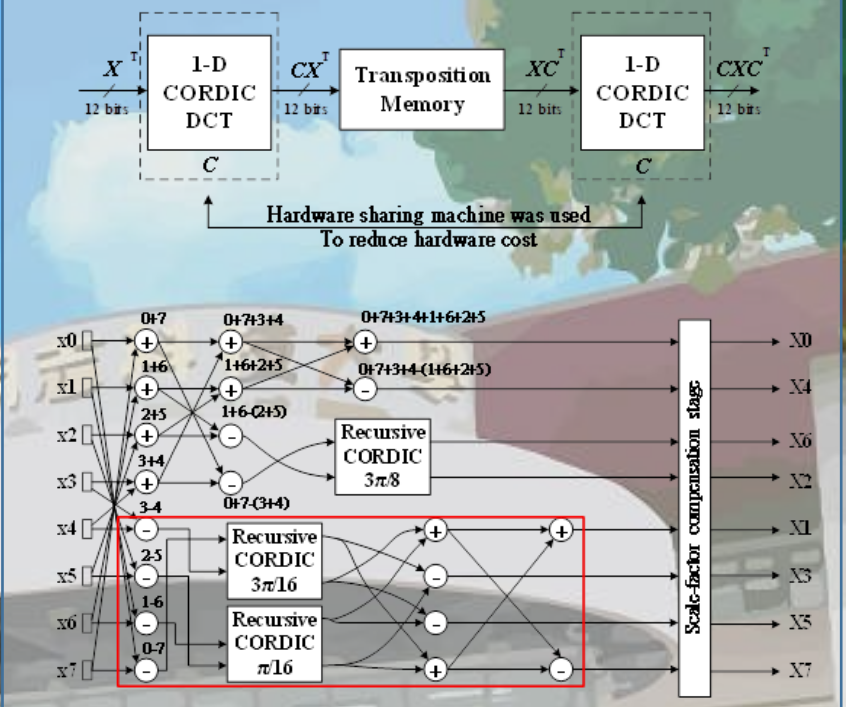

ECG Diagnosis and Prediction

Journal Papers:

1. Yueh Chuo, Wen-Ming Lin, Tsung-Yi Chen, Mei-Ling Chan*, Yu-Sung Chang, Yan-Ru Lin, Yuan-Jin Lin, Yu-Han Shao, **Chiung-An Chen***, Shih-Lun Chen* and Patricia Angela R. Abu, "A high-accuracy detection system: based on transfer learning for apical lesions on periapical radiograph," bioengineering, vol. 9, no. 12, pp. 1-16, Dec. 2022. (SCI, Impact Factor =5.046) (31/98 Q2) (ISSN: 2306-5354)

2. Shih-Lun Chen, Tsung-Yi Chen, Yen-Cheng Huang, **Chiung-An Chen***, He-Sheng Chou, Ya-Yun Huang, Wei-Chi Lin, Tzu-Chien Li, Jia-Jun Yuan, Patricia Angela R. Abu and Wei-Yuan Chiang, "Missing teeth and restoration detection using dental panoramic radiography based on transfer learning with CNNs," *IEEE Access*, vol. 10, pp. 118654 - 118664, Nov. 2022. (SCI, Impact Factor =3.476) (104/344 Q2) (ISSN: 2169-3536)

3. Shih-Lun Chen, Tsung-Yi Chen, Yi-Cheng Mao, Szu-Yin Lin*, Ya-Yun Huang, **Chiung-An Chen**, Yuan-Jin Lin, Yo-Ming Hsu, Chi-An Li, Wei-Yuan Chiang, Kai-Yi Wong and Patricia Angela R. Abu, "Automated detection system based on convolution neural networks for retained root, endodontic treated teeth, and implant recognition on dental panoramic images," IEEE Sensors Journal, vol. 22, no. 23, pp. 23293-23306, Dec. 2022. (SCI, Impact Factor =4.325) (14/76 Q1) (ISSN: 1530-437X)

4. Shih-Lun Chen, Tsung-Yi Chen, Ting-Lan Lin*, **Chiung-An Chen***, Szu-Yin Lin, Yu-Liang Chiang, Kun-Hsien Tung and Wei-Yuan Chiang*, "Fast control for backlight power-saving algorithm using motion vectors from the decoded video stream," *sensors*, vol. 22, no. 19, pp. 1-15, Sep. 2022. (SCI, Impact Factor=3.847)(16/76 Q1) (ISSN: 1424-8220)

5. Chih-Kai Liu, Wei-Yuan Chiang*, Pei-Zong Rao, Pei-Hsiu Hung, Shih-Hung Chen, **Chiung-An Chen***, Liang-Hung Wang, Patricia A.R. Abu, and Shih-Lun Chen*, "The Uses of a Dual-Band Corrugated Circularly Polarized Horn Antenna for 5G Systems" *Micromachines*, vol. 13, no. 2, pp.1-18, Feb. 2022. (SCI, Impact Factor=2.891) (23/64)(EISSN: 2072-666X)

6. Yen-Cheng Huang, **Chiung-An Chen***, Tsung-Yi Chen, He-Sheng Chou, Wei-Chi Lin, Tzu-Chien Li, Jia-Jun Yuan, Szu-Yin Lin*, Chun-Wei Li, Shih-Lun Chen*, Yi-Cheng Mao, Patricia Angela R. Abu, Wei-Yuan Chiang and Wen-Shen Lo, " Tooth position determination by automatic cutting and marking of dental panoramic X-ray film in medical image processing", *Applied Sciences*, vol. 11, no. 24, pp.1-22, Dec. 2021. (SCI, Impact Factor=2.679) (38/90)(ISSN: 2076-3417)

7. Chun-Wei Li, Szu-Yin Lin*, He-Sheng Chou, Tsung-Yi Chen, Yu-An Chen, Sheng-Yu Liu, Yu-Lin Liu, **Chiung-An Chen*** , Yen-Cheng Huang, Shih-Lun Chen , Yi-Cheng Mao, Patricia Angela R. Abu, Wei-Yuan Chiang and Wen-Shen Lo, "Detection of dental apical lesions using CNNs on periapical radiograph," *Sensors*, vol. 21, no. 21, pp. 1-17, Oct. 2021. (SCI, Impact Factor=3.576)(82/273) (ISSN: 1424-8220)

8. Liang-Hung Wang, Ze-Hong Yan, Yi-Ting Yang, Jun-Ying Chen, Tao Yang, I-Chun Kuo*, Patricia Angela R. Abu, Pao-Cheng Huang*, **Chiung-An Chen*** and Shih-Lun Chen, "A classification and prediction hybrid model construction with the IQPSO-SVM Algorithm for atrial fibrillation arrhythmia," *Sensors*, vol. 21, no. 15, pp. 1-20, Aug. 2021.(SCI, Impact Factor=3.576)(82/273) (ISSN: 1424-8220)

Technical Support : Design DDR4 Controller for Portable Testing.
System Architecture : Realized DDR Controller with Physical Layer in FPGA.
Contribution : MCUTEE, Training 3 Master Students.
NANYA, Reducing Engineers Loading.

Embedded System with Digital Controller

Hardware sharing machine was used To reduce hardware cost

VLSI Design for DSP