

Dept. of Computer Science and Information Engineering, National Chiayi University

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Computer Science and Information Engineering

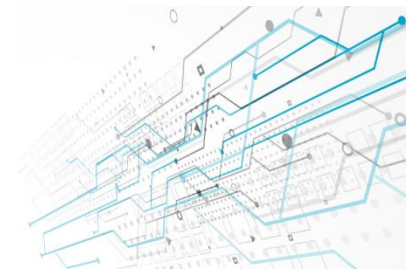


- faculty members: 16
 - Professor: 8
 - Associate Professor: 4
 - Assistant Professor: 4
- students: XXX
 - under: 4
 - master: 28
 - Ph.D.: 7

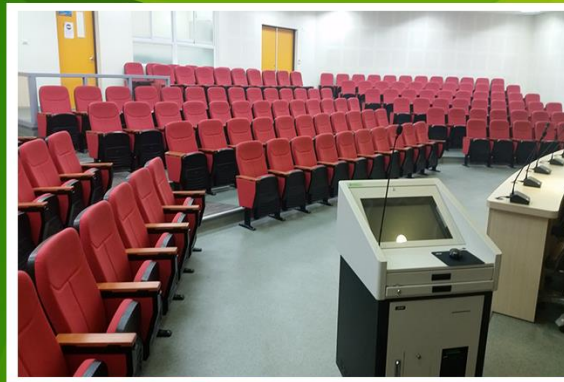




Facility



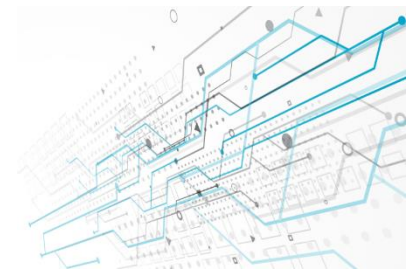
- 15 academic laboratories
- One auditorium



全新理工大樓
教學研究空間充足
三間 公共實驗室
十五間 專業領域實驗室



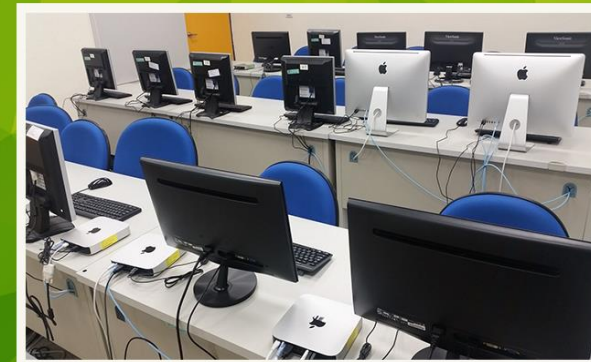
Facility



- 3 specific laboratories
 - Win PC
 - Apple Mac
 - Electronic



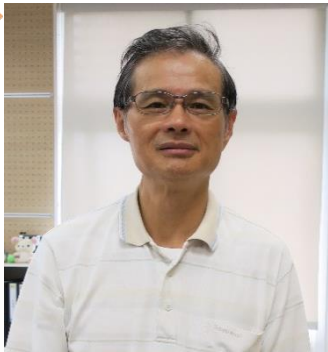
教學空間寬廣
器材設備新穎
軟硬資源完整





Three Major Research Areas

- Knowledge Engineering & Software Engineering
- Interactive Multimedia
- Computer & Information Security

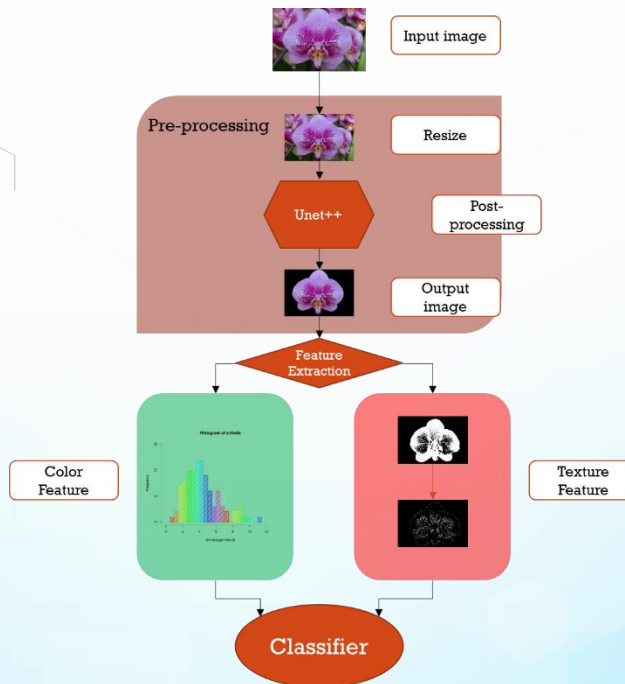
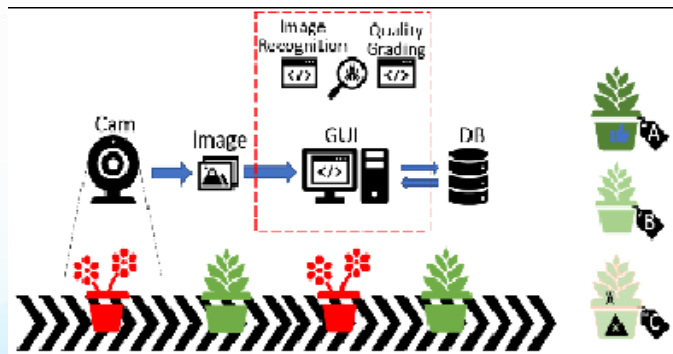
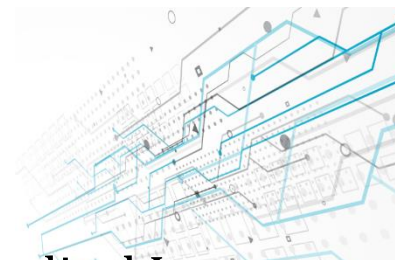


柯建全 教授 Professor

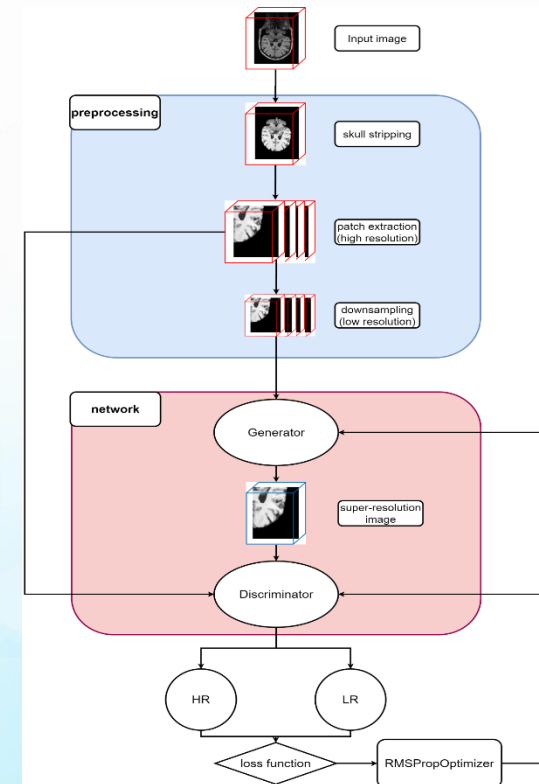
Chien-Chuan Ko, Ph.D.

Research Interests: Computer Vision, Medical Image Processing, Deep Learning, Smart Agriculture

Tel: +886-5-2717732, E-mail: kocc@mail.ncyu.edu.tw



Orchid Variety Classification System

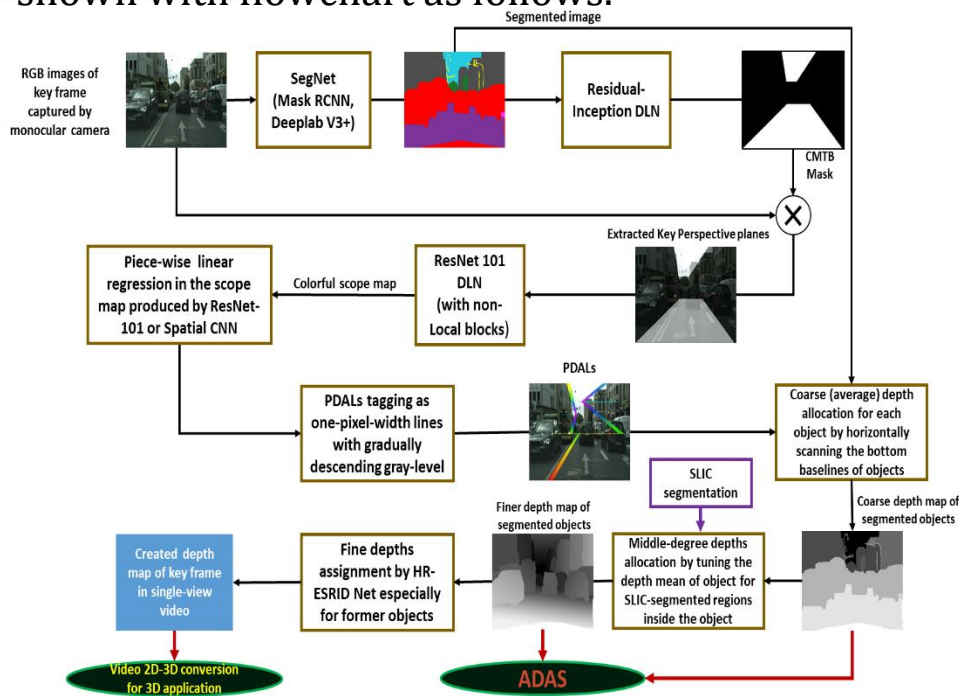


Enhanced Super-Resolution Generative Adversarial Networks for 3D brain MRI image

A Quality Grading System of Pot-Phalaenopsis Orchid using Non-destructive Inspection



Din-Yuen Chan received the Ph.D degree in Electrical Engineering from the National Cheng Kung University, Taiwan, ROC at 1996. He is the **Visual Signal Processing and Communication Technical comment (VSPC TC) member** from 2010 and the founding director of Electrical Engineering department from 2007 to 2011. Also, he had ever been the dean of College of Science and Engineering, National Chiayi University from 2017 to 2020. His research interests include computer vision, object detection, video processing, pattern recognition, stereoscopic 3D and deep learning neural networks. His current MOST plan is “**Monocular Video Depth Generation Networks Based on Consolidated-Conformation Deep Learning for Autonomous Drive**” shown with flowchart as follows.



Nowadays, he will go to **Research Center for Information Technology Innovation of Academia Sinica, Taiwan**, dedicated himself to the investigation of novel rethinking and fundamental for achieving the robust tiny deep-learning neural networks in edge-computing applications.



陳宗和 嘉義大學資訊工程學系 專任教授

Tzung-Her Chen

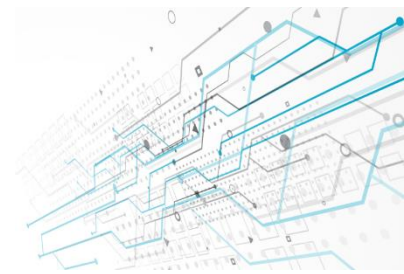
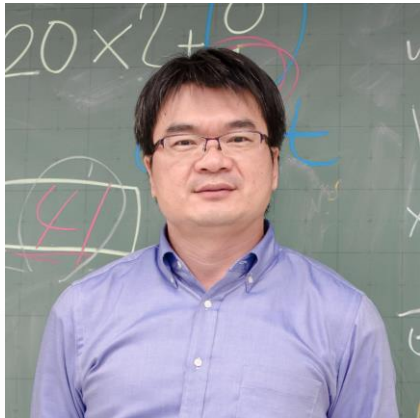
Professor

Department of Computer Science and Information

Engineering

National Chiayi University

E-mail: thchen@mail.ncyu.edu.tw



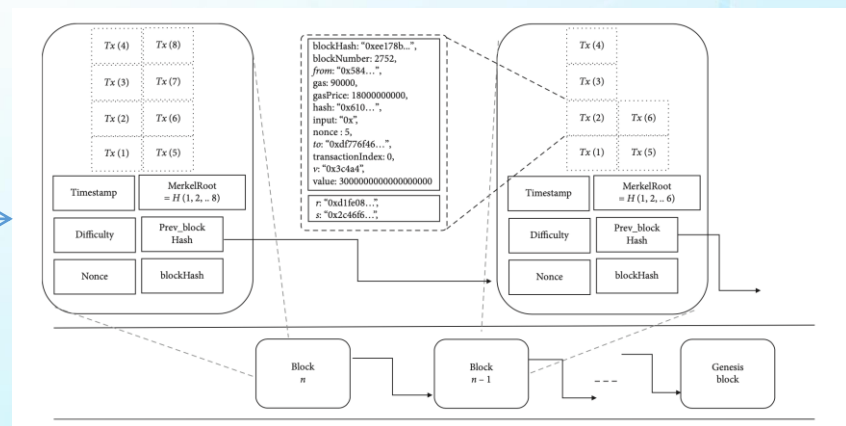
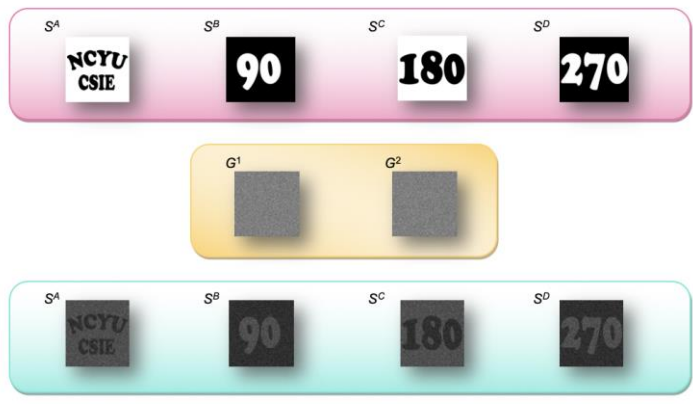
Research interest :

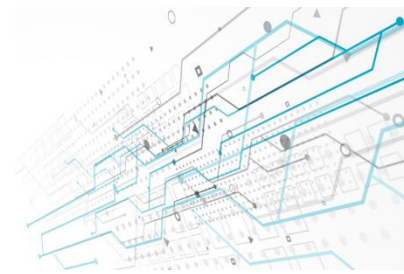
Multimedia Security

Visual Cryptography

Cryptographic Key Management

Blockchain Technology





洪燕竹 教授 Professor **Yen-Chu Hung**, PhD.

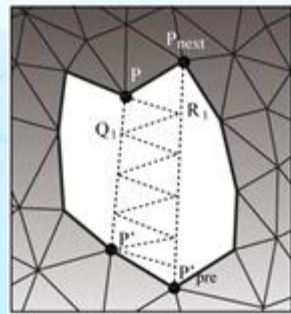
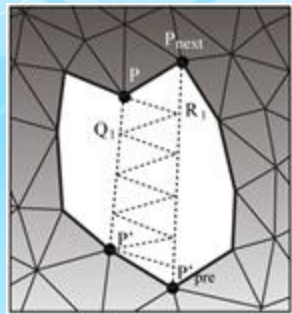
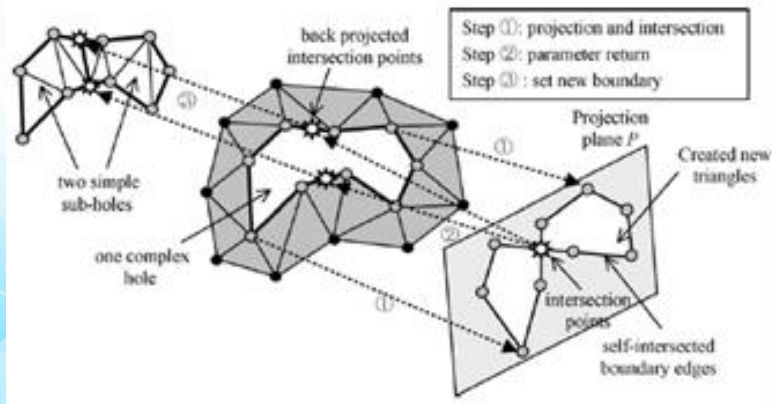
Research Area:

E-learning, AI (Artificial Intelligence Applications), Computer teaching.

Tel: 05-2717728

Email : andrew@mail.ncyu.edu.tw

Hole Filling Algorithm AI Prediction Method



Computer teaching

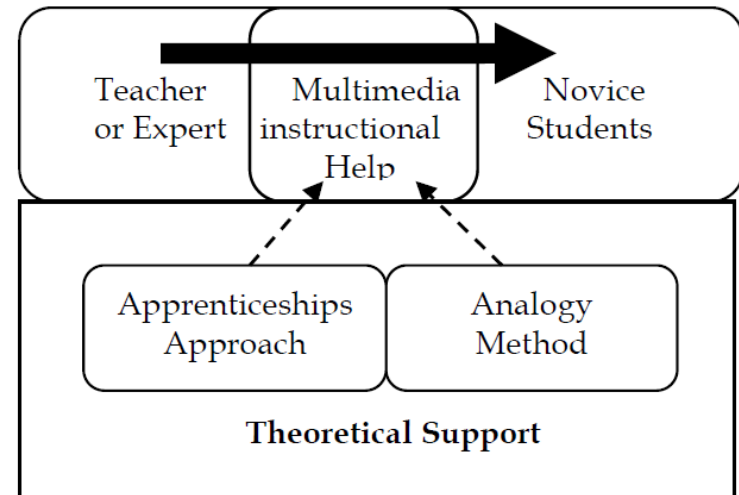


Fig.1

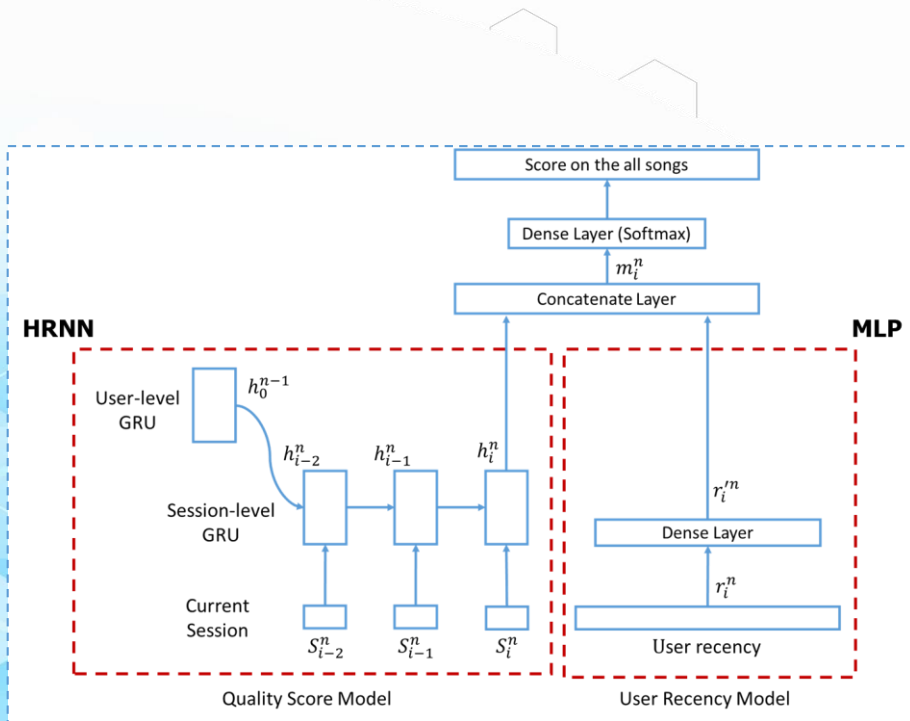
The Question of Learning in Assembly Language programming



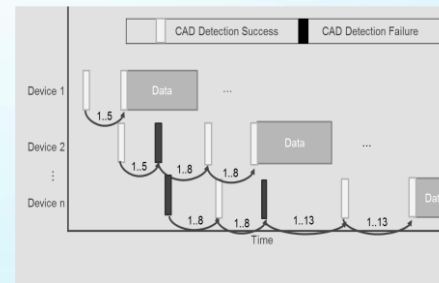
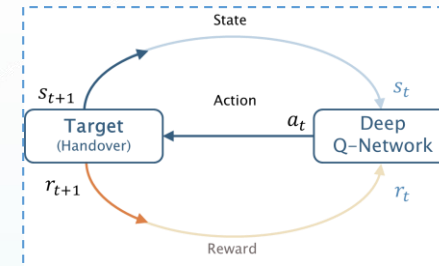
許政穆 教授 Professor **Jenq-Muh Hsu**, PhD.
Research Area: Networking Application Services,
 Recommendation System,
 Tel: 05-2717742, Email : hsujm@mail.ncyu.edu.tw



Development in Networking and Application Service development :
 Apps Developments, Recommendation System, and Network Communication



Musical Recommendation System



Resource Allocation Of Networking



Web/App Development

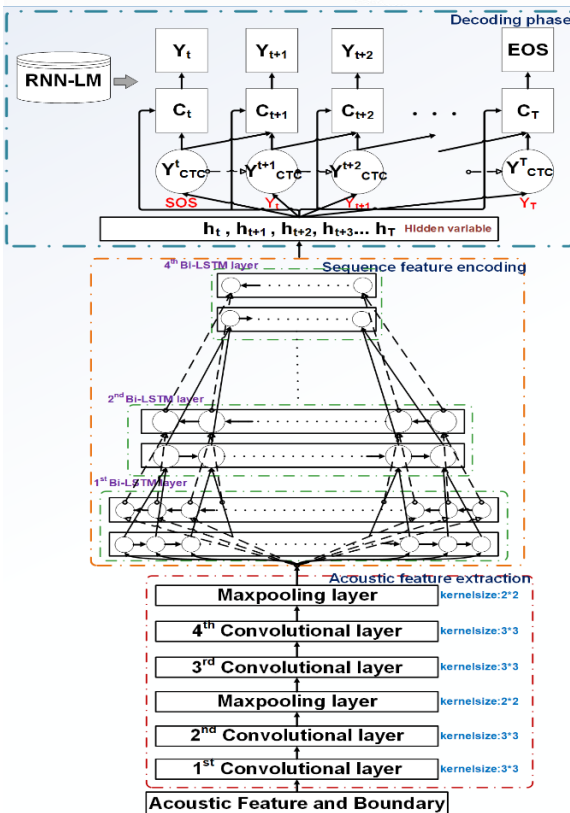


葉瑞峰 教授 Professor **Jui-Feng Yeh, PhD.**

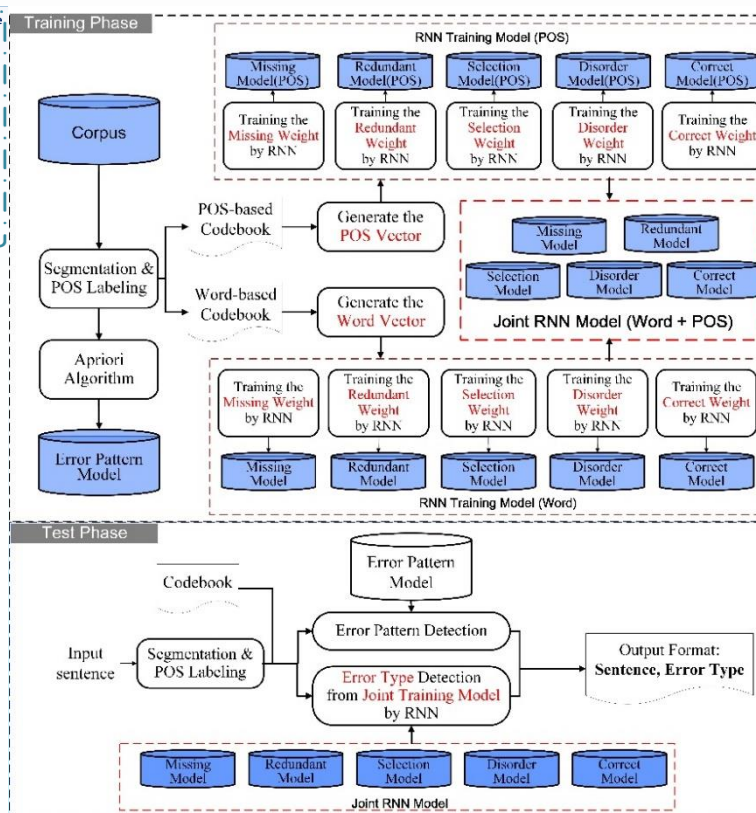
Research Area: Speech communication, Affective computing, Social computing

Tel: 05-2717709, Email : ralph@mail.ncyu.edu.tw

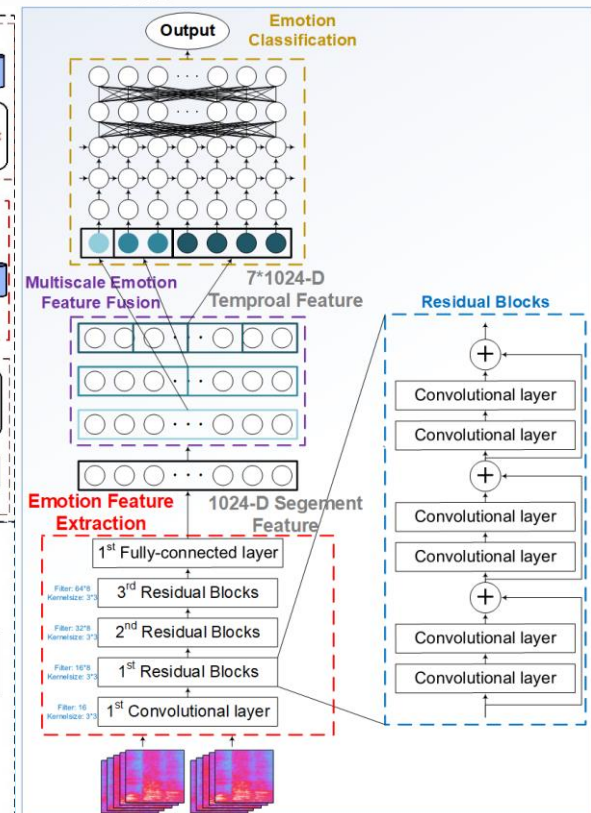
Development in speech communication and affective computing application :
Emotion Recognition, Image Caption Generation



Speech recognition



Mandarin Grammar detection



Emotion recognition

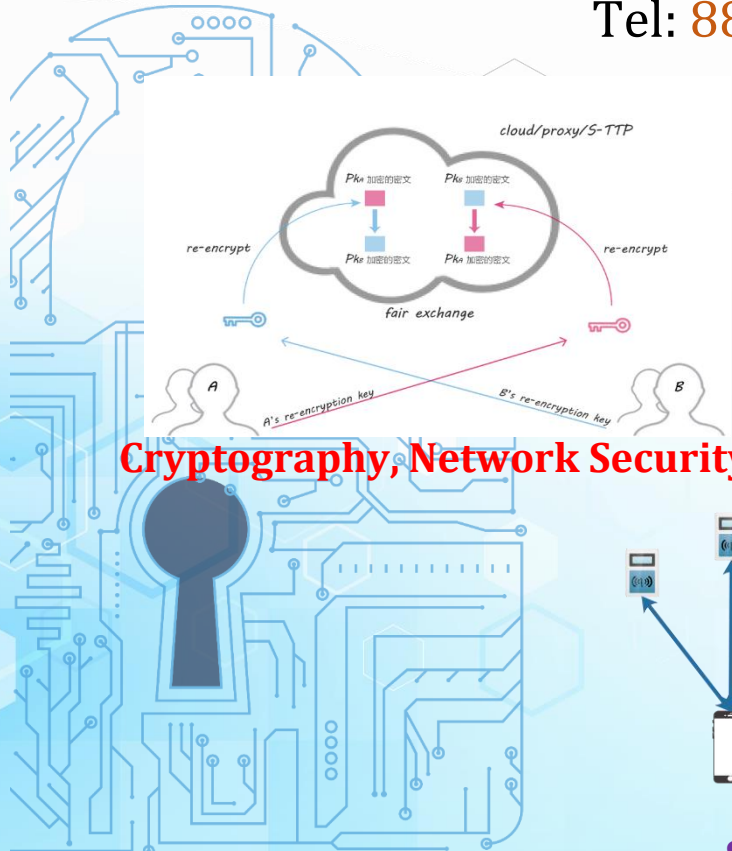


王智弘 教授 Professor

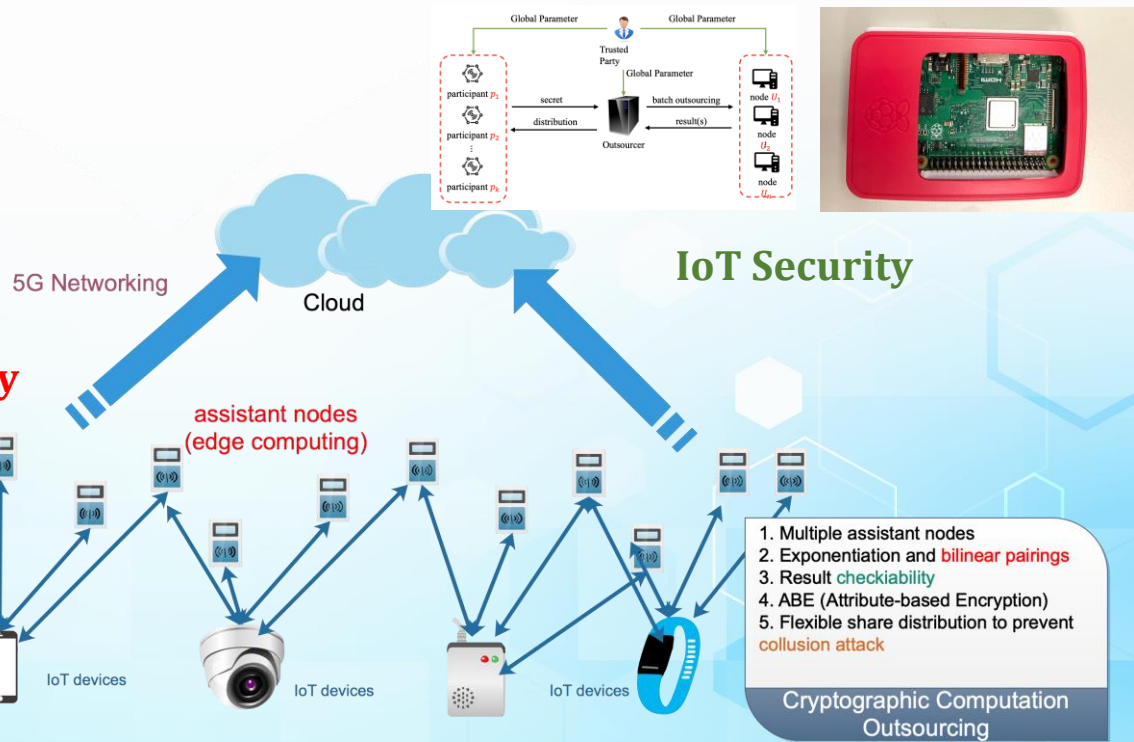
Chih-Hung Wang, Ph.D

Research Area: Cryptography, Network Security, Intrusion Detection and Defense, **IoT Security**, **AI for Cyber Security**, Intelligent Cryptographic Computation, **Web Application Security**, Cloud Computing Security

Tel: 886-271-7736, E-mail: wangch@mail.ncyu.edu.tw



Cryptography, Network Security



IoT Security

1. Multiple assistant nodes
 2. Exponentiation and **bilinear pairings**
 3. Result **checkability**
 4. ABE (Attribute-based Encryption)
 5. Flexible share distribution to prevent **collusion attack**
- Cryptographic Computation Outsourcing

Secure Cryptographic Computation Outsourcing



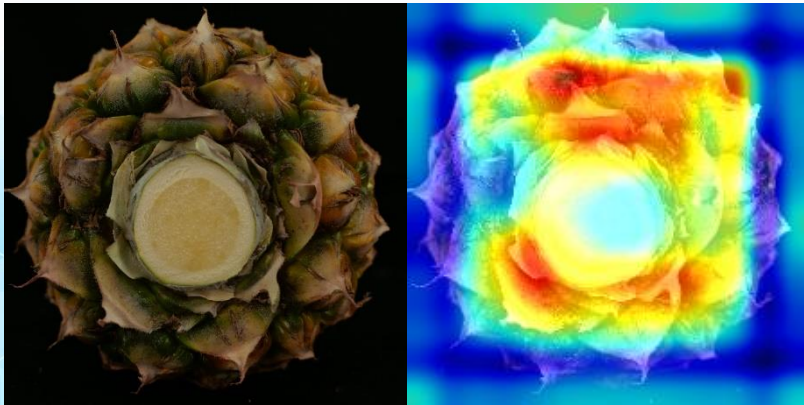
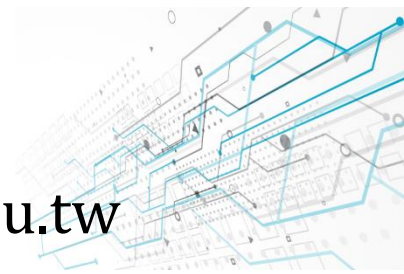
Prof. Chih-Yi Chiu (邱志義)

Tel: 886-271-7228

E-mail: cychiu@mail.ncyu.edu.tw

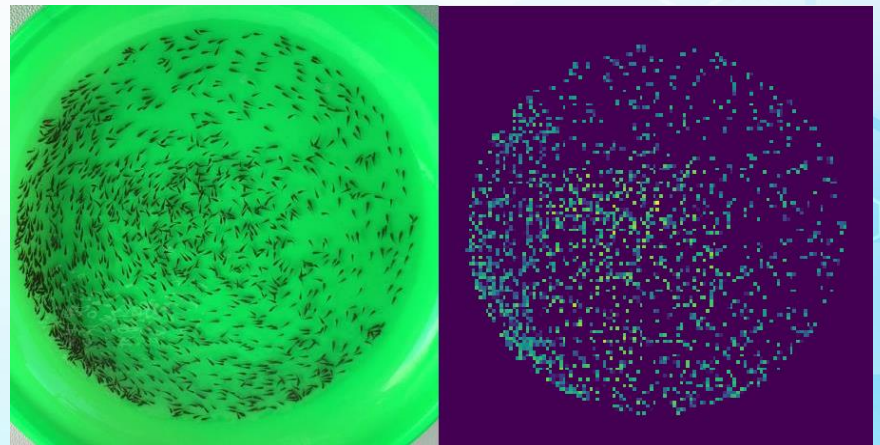
Research Area:

Information Retrieval
Multimedia Indexing
Data Mining
Intelligent Agriculture



Fruit (pineapple)
quality recognition

Tiny object (fry)
counting



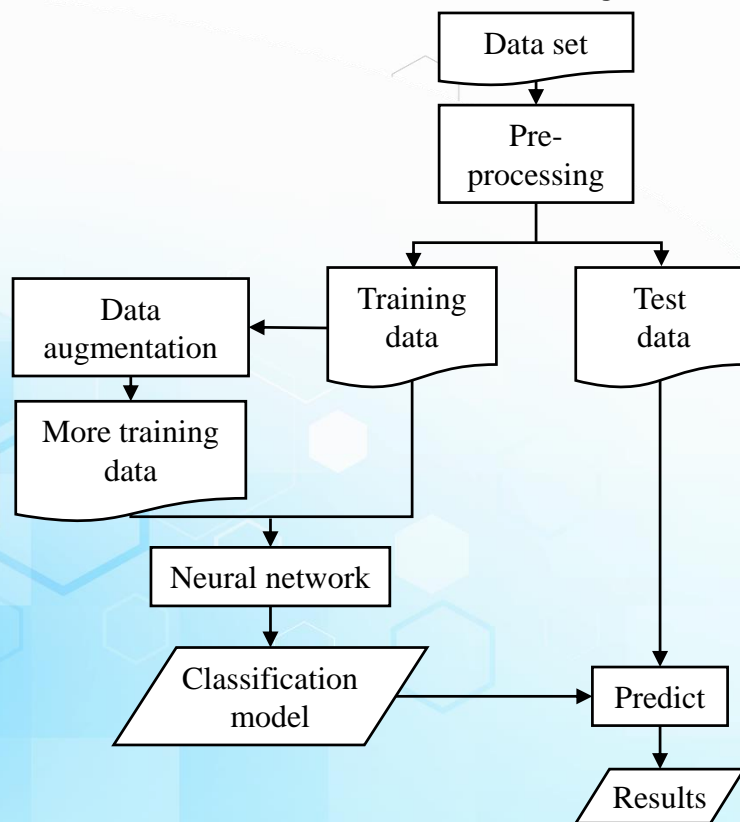
陳耀輝 副教授 Associate Professor

Yaw-Huei Chen, Ph.D.

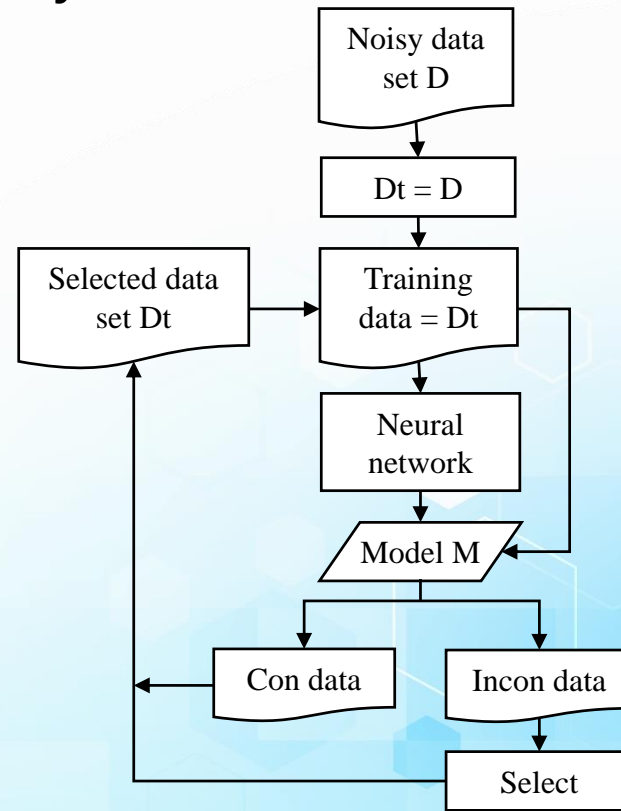
Research Interests: Natural Language Processing,
Machine Learning, Data Bases

Tel: 886-271-7737

E-mail: ychen@mail.ncyu.edu.tw



Data Augmentation



Instance Selection

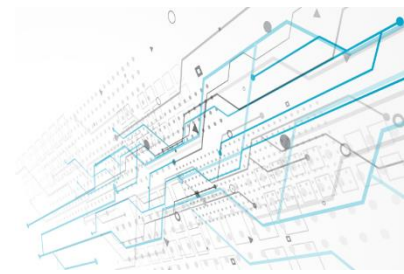


賴泳伶 副教授 Associate Professor

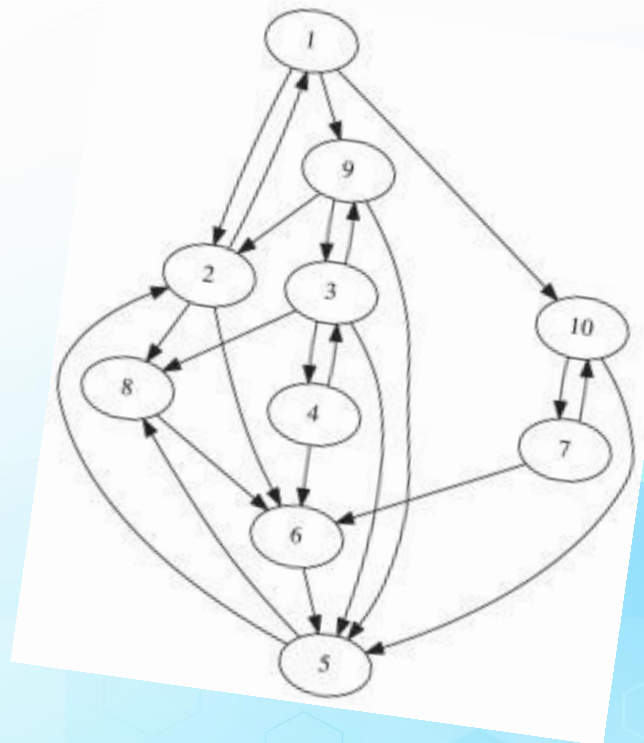
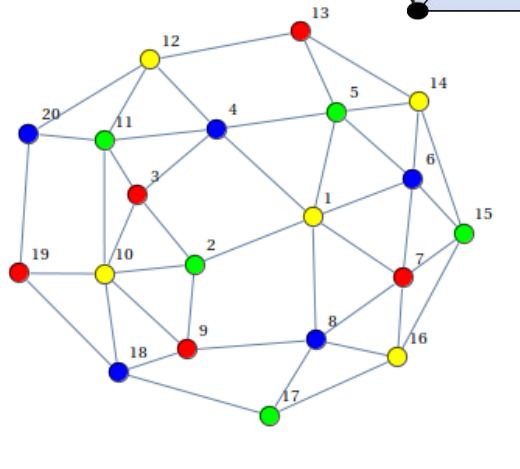
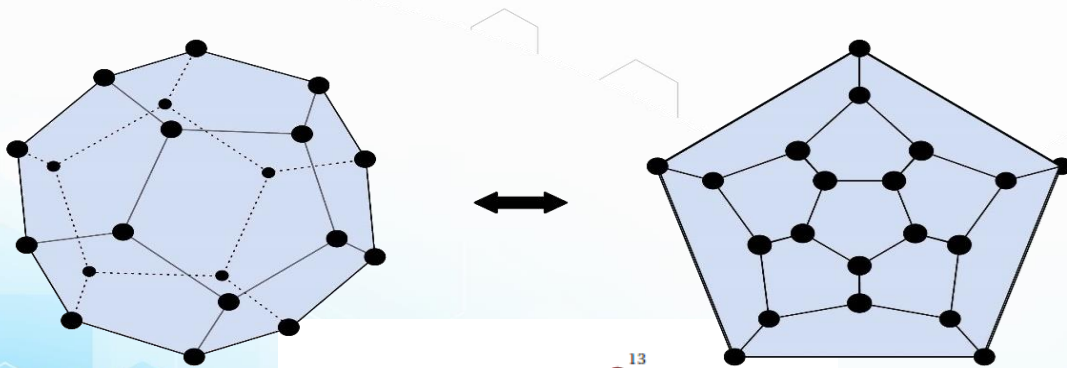
Yung-Ling Lai, Ph.D

Research Area: Graph Theory, Algorithm

Tel: 886-271-7735, E-mail: yllai@mail.ncyu.edu.tw



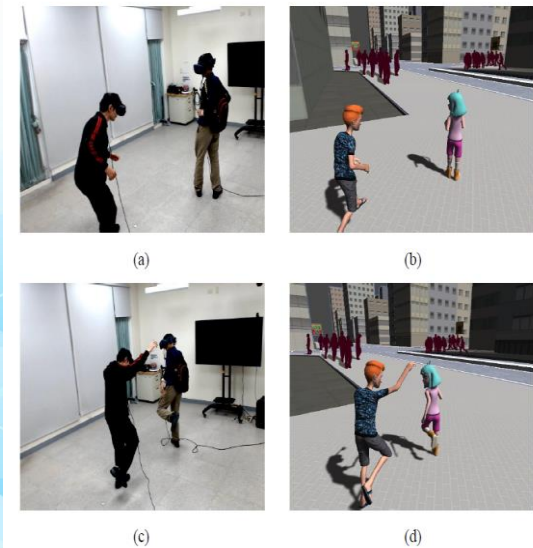
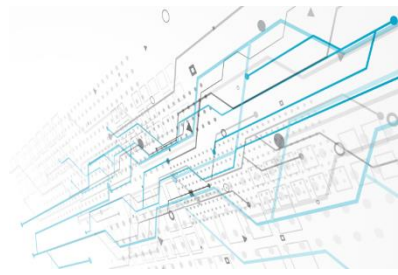
Research Interests : Graph labeling, coloring, ranking, domination, matching, and network topology related



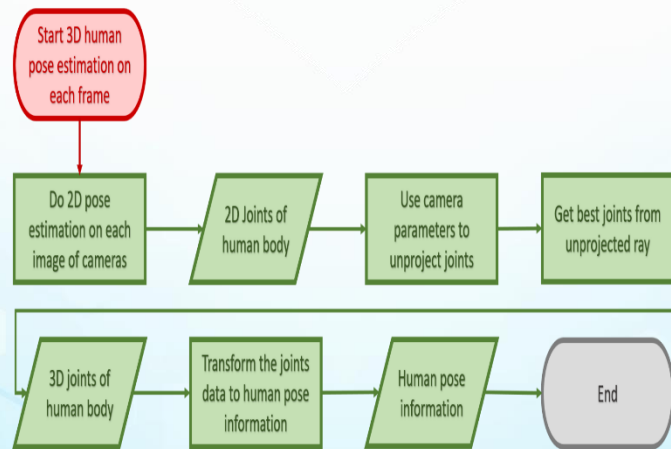


盧天麒 副教授 Associate Professor
Tainchi Lu, Ph.D.

Research Interests: Virtual/Mixed Reality, Computer Graphics, Computer Animation, Interactive Multimedia
Tel: +886-5-2717730, E-mail: tclu@mail.ncyu.edu.tw



3D human pose estimation flow chart



Virtual-Real Interactions in MR



MR Home Safety Assessments



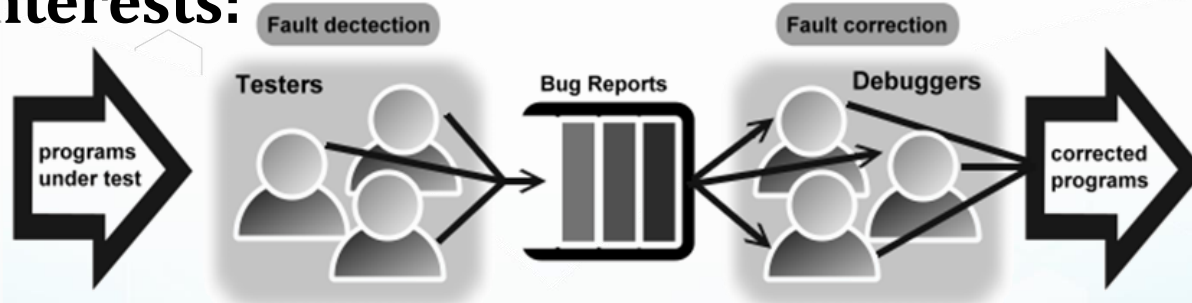
林楚迪 副教授 Associate Professor Chu-Ti Lin, Ph.D

Research Area:

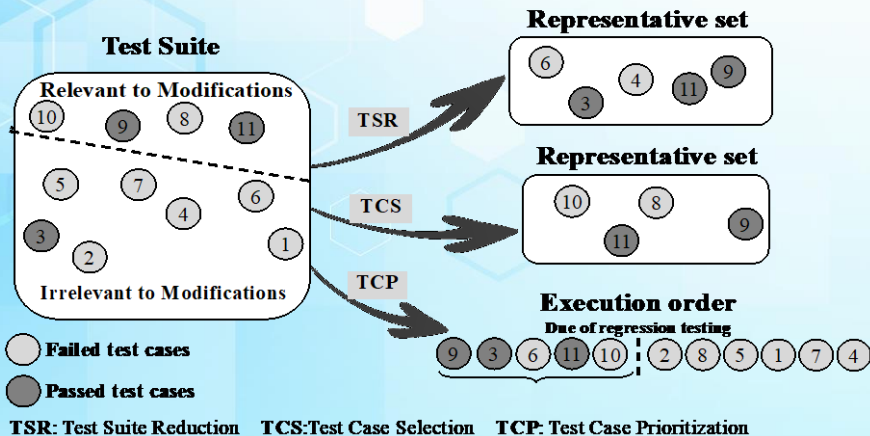
Software Engineering,
Software Testing & Debugging
Software Reliability Engineering

Tel: 886-271-7227, E-mail: chutilin@mail.ncyu.edu.tw

Research Interests:



Regression Testing Techniques



Automated Software Debugging

Sample Faulty Program	Test Cases						Fault Localization Technique	
	t ₁	t ₂	t ₃	t ₄	t ₅	t ₆	Suspiciousness Value	Rank
max(int x, int y, int z){	1,2,3	2,8,5	5,4,9	6,9,4	8,4,7	5,3,1		
s ₁ : if(x>y)	V	V	V	V	V	V	16.67%	5
s ₂ : if(x<z) //Should be if(x>z)			V		V	V	50.00%	1
s ₃ : return x;			V				31.25%	4
s ₄ : else					V	V	41.43%	3
s ₅ : return z;					V	V	41.43%	3
s ₆ : else	V	V		V			0.00%	10
s ₇ : if(y>z)	V	V		V			0.00%	10
s ₈ : return y;		V		V			7.14%	8
s ₉ : else	V						12.50%	7
s ₁₀ : return z;	V						12.50%	7
} Pass/Fail	P	P	F	P	F	F		

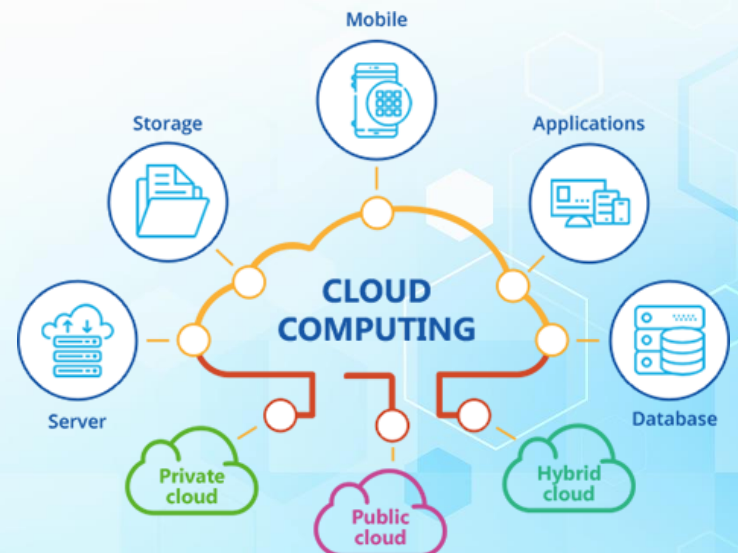


李龍盛 助理教授 Assistant Professor

Long-Sheng Li, Ph.D

Research Area: PCS (5G), AIoT, Cloud, Mobile Comp.

Tel: 886-5-2717733, E-mail: sheng@mail.ncyu.edu.tw





郭煌政 助理教授 Assistant Professor
Huang-Cheng Kuo, Ph.D.

Research Interests:
Data Mining, Bioinformatics

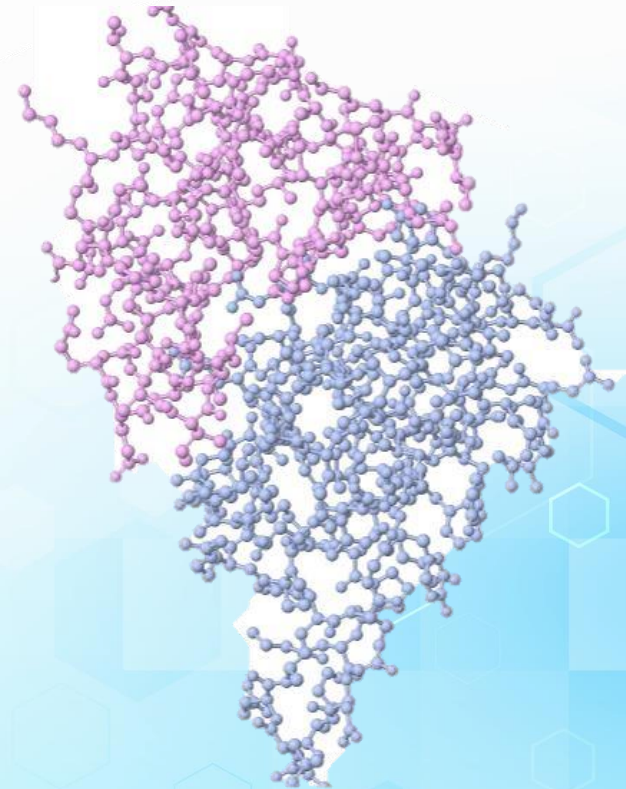
Tel: +886 (05)271-7731

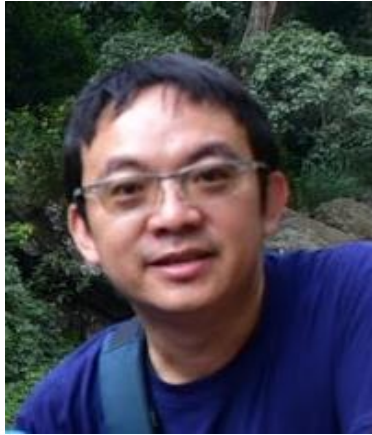
E-mail: hckuo@mail.ncyu.edu.tw

Recent study is on the classification of protein-protein interaction type.

A protein interacts with another one either transiently or permanently.

Various data mining techniques are applied in the study.



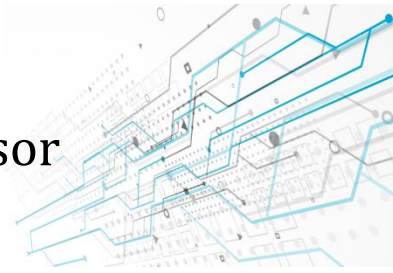


王皓立 助理教授 Assistant Professor

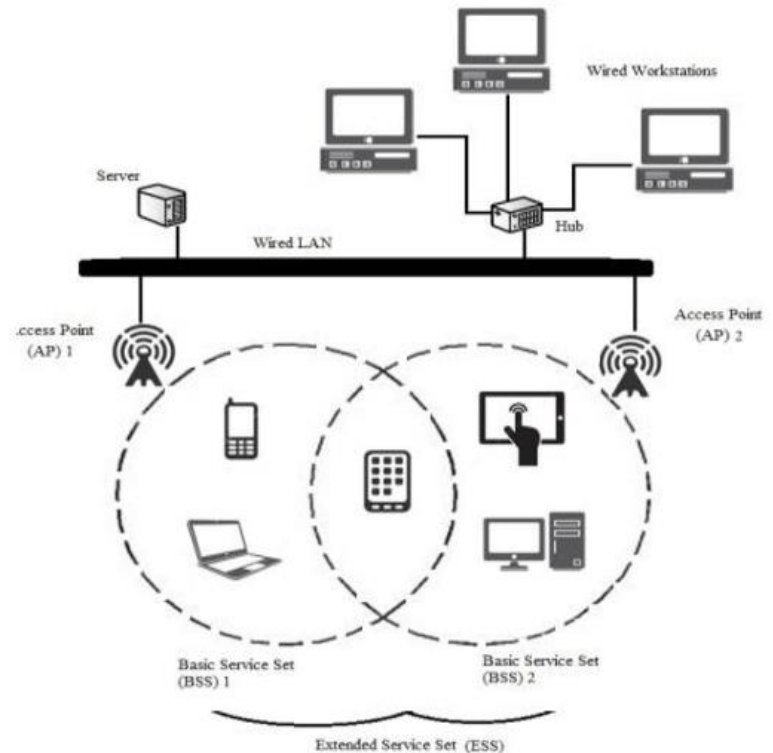
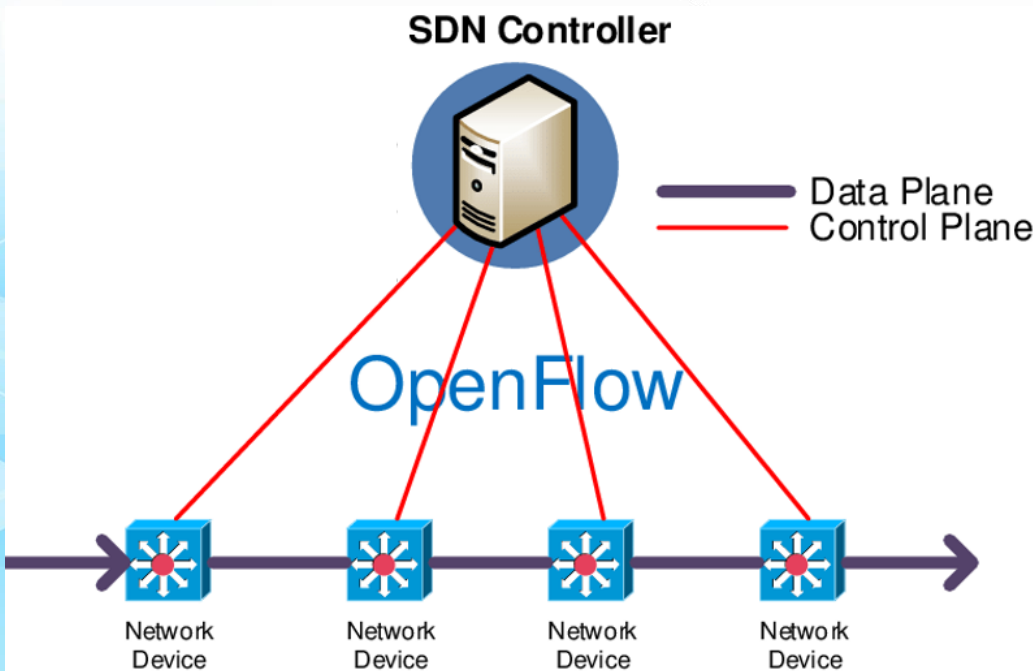
Hao-Li Wang, Ph.D

Research Area: Software Defined Networks, Wireless Network, Network Simulation

Tel: 886-271-7724 , E-mail: haoli@mail.ncyu.edu.tw



Research Interests:





方文杰 專案助理教授 Assistant Professor

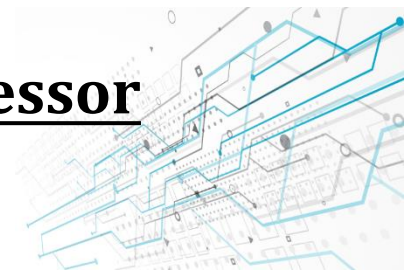
Wen-Chieh Fang, Ph.D

Research Area:

Machine learning, Artificial Intelligence

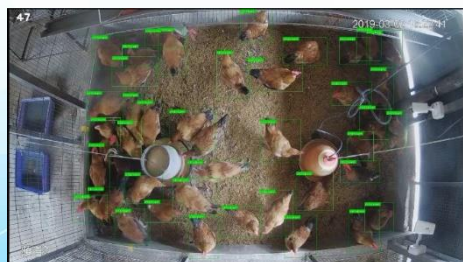
Tel: 886-271-7739

E-mail: ncyu.deep@mail.ncyu.edu.tw

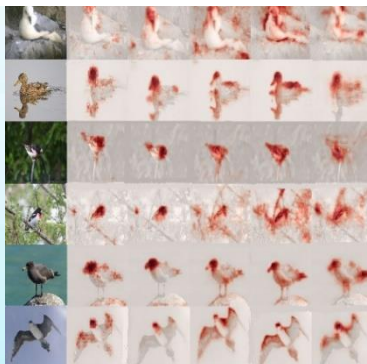
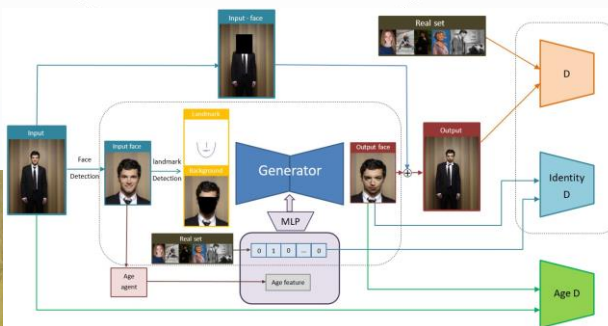


Research Interests:

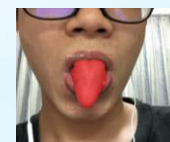
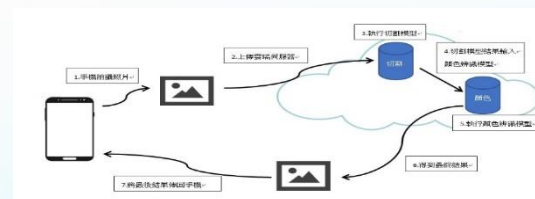
Precision agriculture



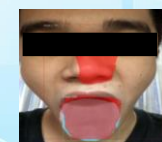
Deep Learning for Computer Vision



Health Informatics



圖八 較理想的 Mask



圖九 較不理想的 Mask

