

# Department of Computer Science & Information Engineering National Dong Hwa University, Taiwan, R.O.C.

國立東華大學資訊工程學系

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## Admission Advantage

NDHU ranks **801~1000<sup>th</sup>** worldwide in Time's Higher Education World University Rankings®, **251-260<sup>th</sup>** in QS Top University Rankings Asia, **10<sup>th</sup>** in University Ranking by Academic Performance in Taiwan. **Dept of CSIE** ranks **463<sup>th</sup>** (Taiwan 6<sup>th</sup>) worldwide in Computer Science field and **604<sup>th</sup>** (Taiwan 8<sup>th</sup>) worldwide in Engineering Technology field and in 2020 World Ranking of Academic Performance. Our research opportunities and performances are outstanding and remarkable. The supportive faculty and excellent learning environment will definitely promote and advance your career.

## Department Features

- Excellent and vigorous faculty:** We have 20 full-time faculty members, **all with Ph.D. degrees**; 15 among them were awarded national or international honors.
- Outstanding research performance:** Our academic performance is widely acknowledged. On average, each of our professors has at least one National Science Council-sponsored project per year. Our research fund and research achievements have been listed among the best ranking universities in Taiwan.
- Advanced and up-to-date research equipment:** In the department building, we have 3 PCs Labs, 1 Apple Mac PC Lab, 20 spacious laboratories operated with 24 hours high-speed networks and frequently updated instruments and equipment.
- Comprehensive and distinct research fields:** Our research projects have covered all important fields and distinct research topics, such as AI, AR/VR, IoT...etc.
- Flexible and solid program design:** We offer students a great range of interesting programs, including all CSIE related academic fields. Practical training for advanced study and employment is available. The flexible program-based graduation system allows students to enroll in courses across disciplines.
- Promising future career:** The performance of our graduates is widely acknowledged and commendable.
- Poetic and picturesque campus:** National Dong Hwa University is famous for its natural beauty. Studying in here is definitely an unforgettable experience.
- Family-like study environment:** Our teachers and students get along like a big family, closely interacting with and taking care of each other.
- First and most comprehensive CSIE department in eastern Taiwan:** The department was established in 1995. It now offers comprehensive programs for B.S., M.S., and Ph.D. degrees, and is a very important cradle of IT talents of eastern Taiwan. Since 2011, the English-Taught **International B.S., M.S., & Ph.D programs** has been recruiting international elite students, and gaining a deeper connection with the world.

## Achievements and Awards of the professors and students in recent years:

- 2019 CSIE Outstanding Academic Performance ranked as **463<sup>th</sup>** worldwide
- 2019 AR/VR App received high praise in 2019 Taiwan Lantern Festival.
- 2018 The Artificial Intelligence Lab won 5 gold 2 silver and 1 bronze medals in 2018 International Olympia computer game competition,
- 2018 (~2010) participated in various computer game competitions and won a total of 34 gold, 16 silver and 12 bronze (including TAAI total 12/4/6; TCGI total 18/9/5; 15th Computer Olympiad total 4/2/0; other 0/1/1)
- 2018 Prof. Chung Yung received the Best Presentation Award ICCEE (Japan)
- 2018 CSIE students participated in Japan Sakura Science Program
- 2018 The Information Security Lab received the Best Paper Award in TANET Symposium
- 2017 **Silver Prize** in Smart Terminal and Human-Computer Interaction Software Creation Competition
- 2017 Prof Chung Yung received the Excellent Paper Award in ICIET (Japan)
- 2017 Prof James C.N. Yang awarded with IET Fellow Honor
- 2016 Prof David S.F. Lin awarded with IET Fellow Honor
- 2016 **Bronze Prize** in 2016 National Intercollegiate Program Design Contest
- 2016 Excellence Works in ITSA Annual Collegiate Programming Contest
- 2015 Prof Chung Yung received the Best Presentation Award in ICIT (Singapore)
- 2015 **Gold Prize** in 2015 National Intercollegiate Program Design Contest
- 2014 IICM **Excellent Paper** Award
- 2013 **Chinese Chess Artificial Intelligent Software successfully challenged human brain for the world record**



NDHU campus view



NDHU library



Dormitory interior



College of Science & Engineering



NDHU Canoeing Class



Indoor-Outdoor swimming



NDHU Windsurfing Class



Computer classroom



Small group meeting



Research discussion

## Research Laboratories

- Cloud Computing & Big-Data Processing Server
- Artificial Intelligence Laboratory
- Intelligent Systems Laboratory
- Pervasive Computing and Data Management Lab.
- Software Engineering Laboratory
- Graphics Animation Multimedia Edutainment Lab.
- Cryptography and Information Security Laboratory
- Graphs and Bioinformatics Algorithm Laboratory
- Compiler Technology and Application Laboratory
- Multimedia Interaction Technology Laboratory
- Computer Vision and Virtual Reality Laboratory
- Computer Systems Laboratory
- Image and Video Processing Laboratory
- Digital Image and Vision Computing Laboratory
- Wireless Internet Service Engineering Laboratory
- Decision Support Systems Laboratory
- Interconnection Network and Fault Tolerant Computing Laboratory
- Advanced Network Technology Laboratory
- Distributed Computing Laboratory
- Internet Computing and Application Laboratory
- Mobile Computing and Knowledge Engineering Lab.
- Learning Technology Laboratory



CSIE Professors in charity marathon



Artificial Intelligence won over Human



CSIE's Program won gold medal



CSIE's Academic Excellent Awardees



CSIE Departmental badminton team



CSIE Foreign students in culture exchange



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**Top Notch, Most Popular Research Involved**

- Smart Technology πPBL Transdisciplinary Program
- Multimedia & Intelligent Computing (Computer Games, Artificial Intelligence, Digital Image, Virtual Reality, ...etc)
- Network and Systems (Embedded, Wearable, Mobile, Internet of Things, Wireless...etc.)

**Campus is under 24-hr wireless internet connection**

**All International Students are guaranteed for on-campus dormitory**

**State-Of-The-Art Instruments for Research**

- Cloud Computing and Big Data Server Lab
- Mobile Service Development Computer Lab
- 3 PC and 1 Apple Mac large computer classrooms
- 20 research laboratories

**Scholarship**

- Taiwan Fellowships and Scholarships (tafs.mofa.gov.tw)
- NDHU Scholarship (oia.ndhu.edu.tw)

**Faculty & Research Interests**

Name	Position	Education Background	Research Interest
Shin-Feng Lin	Professor and Vice-President	Ph.D, Dept. of Electrical Engineering, Mississippi State University, U.S.A.	Signal /Image Processing, Image/ Video Compression, Information Security
Chang-Hsiung Tsai	Professor and Vice-Dean of Academic Affairs	Ph.D, Dept. of Computer Information Science, National Chiao Tung University, Taiwan	Fault-Tolerant Computing, Peer-to-Peer Computing, Interconnection Networks, Embedded Systems
Sheng-Lung Peng	Professor and Dir. of Library and Information Center	Ph.D, Dept. of Computer Science, National Tsing Hua University, Taiwan	Computer Algorithms, Graph Theory, Bioinformatics
Cheng-Chin Chiang	Professor and Chairman	Ph.D, Dept. of Computer Science and Information Engineering, National Chiao Tung University, Taiwan	Neural Network, Image Processing, Pattern Recognition, Intelligent Human-Machine Interface
Shiow-Yang Wu	Professor	Ph.D, Dept. of Computer Science, University of Texas at Austin, U.S.A.	Cloud Computing & Big Data Processing, Mobile & Pervasive Computing, Data & Knowledge Bases, Distributed Systems, Web Services
Chenn-Jung Huang	Professor	Ph.D, Dept. of Electrical Engineering, National Sun Yat-Sen University, Taiwan	Machine Learning, Wireless Network, Embedded System, Electronic Learning
Shih-Chien Chou	Professor	Ph.D, Dept. of Computer Science and Information Engineering, National Chiao Tung University, Taiwan	Software Engineering, Systems Analysis and Design, Software Development, Object-Oriented Software
Ching-Nung Yang	Professor	Ph.D, Dept. of Electrical Engineering, National Cheng Kung University, Taiwan	Cryptography, Information and Network Security, Coding Theory
Shi-Jim Yen	Professor	Ph.D, Dept. of Computer Science and Information Engineering, National Taiwan University, Taiwan	Artificial Intelligence, Computer Games, Machine Learning
Mau-Tsuen Yang	Professor	Ph.D, Dept. of Computer Science and Engineering, Pennsylvania State University, U.S.A.	Computer Vision, Augmented Reality, Learning Technology
Han-Ying Kao	Professor	Ph.D, Dept. of Information Management, National Chiao Tung University, Taiwan	Optimization Methods and Applications, Soft Computing, Intelligent Decisions
I-Cheng Chang	Professor	Ph.D, Dept. of Electrical Engineering, National Tsing Hua University, Taiwan	Image Processing, Computer Vision, Computer Graphics
Hsin-Chou Chi	Asso. Professor	Ph.D, Dept. of Computer Science, University of California, Los Angeles, U.S.A.	Computer Architecture, Parallel Processing, VLSI Design, Embedded Systems,
Guan-Ling Lee	Asso. Professor	Ph.D, Dept. of Computer Science, National Tsing Hua University, Taiwan	Mobile Computing, Database, Data Mining
Shou-Chih Lo	Asso. Professor	Ph.D, Dept. of Computer Science, National Tsing Hua University, Taiwan	Mobile Computing ,Wireless Network, Information Services
Pao-Lien Lai	Asso. Professor	Ph.D, Dept. of Computer Information Science, National Chiao Tung University , Taiwan	Interconnection Networks, Error-Diagnosis, Graph Theory, Fault-Tolerant Computing
Min-Xiou Chen	Asso. Professor	Ph.D, Dept. of Computer Science and Information Engineering, National Chung Cheng University, Taiwan	Computer Network, Wireless Network, Cloud Network
Chih-Hung Lai	Asso. Professor	Ph.D, Dept. of Computer Science and Information Engineering, National Central University, Taiwan	Digital Learning, Learning Technology, Mobile Learning
Tao-Ku Chang	Asso. Professor	Ph.D, Institute of Information and Computer Education, National Taiwan Normal University, Taiwan	Information Security, Internet Services, Workflow, Software Engineering
Chung Yung	Assis. Professor	Ph.D, Dept. of Computer Science, New York University, U.S.A.	Cloud Computing, Compilers, Big Data Analysis in Tourism

**Research Results**

- Artificial Intelligence Lab – 2010~2018 participated in various competitions and receipted 34 Gold 16 Silver 12 Bronze prize medals
- Artificial Intelligence Lab –Chinese Chess AI Software successfully challenged human brain for the World Record
- Multimedia Interact Tech Lab – Automatic Surveillance, Face Tracking and Facial Expression Synthesis System, Keyword Spotting
- Intelligent Lab –Intelligent Transportation Application, Intelligent Food Quality Control Expert System
- Game Lab – Sport Timing Systems, Video Simulation Safe Driver Evaluation Systems