

# 2018 IEEE CIS SUMMER SCHOOL

Aug. 21-24, 2018, NCKU, Kaohsiung, Taiwan

---

COMPUTATIONAL INTELLIGENCE  
FOR HUMAN AND MACHINE CO-LEARNING

EVENT REPORT





# 2018 IEEE CIS SUMMER SCHOOL

COMPUTATIONAL INTELLIGENCE FOR HUMAN AND MACHINE CO-LEARNING

國際電機電子工程學會 計算智慧夏令營 Aug. 21-24, 2018, NCKU, Kaohsiung, Taiwan

## PROGRAM

AUG.	#	TIME	SESSION	SPEAKER(S)	TOPIC	VENUE
21 TUE.	1	08:30 - 09:00	REGISTRATION			EXECUTIVE BUILDING 10F RECEPTION ROOM
	2	09:00 - 10:00	PLENARY TALK 1	LIEN-SHANG WU, PH.D. PAU-CHOO CHUNG, PH.D. HUNG-YU KAO, PH.D. KUO-SHENG CHENG, PH.D.		EXECUTIVE BUILDING 10F BOARD ROOM
			TEA BREAK			
	3	11:00 - 12:00	PLENARY TALK 2	CHEN-FU CHIEN, PH.D. YUN-NIEN SUN, PH.D.		EXECUTIVE BUILDING 10F BOARD ROOM
	4	12:00 - 13:00	LUNCH			EXECUTIVE BUILDING 10F RECEPTION ROOM
	5	13:00 - 14:00	LECTURE 1	MONG-FONG HORNG, PH.D.	TREND OF AI IN IOT	EXECUTIVE BUILDING 10F BOARD ROOM
22 WED.			TEA BREAK			
	6	14:15 - 15:15	LECTURE 2	HUNG-YU KAO, PH.D.	TEXT MINING IN DEEP LEARNING ERA	EXECUTIVE BUILDING 10F BOARD ROOM
			TEA BREAK			
	7	15:30 - 16:30	LECTURE 3	CHIA-HUI CHANG, PH.D.	CO-LEARNING WITH COMPUTERS VIA DISTANT SUPERVISION	EXECUTIVE BUILDING 10F BOARD ROOM
	1	08:30 - 09:00	BREAKFAST			EXECUTIVE BUILDING 10F RECEPTION ROOM
	2	09:00 - 10:00	PLENARY TALK 3	JACEK MANDZIUK, PH.D.	GENERAL GAME PLAYING WITH MONTE CARLO TREE SEARCH	EXECUTIVE BUILDING 10F BOARD ROOM
			TEA BREAK			
3	11:00 - 12:00	PLENARY TALK 4	NAOYUKI KUBOTA, PH.D.	TOPOLOGICAL MAPPING FOR SLAM AND VISUALIZATION	EXECUTIVE BUILDING 10F BOARD ROOM	
4	12:00 - 13:00	LUNCH			EXECUTIVE BUILDING 10F RECEPTION ROOM	
5	13:00 - 14:00	LECTURE 4	CHUAN-KANG TING, PH.D.	EVOLUTIONARY COMPUTATION FOR EXTENDING WIRELESS SENSOR NETWORK LIFETIME	EXECUTIVE BUILDING 10F BOARD ROOM	
		TEA BREAK				
6	14:15 - 15:15	LECTURE 5	CHIA-FENG JUANG, PH.D.	LEARNING TECHNIQUES AND APPLICATIONS OF DATA-DRIVEN INTERPRETABLE FUZZY SYSTEMS	EXECUTIVE BUILDING 10F BOARD ROOM	
		TEA BREAK				
7	15:30 - 16:30	LECTURE 6	LI-WEI KO, PH.D.	HUMAN BRAIN MACHINE INTERACTION WITH COMPUTATIONAL INTELLIGENCE	EXECUTIVE BUILDING 10F BOARD ROOM	
23 THU.	1	08:30 - 09:00	BREAKFAST			EXECUTIVE BUILDING 10F RECEPTION ROOM
	2	09:00 - 10:00	PLENARY TALK 5	YUSUKE NOJIMA, PH.D.	EVOLUTIONARY MACHINE LEARNING	EXECUTIVE BUILDING 10F BOARD ROOM
			TEA BREAK			
	3	11:00 - 12:00	PLENARY TALK 6	JEN-WEI HUANG, PH.D.	INTRODUCTION TO SOCIAL NETWORK ANALYSIS	EXECUTIVE BUILDING 10F BOARD ROOM
	4	12:00 - 13:00	LUNCH			EXECUTIVE BUILDING 10F RECEPTION ROOM
	5	13:00 - 14:00	LECTURE 7	TZUNG-PEI HONG, PH.D.	WHEN COMPUTATIONAL INTELLIGENCE MEETS DATA MINING	EXECUTIVE BUILDING 10F BOARD ROOM
			TEA BREAK			
6	14:15 - 15:15	LECTURE 8	FEIPEI LAI, PH.D.	PRECISION MEDICINE AT NTUH - CURRENT STATUS AND ROADMAP	EXECUTIVE BUILDING 10F BOARD ROOM	
		TEA BREAK				
7	15:30 - 16:30	DEMO SESSION	DIRECTOR, WEN-HUEI LIU DIRECTOR, SUN-LU FAN JACEK MANDZIUK, PH.D. CHANG-SHING LEE, PH.D. YUSUKE NOJIMA, PH.D.	MULTINATIONAL DEMO ON COMPUTATIONAL INTELLIGENCE FOR HUMAN AND MACHINE CO-LEARNING	EXECUTIVE BUILDING 10F RECEPTION ROOM	
8	17:00 - 21:00	BANQUET			Han-Hsien Heping Restaurant	
24 FRI.	1	08:30 - 09:00	BREAKFAST			EXECUTIVE BUILDING 10F RECEPTION ROOM
	2	09:00 - 10:00	PLENARY TALK 7	KAO-SHING HWANG, PH.D.	INTRODUCTION TO REINFORCEMENT LEARNING AND ITS APPLICATIONS	EXECUTIVE BUILDING 10F BOARD ROOM
			TEA BREAK			
	3	11:00 - 12:00	CLOSING CEREMONY	DIRECTOR, SUN-LU FAN CHIEF, ZE-BIN HUANG DOWMING YEH, PH.D. CEO, HUNGCHI HUANG	ISSUE IEEE CIS CERTIFICATE OF COMPLETION	EXECUTIVE BUILDING 10F BOARD ROOM
4	12:00 -	DEPARTURE				



# Table of Contents

<b>Objectives</b> .....	<b>4</b>
<b>Message from General Chair</b> .....	<b>5</b>
<b>Organizers</b> .....	<b>6</b>
<b>Organization</b> .....	<b>7</b>
<b>Program</b> .....	<b>8</b>
<b>Plenary Talk 1</b> .....	<b>9</b>
<b>Plenary Talk 2a: Industry 3.5” Disruptive Innovations via Artificial Intelligence and Big Data Analytics to Empower Intelligent Manufacturing</b> .....	<b>10</b>
<b>Plenary Talk 2b: Deep Learning and Medical Image Analysis</b> .....	<b>12</b>
<b>Lecture 1: Trend of AI in IoT</b> .....	<b>14</b>
<b>Lecture 2: Text Mining in Deep Learning Era</b> .....	<b>16</b>
<b>Lecture 3: Co-Learning with Computers via Distant Supervision</b> .....	<b>17</b>
<b>Plenary Talk 3: General Game Playing with Monte Carlo Tree Search</b> .....	<b>18</b>
<b>Plenary Talk 4: Topological Mapping for SLAM and Visualization</b> .....	<b>20</b>
<b>Lecture 4: Evolutionary Computation for Extending Wireless Sensor Network Lifetime</b> .....	<b>22</b>
<b>Lecture 5: Learning Techniques and Applications of Data-driven Interpretable Fuzzy Systems</b> .....	<b>24</b>
<b>Lecture 6: Human Brain Machine Interaction with Computational Intelligence</b> .....	<b>26</b>
<b>Plenary Talk 5: Evolutionary Machine Learning - Toward Explainable AI</b> .....	<b>28</b>
<b>Plenary Talk 6: Introduction to Social Network Analysis</b> .....	<b>29</b>
<b>Lecture 7: When Computational Intelligence Meets Data Mining</b> .....	<b>30</b>
<b>Lecture 8: Precision Medicine at NTUH – Current Status and Roadmap</b> .....	<b>32</b>
<b>Demo Section: Multinational Demo on Computational Intelligence for Human and Machine Co-learning</b> .....	<b>34</b>
<b>Plenary Talk 7: Introduction to Reinforcement Learning and Its Applications</b> .....	<b>37</b>
<b>Venue</b> .....	<b>38</b>
<b>Pictures</b> .....	<b>39</b>
<b>Feedback</b> .....	<b>53</b>
<b>Notes</b> .....	<b>59</b>



# Objectives

---

On 21th-24th, August, 2018, a four-day summer school on computational intelligence for human and machine co-learning was held on National Kaohsiung Normal University, Kaohsiung, Taiwan. More than fifty attendances registered and participated in this summer school.

The promise of Computational Intelligence (CI) area in spurring technological innovation in cybernetics systems has generated growing interest among students and professionals. While computer programs are already better than humans (even high level professionals), machine learning still offers interesting prospects, both from the fundamental points of view to even further the limits of game playing (having programs playing against each other), to better understand machine intelligence and compare it to human intelligence, and from the practical point of view of enhancing the human playing experience by coaching professionals to play better or training beginners.

This summer school offers opportunities for students from senior high schools, undergraduate colleges, graduate schools and even post-graduate to enrich themselves with knowledge and to speak to experts in the CI area. Throughout the week, they met professionals from the technology industry who can speak with students about machine learning, computer science, technology & more.

# Message from General Chair

---



**Po-Hsun Cheng, Ph.D.**

General Chair, 2018 IEEE CIS Summer School  
Professor, Software Engineering and Management  
Dean, Technology College  
Chair, Information Education Center  
National Kaohsiung Normal University  
Taiwan

On behalf of the general chair of the 2018 IEEE CIS Summer School at Kaohsiung, Taiwan. I would like to welcome you all to Kaohsiung city. As many of you know, IEEE CIS Summer School have five schools around the world this year. We are delighted this year to be in Taiwan and are thankful to the National Kaohsiung Normal University for hosing this year's summer school.

We are fortunate to have at least 20 professors as our speakers for seven plenary talks, eight lectures and one demo section. Meanwhile, the demo section is also welcome the professional Go master, Chun-Hsun Chou, to play with intelligent computer that are designed by professor, Chang-Shing Lee, Ph.D. Also, we warmly welcome three foreign speakers from Poland and Japan: professor, Jacek Mandziuk, Ph.D., professor, professor, Naoyuki Kubota, Ph.D, and Yusuke Nojima, Ph.D.

At last, hope everyone have a wide knowledge gathering in this summer school.



# Organizers

## Organizers



IEEE CIS



NKNU

## Co-Organizers



IEEE Tainan Section



IEEE CIS Tainan Chapter



人工智慧產學研聯盟  
Artificial Intelligence Industry & Academia Alliance  
國研院 AI 產學研聯盟



MOST 成大AI生技醫療研究中心



高雄市政府教育局



知識應用暨網路服務研究中心



MOST 清大AI智慧製造研究中心



成大科技部人工智慧  
生技醫療創新研究中心



高中資訊學科中心：  
國立台南第二高級中學



MOST數位經濟前瞻技術AI分項計畫



國立臺南大學資訊工程學系



# Organization

---

## General Chair

- **Po-Hsun Cheng, Ph.D.**, National Kaohsiung Normal University, Taiwan

## Organizing Committee Members

- **Pau-Choo Chung, Ph.D.**, National Cheng Kung University, Taiwan
- **Hung-Yu Kao, Ph.D.**, National Cheng Kung University, Taiwan
- **Chuan-Kang Ting, Ph.D.**, National Tsing Hua University, Taiwan
- **Jen-Wei Huang, Ph.D.**, National Cheng Kung University, Taiwan
- **Kao-Shing Hwang, Ph.D.**, National Sun Yat-Sen University, Taiwan
- **Giovanni Acampora, Ph.D.**, University of Naples Federico II, Italy
- **Naoyuki Kubota, Ph.D.**, Tokyo Metropolitan University, Japan
- **Tzung-Pei Hong, Ph.D.**, National Kaohsiung University, Taiwan
- **Mong-Fong Horng, Ph.D.**, Kaohsiung University of Science & Technology, Taiwan
- **Jyh-Horng Chou, Ph.D.**, Kaohsiung University of Science and Technology, Taiwan
- **Naoyuki Kubota, Ph.D.**, Tokyo Metropolitan University, Taiwan
- **Kay-Chen Tan, Ph.D.**, City University of Hong Kong, China
- **Chang-Shing Lee, Ph.D.**, National University of Tainan, Taiwan
- **Li-Wei Chen, Ph.D.**, National Kaohsiung Normal University, Taiwan
- **Yi-Ren Yeh, Ph.D.**, National Kaohsiung Normal University, Taiwan
- **Che-Chern Lin, Ph.D.**, National Kaohsiung Normal University, Taiwan
- **Pei-Chen Sun, Ph.D.**, National Kaohsiung Normal University, Taiwan
- **Yuan-Ze Yu, Ph.D.**, National Kaohsiung Normal University, Taiwan
- **Dowming Yeh, Ph.D.**, National Kaohsiung Normal University, Taiwan



# Program



## 2018 IEEE CIS SUMMER SCHOOL COMPUTATIONAL INTELLIGENCE FOR HUMAN AND MACHINE CO-LEARNING 國際電機電子工程學會 計算智慧夏令營 Aug. 21-24, 2018, NKNU, Kaohsiung, Taiwan

### PROGRAM

AUG.	#	TIME	SESSION	SPEAKER(S)	TOPIC	VENUE
AUG. 21 TUE.	1	08:30 - 09:00	REGISTRATION			EXECUTIVE BUILDING 10F RECEPTION ROOM
	2	09:00 - 10:00	PLENARY TALK 1	LIEN-SHANG WU, PH.D. PAU-CHOO CHUNG, PH.D. HUNG-YU KAO, PH.D. KUO-SHENG CHENG, PH.D.		EXECUTIVE BUILDING 10F BOARD ROOM
			TEA BREAK			
	3	11:00 - 12:00	PLENARY TALK 2	CHEN-FU CHIEN, PH.D. YUN-NIEN SUN, PH.D.		EXECUTIVE BUILDING 10F BOARD ROOM
	4	12:00 - 13:00	LUNCH			EXECUTIVE BUILDING 10F RECEPTION ROOM
	5	13:00 - 14:00	LECTURE 1	MONG-FONG HORNG, PH.D.	TREND OF AI IN IOT	EXECUTIVE BUILDING 10F BOARD ROOM
AUG. 22 WED.			TEA BREAK			
	6	14:15 - 15:15	LECTURE 2	HUNG-YU KAO, PH.D.	TEXT MINING IN DEEP LEARNING ERA	EXECUTIVE BUILDING 10F BOARD ROOM
			TEA BREAK			
	7	15:30 - 16:30	LECTURE 3	CHIA-HUI CHANG, PH.D.	CO-LEARNING WITH COMPUTERS VIA DISTANT SUPERVISION	EXECUTIVE BUILDING 10F BOARD ROOM
	1	08:30 - 09:00	BREAKFAST			EXECUTIVE BUILDING 10F RECEPTION ROOM
	2	09:00 - 10:00	PLENARY TALK 3	JACEK MANDZIUK, PH.D.	GENERAL GAME PLAYING WITH MONTE CARLO TREE SEARCH	EXECUTIVE BUILDING 10F BOARD ROOM
			TEA BREAK			
3	11:00 - 12:00	PLENARY TALK 4	NAOYUKI KUBOTA, PH.D.	TOPOLOGICAL MAPPING FOR SLAM AND VISUALIZATION	EXECUTIVE BUILDING 10F BOARD ROOM	
4	12:00 - 13:00	LUNCH			EXECUTIVE BUILDING 10F RECEPTION ROOM	
5	13:00 - 14:00	LECTURE 4	CHUAN-KANG TING, PH.D.	EVOLUTIONARY COMPUTATION FOR EXTENDING WIRELESS SENSOR NETWORK LIFETIME	EXECUTIVE BUILDING 10F BOARD ROOM	
			TEA BREAK			
6	14:15 - 15:15	LECTURE 5	CHIA-FENG JUANG, PH.D.	LEARNING TECHNIQUES AND APPLICATIONS OF DATA-DRIVEN INTERPRETABLE FUZZY SYSTEMS	EXECUTIVE BUILDING 10F BOARD ROOM	
			TEA BREAK			
7	15:30 - 16:30	LECTURE 6	LI-WEI KO, PH.D.	HUMAN BRAIN MACHINE INTERACTION WITH COMPUTATIONAL INTELLIGENCE	EXECUTIVE BUILDING 10F BOARD ROOM	
AUG. 23 THU.	1	08:30 - 09:00	BREAKFAST			EXECUTIVE BUILDING 10F RECEPTION ROOM
	2	09:00 - 10:00	PLENARY TALK 5	YUSUKE NOJIMA, PH.D.	EVOLUTIONARY MACHINE LEARNING	EXECUTIVE BUILDING 10F BOARD ROOM
			TEA BREAK			
	3	11:00 - 12:00	PLENARY TALK 6	JEN-WEI HUANG, PH.D.	INTRODUCTION TO SOCIAL NETWORK ANALYSIS	EXECUTIVE BUILDING 10F BOARD ROOM
	4	12:00 - 13:00	LUNCH			EXECUTIVE BUILDING 10F RECEPTION ROOM
	5	13:00 - 14:00	LECTURE 7	TZUNG-PEI HONG, PH.D.	WHEN COMPUTATIONAL INTELLIGENCE MEETS DATA MINING	EXECUTIVE BUILDING 10F BOARD ROOM
				TEA BREAK		
6	14:15 - 15:15	LECTURE 8	FEIPEI LAI, PH.D.	PRECISION MEDICINE AT NTUH - CURRENT STATUS AND ROADMAP	EXECUTIVE BUILDING 10F BOARD ROOM	
			TEA BREAK			
7	15:30 - 16:30	DEMO SESSION	DIRECTOR, WEN-HUEI LIU DIRECTOR, SUN-LU FAN JACEK MANDZIUK, PH.D. CHANG-SHING LEE, PH.D. YUSUKE NOJIMA, PH.D.	MULTINATIONAL DEMO ON COMPUTATIONAL INTELLIGENCE FOR HUMAN AND MACHINE CO-LEARNING	EXECUTIVE BUILDING 10F RECEPTION ROOM	
8	17:00 - 21:00	BANQUET			Han-Hsien Heping Restaurant	
AUG. 24 FRI.	1	08:30 - 09:00	BREAKFAST			EXECUTIVE BUILDING 10F RECEPTION ROOM
	2	09:00 - 10:00	PLENARY TALK 7	KAO-SHING HWANG, PH.D.	INTRODUCTION TO REINFORCEMENT LEARNING AND ITS APPLICATIONS	EXECUTIVE BUILDING 10F BOARD ROOM
			TEA BREAK			
	3	11:00 - 12:00	CLOSING CEREMONY	DIRECTOR, SUN-LU FAN CHIEF, ZE-BIN HUANG DOWMING YEH, PH.D. CEO, HUNGCHI HUANG	ISSUE IEEE CIS CERTIFICATE OF COMPLETION	EXECUTIVE BUILDING 10F BOARD ROOM
4	12:00 -	DEPARTURE				





# Plenary Talk 1

---

**Date:** 2018/08/21

**Time:** 09:00-10:00

**Place:** 10F Board Room



**Lien-Shang Wu**

Professor and President  
National Kaohsiung Normal University  
Taiwan



**Pau-Choo Chung**

Processor  
Department of Electrical Engineering,  
National Cheng Kung University  
Taiwan

Vice President  
IEEE CIS Members Activities



**Kuo-Sheng Cheng**

Professor  
Department of Biomedical Engineering  
National Cheng Kung University  
Taiwan

President  
IEEE Tainan Section



**Hung-Yu Kao**

Professor and Chair  
Computer Science and Information Engineering  
Institute of Medical Informatics  
National Cheng Kung University  
Taiwan

Chair  
IEEE CIS Tainan Chapter

# Plenary Talk 2a: Industry 3.5” Disruptive Innovations via Artificial Intelligence and Big Data Analytics to Empower Intelligent Manufacturing

---

**Date:** 2018/08/21

**Time:** 11:00-12:00

**Place:** 10F Board Room



## **Chen-Fu Chien**

Tsinghua Chair Professor

Department of Industrial Engineering & Engineering  
Management; EMBA/MBA,  
National Tsing Hua University

Director

AIMS Research Center

Ministry of Science & Technology  
Taiwan

## **Curriculum Vitae**

### **Education**

- Ph.D., Decision Sciences and Operation Research, University of Wisconsin-Madison, USA (two minors: Statistics and Business). (1994-1996)
- M.S., Industrial Engineering Department, University of Wisconsin-Madison, USA. (1992-1994)
- B.S., Double Majors of Industrial Engineering and Electrical Engineering, National Tsing Hua University, TAIWAN (Award by the Phi Tau Phi Scholastic Honor Society).( 1985-1990)

### **Expertise**

- Decision Analysis and Decision Quality
- Data Mining and Big Data Analytics
- Modeling and Analysis for Semiconductor Manufacturing
- Manufacturing Intelligence and Decision Support Systems
- Manufacturing Strategy and Industry 3.5

### **Professional Experience**

- 2018 –now Convener, Industrial Engineering and Management Program, Ministry of Science & Technology



- 2017 –now Director, Artificial Intelligence for Intelligent Manufacturing Systems (AIMS) Research Center, Ministry of Science & Technology
- 2015 – now Editorial Board, Harvard Business Review, Chinese Version, Taiwan
- 2013 – now Director, NTHU-TSMC Center for Manufacturing Excellence, NTHU
- 2013 – now Principal Investigator, Semiconductor Technologies Empowerment Partners (STEP) Consortium, Ministry of Science and Technology, Taiwan
- 2012 – 2014 Vice President and Chief of Staff, National Tsing Hua University
- 2008 – 2010 CEO for University-Industry Collaboration, National Tsing Hua University
- 2005 – 2008 Deputy Director, Industrial Engineering Division, TSMC

# Plenary Talk 2b: Deep Learning and Medical Image Analysis

---

**Date:** 2018/08/21

**Time:** 11:00-12:00

**Place:** 10F Board Room



## **Yun-Nien Sun**

Distinguished Professor  
Computer Science and Information Engineering  
National Cheng Kung University  
Taiwan

## **Curriculum Vitae**

### **Education**

- B.S. Department of Control Engineering, National Chiao Tung University, Taiwan, 1978
- M.S. Department of Electrical Engineering, University of Pittsburgh, USA, 1983
- Ph.D. Department of Electrical Engineering, University of Pittsburgh, USA, 1987

### **Professional Experience**

- Principal Investigator, MOST AI Biomedical Research Center in NCKU, Tainan, Taiwan, ROC, 2018/01 – present
- Director, Medical Device Innovation Center, Tainan, Taiwan, ROC, 2017/02 – 2017/07
- Vice President, National Pingtung Institute of Commerce, Pingtung, Taiwan, ROC, 2009/08 – 2010/7
- Vice Dean, National Cheng Kung University, Tainan, Taiwan, ROC, 2007/05 – 2009/07
- Distinguished Professor, National Cheng Kung University, Tainan, Taiwan, ROC, 2002/08 – present
- Professor, National Cheng Kung University, Tainan, Taiwan, ROC, 1993/08 – present
- Chairman, Department of Computer Science & Information Engineering, National Cheng Kung University, Tainan, Taiwan, ROC, 1996 – 1999



- Associate Professor, National Cheng Kung University, Tainan, Taiwan, ROC 1989 – 1993
- Group Leader, Computer & Communication Center, National Cheng Kung University, Taiwan, 1991 – 1996
- Assistant Scientist, Brookhaven National Laboratory, Long Island, NY, U.S.A., 1987 – 1989

# Lecture 1: Trend of AI in IoT

---

**Date: 2018/08/21**

**Time: 13:00-14:00**

**Place: 10F Board Room**



## **Mong Fong Horng**

Professor

Department of Electronic Engineering

National Kaohsiung University of Science and Technology

Taiwan

## **Curriculum Vitae**

Prof. **Mong Fong Horng** received his B.S., Ms. and Ph.D degrees from Control Engineering Department, National Chiao Tung University, Computer Sciences and Information Engineering Department, National Cheng Kung University, Taiwan in 1989, 1991 and 2003, respectively. He now is a professor and chairman with the department of Electronics Engineering at National Kaohsiung University of Science and Technology, Taiwan. Prof. Horng focuses his research interest on Computational Intelligence, Embedded Software, Sensor networks. Till 2017, Dr. Horng had published 132 academic papers, 6 textbooks, about his research. Based on the researches, Prof. Horng has been granted with 14 Taiwan patents and two US patents. In 2012, Dr. Horng with his research team won more than 6 gold awards in Geneva invention exhibition in Swiss, The iENA Nuremberg in Germany, INPEX (Invention and New Product Exposition) Pittsburg, US, International Invention Fair in Middle East, Kuwait during 2012-2017. Additionally, he also serves as the member of IEEE SMC Technical Committee on Computational Collective Intelligence, the government board of Taiwanese Association of Artificial Intelligence (TAAI) and the president of Taiwanese Association of Consumer Electronics (TACE) Moreover, Dr. Horng contributes his effort to the editorial boards of International Journal of Computer Science and Engineering System as well as International Journal of Knowledge Engineering and Soft Data Paradigms published by Elsevier. Dr. Horng also serves as the reviewer of IEEE Transaction on Multimedia, IEEE Transactions on Circuits and System, Information Science, International Journal Machine Learning and Cybernetics, Journal of Information Science and Engineering, Computer Communications, Wireless IEEE CIS Summer School, Kaohsiung, Taiwan, Aug. 21-24, 2018.

2018, Copyright Reserved, IEEE.



Communications and Mobile Computing, IEEE Communications Letters and so on. Meanwhile Dr. Horng also serves as Chairs of eight international academic conferences, a guest editor of International Journal of Innovative Computing, Information and Control 2011. Dr. Horng would like to collaborate the professionals in worldwide to work on network research and academic activity.

# Lecture 2: Text Mining in Deep Learning Era

---

**Date:** 2018/08/21

**Time:** 14:15-15:15

**Place:** 10F Board Room



**Hung-Yu Kao**

Professor and Chair

Computer Science and Information Engineering

Institute of Medical Informatics

National Cheng Kung University

Taiwan

## Curriculum Vitae

**Hung-Yu Kao** received the B.S. and M.S. degree in Computer Science from National Tsing Hua University in 1994 and 1996 respectively. In July 2003, he received the PhD degree from the Electrical Engineering Department, National Taiwan University. He is currently the Director of Institute of Medical Informatics (IMI) and Department of Computer Science and Information Engineering (CSIE) of National Cheng Kung University. He is also the chair of IEEE CIS Tainan Chapter. He was a post-doctoral fellow of Institute of Information Science (IIS), Academia Sinica from 2003 to 2004. His research interests include Web information retrieval / extraction, search engine, knowledge management, data mining, social network analysis and bioinformatics. He has published more than 60 research papers in refereed international journals and conference proceedings. He is a member of IEEE and ACM.



# Lecture 3: Co-Learning with Computers via Distant Supervision

---

**Date:** 2018/08/21

**Time:** 15:30-16:30

**Place:** 10F Board Room



## **Chia-Hui Chang**

Professor

Computer Science and Information Engineering

National Central University

Taiwan

## **Curriculum Vitae**

**Dr. Chia-Hui Chang** is a full Professor at National Central University, Taiwan. Dr. Chang obtained her Ph.D. in Computer Science and Information Engineering from National Taiwan University, Taiwan in 1999. Her research interests focus on Information Extraction, Web Intelligence, Data Mining, Machine Learning and System Integration. Dr. Chang has published more than 80 papers at refereed conferences and journals including WWW, PAKDD, TKDE, IEEE Intelligent Systems, etc. She served as area co-chairs for ACL 2017, NAACL 2018 and PC members for ICDE, CIKM, PAKDD, AAI, ICTIR, etc. She is also an executive director of Taiwan Association for Artificial Intelligence (TAAI) and currently vice president for Association for Computational Linguistic and Chinese Language Processing (ACLCLP).

# Plenary Talk 3: General Game Playing with Monte Carlo Tree Search

---

**Date:** 2018/08/22

**Time:** 09:00-10:00

**Place:** 10F Board Room



## **Jacek Mańdziuk**

Professor

Mathematics and Information Science

Warsaw University of Technology

Poland

## **Curriculum Vitae**

Prof. Jacek Mańdziuk, Ph.D., D.Sc., received M.Sc. (Honors) and Ph.D. in Applied Mathematics from the Warsaw University of Technology (WUT), Poland in 1989 and 1993, resp. and D.Sc. degree in Computer Science from the Polish Academy of Sciences in 2000. In 2011 he was awarded the title of Professor Titular.

He is Full Professor at the Faculty of Mathematics and Information Science, WUT, Head of Division of Artificial Intelligence and Computational Methods, and Head of Doctoral Programme in Computer Science, at this faculty.

He is the author of 3 books (including *Knowledge-free and Learning-based Methods in Intelligent Game Playing*, Springer, 2010) and 130+ research papers. He served as Program Committee Member for 100+ international conferences. Recently he has been the organizer and Chair of the IEEE SSCI Symposium on Computational Intelligence for Human-like Intelligence (Singapore 2013, Orlando 2014, Cape Town 2015, Athens 2016, Honolulu 2017, Bengaluru 2018). He is a General Co-Chair of the 2021 IEEE Congress on Evolutionary Computation (Krakow, Poland).



He serves/served as an Associate Editor of the IEEE Transactions on Neural Networks and Learning Systems, and the IEEE Transactions on Computational Intelligence and AI in Games. He is a Senior Member of IEEE (M'05, SM'10) and a founding chair of the IEEE ETTC Task Force on Towards Human-like Intelligence.

Prof. Mańdziuk was a recipient of the Fulbright Senior Advanced Research Award (UC Berkeley and ICSI Berkeley, USA) and the Robert Schuman Foundation Fellowship (CNRS, Besacon, France). Recently he has been a visiting professor in the School of Computer Engineering, Nanyang Technological University in Singapore (2015-2017). He was also a visiting professor at the University of New South Wales (Australia, 2013), Yonsei University (South Korea, 2011) and the University of Alberta (Canada, 2011).

His research interests include application of Computational Intelligence and Artificial Intelligence methods to games, dynamic optimization problems, human-machine cooperation and financial modeling. He is also interested in development of general-purpose human-like learning and problem-solving methods which involve intuition, creativity and multitasking. For more information please visit <http://www.mini.pw.edu.pl/~mandziuk>.

# Plenary Talk 4: Topological Mapping for SLAM and Visualization

---

**Date:** 2018/08/22

**Time:** 11:00-12:00

**Place:** 10F Board Room



**Naoyuki Kubota**

Professor

Department of System Design Mechanical Systems

Engineering

Tokyo Metropolitan University

Japan

## Curriculum Vitae

**Naoyuki Kubota** graduated from Osaka Kyoiku University in 1992, received the M.E. degree from Hokkaido University in 1994, and received the D.E. degree from Nagoya University, Japan in 1997. He was an Assistant Professor and Lecturer at the Department of Mechanical Engineering, Osaka Institute of Technology, Japan, from 1997 to 2000. In 2000, he joined the Department of Human and Artificial Intelligence Systems, the School of Engineering, Fukui University, as an Associate Professor. He joined the Department of Mechanical Engineering, the Graduate School of Engineering, Tokyo Metropolitan University, Japan, as an Associate Professor in 2004. He was an Associate Professor from 2005 to 2012, and a Professor from 2012 to 2017 at the Department of Systems Design, the graduate School of Systems Design, Tokyo Metropolitan University, Japan. He is currently a Professor at the Department of Mechanical Systems Engineering, the Graduate School of Systems Design, Tokyo Metropolitan University, Japan. He was a Visiting Professor at University of Portsmouth, UK, in 2007 and 2009, and was an Invited Visiting Professor at Seoul National University from 2009 to 2012. His current interests are in the fields of coevolutionary computation, fuzzy control, spiking neural networks, perception-based robotics, robot partners, and informationally structured space. He has published more than 200 refereed journal and conference papers in the above research fields. He received the Best Paper Award of IEEE IECON'96, the Best Paper Award of IEEE CIRA'97, and so on. He was an associate editor of the IEEE Transactions on Fuzzy



Systems from 1999 to 2010, the IEEE CIS Intelligent Systems Applications Technical Committee, Robotics Task Force Chair from 2007 to 2014, IEEE Systems, Man, and Cybernetics Society, Japan Chapter Chair since 2018, and others.

# Lecture 4: Evolutionary Computation for Extending Wireless Sensor Network Lifetime

---

**Date:** 2018/08/22

**Time:** 13:00-14:00

**Place:** 10F Board Room



## **Chuan-Kang Ting**

Professor

Department of Power Mechanical Engineering

National Tsing Hua University

Taiwan

## **Curriculum Vitae**

**Chuan-Kang Ting** is currently a Professor with the Department of Power Mechanical Engineering, National Tsing Hua University, Taiwan. His research interests include evolutionary computation, computational intelligence, machine learning, and their applications in machinery, manufacturing, networks, music and arts. Prof. Ting is an Associate Editor of the IEEE Transactions on Emerging Topics in Computational Intelligence, and an Editorial Board Member of Soft Computing and Memetic Computing journals. He was an Associate Editor of IEEE Computational Intelligence Magazine (2012-2017). He serves as the IEEE CIS Newsletter Editor, Vice Chair of Intelligent Systems Applications Technical Committee, Chair of Creative Intelligence Task Force, and Vice Chair of Intelligent Network Systems Task Force, all in IEEE Computational Intelligence Society (CIS). He has been involved in organization of many international conferences, symposiums, workshops, and special sessions. He serves as the Special Session Chair of IEEE WCCI 2016, WCCI 2018, and CEC 2019. He was the Chair of IEEE Symposium on Computational Intelligence for Creativity and Affective Computing 2013, Program Chair of TAAI 2012 and 2015, and Organizing



Chair of AI Forum 2012. He is an Executive Board Member of Taiwanese Association for Artificial Intelligence.

# Lecture 5: Learning Techniques and Applications of Data-driven Interpretable Fuzzy Systems

---

**Date:** 2018/08/22

**Time:** 14:15-15:15

**Place:** 10F Board Room



## **Chia-Feng Juang**

Professor

Department of Electrical Engineering

National Chung-Hsing University

Taiwan

## **Curriculum Vitae**

**Chia-Feng Juang** received the B.S. and Ph.D. degrees in Control Engineering from the National Chiao-Tung University, Hsinchu, Taiwan, R.O.C., in 1993 and 1997, respectively.

Since 2001, he has been with the Department of Electrical Engineering, National Chung-Hsing University (NCHU), Taichung, Taiwan, R.O.C., where he became a Full Professor in 2007 and has been a Distinguished Professor since 2009. He is the Chair of Taipei Chapter, IEEE Computational Intelligence Society (2017-2018), Director of Taiwan Fuzzy Systems Association, and Director of Chinese Automatic Control Society. He has authored or coauthored nine book chapters (published by IEEE-Wiley, Springer, Academic Press, etc.), over 95 journal papers (including over 55 IEEE journal papers), and over 110 conference papers. His current research interests include computational intelligence, intelligent control, computer vision, and intelligent robots.

Dr. Juang received the Youth Automatic Control Engineering Award from Chinese Automatic Control Society (CACS), Taiwan, in 2006; the Outstanding Youth Award from Taiwan System Science and Engineering Society, Taiwan, in 2010; the Excellent Research Award from NCHU, Taiwan, in 2010; the Outstanding Youth Award from IEEE CIS Summer School, Kaohsiung, Taiwan, Aug. 21-24, 2018.

2018, Copyright Reserved, IEEE.





Taiwan Fuzzy Systems Association, Taiwan, in 2014; and the Outstanding Automatic Control Engineering Award from CACS, Taiwan, in 2014. He was elevated to IET Fellow in 2014 and CACS Fellow in 2016 Dr. Juang is an Associate Editor of the IEEE TRANSACTIONS ON FUZZY SYSTEMS, the IEEE TRANSACTIONS ON CYBERNETICS, the Asian Journal of Control, and the Journal of Information Science and Engineering and an Area Editor of the International Journal of Fuzzy Systems.

# Lecture 6: Human Brain Machine Interaction with Computational Intelligence

---

**Date:** 2018/08/22

**Time:** 15:30-16:30

**Place:** 10F Board Room



**Li-Wei Ko**

Professor

Institute of Bioinformatics and Systems Biology

National Chiao Tung University

Taiwan

## Curriculum Vitae

**Li-Wei (Leo) Ko** received the Ph.D. degrees in Institute of Electrical and Control Engineering from National Chiao Tung University (NCTU) Taiwan in 2007. He currently is Associate Professor in Institute of Bioinformatics and Systems Biology in NCTU. He is also the visiting scholar at Institute for Neural Computation in University of California, San Diego (UCSD). His current primary research interest is focusing on Neural Engineering research, especially in Brain Computer Interface, Real-world Neuroimaging studies, and Neural Computation in the Clinical Applications such as neural rehabilitation, medical device for early diagnosis. Dr. Ko's H-index of the journal citation number is 26 and currently has published 60 journal papers, 104 conference papers, and 8 book chapters. He earned the Young Investigator Project sponsored by the Minister of Science and Technology from 2011-2014. His research group won the Silver and Bronze prizes in the 13<sup>th</sup> (2013) and 15<sup>th</sup> (2015) Macronix Golden Silicon Awards Semiconductor Design and Application Competition in Application Category, respectively, and won the Bronze prize of the Lite-on Award in 2017. Dr. Ko also served over 30 program committees in the international conferences, gave 28 invited talks, and receive 18 academic awards in the neural engineering research.

In academic service, Dr. Ko currently is Associate Editor of IEEE Transactions on Neural Systems and Rehabilitation Engineering (**Impact Factor: 3.972, Rank: 3/65,**



**Top 4.62% of Rehabilitation)** and ever was Associate Editor of IEEE Transactions on Neural Networks and Learning Systems (**Impact Factor: 7.982, Rank: 2/103, Top 1.94% of Computer Science, Theory, and Methods**) in IEEE Computational Intelligence Society (CIS) from 2010-2015. Dr. Ko are also the technical committee members of **Neural Network Technical Committee (NNTC)** and **Fuzzy Systems Technical Committee (FSTC)** in IEEE CIS and chaired a task force on “Fuzzy Modeling in Brain Computer Interactions and Cognitive Systems” in FSTC.

# Plenary Talk 5: Evolutionary Machine Learning - Toward Explainable AI

---

**Date: 2018/08/23**

**Time: 09:00-10:00**

**Place: 10F Board Room**



**Yusuke Nojima**

Professor

Computer Science and Intelligence Systems

Osaka Prefecture University

Japan

## Curriculum Vitae

**Yusuke Nojima** received the B.S. and M.S. Degrees in mechanical engineering from Osaka Institute of Technology, Osaka, Japan, in 1999 and 2001, respectively, and the Ph.D. degree in system function science from Kobe University, Hyogo, Japan, in 2004. Since 2004, he has been with Osaka Prefecture University, Osaka, Japan, where he was a Research Associate and is currently an Associate Professor in Department of Computer Science and Intelligent Systems. His research interests include genetic fuzzy systems, evolutionary multiobjective optimization, and parallel distributed data mining. He was a guest editor for several special issues in international journals. He is currently a task force chair on Evolutionary Fuzzy Systems in Fuzzy Systems Technical Committee of IEEE Computational Intelligence Society. He is an associate editor of IEEE Computational Intelligence Magazine (2014-).

# Plenary Talk 6: Introduction to Social Network Analysis

---

**Date:** 2018/08/23

**Time:** 11:00-12:00

**Place:** 10F Board Room



**Jen-Wei Huang**

Professor

Department of Electrical Engineering

National Cheng Kung University

Taiwan

## Curriculum Vitae

**Jen-Wei Huang** received the BS and PhD degree in electrical engineering from National Taiwan University, Taiwan in 2002 and 2009 respectively. He was a visiting scholar in IBM Almaden Research Center from 2008 to 2009, an assistant professor in Yuan Ze University from 2009 to 2012, and a visiting scholar in University of Chicago in 2016. He is now an assistant professor in the Department of Electrical Engineering, National Cheng Kung University, Taiwan. He majors in computer science and is familiar with data mining. His research interests include data mining, mobile computing, and bioinformatics. Among these, social network analysis, spatial-temporal data mining, and multimedia information retrieval are his special interests. In addition, some of his research are on data broadcasting, privacy preserving data mining, e-learning, and FinTech.

# Lecture 7: When Computational Intelligence Meets Data Mining

---

**Date:** 2018/08/23

**Time:** 13:00-14:00

**Place:** 10F Board Room



## **Tzung-Pei Hong**

Professor

Department of Computer Science and Information  
Engineering

National Kaohsiung University  
Taiwan

## **Curriculum Vitae**

**Tzung-Pei Hong** received his B.S. degree in chemical engineering from National Taiwan University in 1985, and his Ph.D. degree in computer science and information engineering from National Chiao-Tung University in 1992. He served at the Department of Computer Science in Chung-Hua Polytechnic Institute from 1992 to 1994, and at the Department of Information Management in I-Shou University from 1994 to 2001. He was in charge of the whole computerization and library planning for National University of Kaohsiung in Preparation from 1997 to 2000 and served as the first director of the library and computer center in National University of Kaohsiung from 2000 to 2001, as the Dean of Academic Affairs from 2003 to 2006, as the Administrative Vice President from 2007 to 2008, and as the Academic Vice President in 2010. He is currently a distinguished and chair professor at the Department of Computer Science and Information Engineering and at the Department of Electrical Engineering, and the director of AI Research Center in National University of Kaohsiung, Taiwan. He is also a joint professor at the Department of Computer Science and Engineering, National Sun Yat-sen University, Taiwan. He got the first national flexible wage award from Ministry of Education in Taiwan.



He has published more than 600 research papers in international/national journals and conferences and has planned more than fifty information systems. He is also the board member of more than forty journals and the program committee member of more than five hundred conferences. His current research interests include knowledge engineering, data mining, soft computing, management information systems, and www applications.

# Lecture 8: Precision Medicine at NTUH – Current Status and Roadmap

---

**Date:** 2018/08/23

**Time:** 14:15-15:15

**Place:** 10F Board Room



## **Feipei Lai**

Professor

Department of Computer Science and Information  
Engineering

National Taiwan University  
Taiwan

## **Curriculum Vitae**

**Feipei Lai** received a B.S.E.E. degree from National Taiwan University in 1980, and M.S. and Ph.D. degrees in computer science from the University of Illinois at Urbana-Champaign in 1984 and 1987, respectively. He is a professor in the Graduate Institute of Biomedical Electronics and Bioinformatics, the Graduate Institute of Medical Device and Imaging, the Graduate Institute of Health Policy and Management, the Department of Computer Science & Information Engineering and the Department of Electrical Engineering at National Taiwan University. He serves as secretary in medical affairs, National Taiwan University Hospital. He was a vice superintendent of National Taiwan University Hospital. He was the chairman of Taiwan Network Information Center. He was a visiting professor in the Department of Computer Science and Engineering at the University of Minnesota, Minneapolis, USA. He was also a guest Professor at University of Dortmund, Germany and a visiting senior computer system engineer in the Center for Supercomputing Research and Development at the University of Illinois at Urbana-Champaign. His current research interest is Medical Informatics. Prof. Lai is one of the founders of the Institute of Information & Computing Machinery and served as the President during 2009/7-2013/7. He is also a member of Phi Kappa Phi, Phi Tau Phi, Chinese Institute of Engineers, Chinese Institute of Electrical Engineers. Prof. Lai was the chairman of Taiwan Internet Content Rating Foundation. He received the Taiwan Fuji Xerox Research Award in 1991, K-T Li Breakthrough





Award in 2008, IBM Faculty Award, NTU Distinguished Service Award in 2009, Taiwan 2010 IT Distinguished Professionals and 2013 Telehealthcare Distinguished Contribution Award.

# Demo Section: Multinational Demo on Computational Intelligence for Human and Machine Co- learning

---

**Date:** 2018/08/23

**Time:** 15:30-16:30

**Place:** 10F Reception Room



**Wen-Huei Liu**

Acting Director

Department of Information and Technology Education

Ministry of Education

Taiwan



**Sun-Lu Fan**

Director-General

Kaohsiung Education Bureau

Kaohsiung City Government

Taiwan



## Chang-Shing Lee

Professor

Computer Science and Intelligence Systems

National University of Tainan

Taiwan

## Curriculum Vitae

**Chang-Shing Lee** is currently a Professor with the Department of Computer Science and Information Engineering, National University of Tainan (NUTN), Taiwan. He was the Director of Computer Center from February 2006 to July 2011, and Dean of Research and Development Office from January 2011 to July 2015. He also co-organized TANET 2010 (General Co-Chair) and FUZZ-IEEE 2011(Program Chair) during his Director of Computer Center term. He handled the university assessment affairs of NUTN in 2011 and assisted Ministry of Education (MOE, Taiwan) to deal with the gender equality event and state compensation of The Affiliated School for Students with Hearing Impairments of National University of Tainan (2013/10-2015/1) to implement University Social Responsibility (USR) during his Dean of RD Office term. Since Sept. 2007, he has assisted MOE to establish the platform of remedial instruction for students from elementary schools and junior high schools. In 2017, he utilized the resources of Taiwan's academic institutes and research institutes to co-invite Facebook AI Research (FAIR) Director Yann LeCun to visit Taiwan and to give public speeches in Taiwan. It is hoped to speed up Taiwan's AI industrial development and real-world applications.

His current research interests include artificial intelligence, adaptive assessment and self-learning, intelligent agent, ontology applications, Capability Maturity Model Integration (CMMI), fuzzy theory and applications, and machine learning. He also holds several patents on Fuzzy Markup Language (FML), ontology engineering, document classification, image filtering, and healthcare. He was awarded Certificate of Appreciation for outstanding contributions to the development of IEEE Standard 1855TM-2016 (IEEE Standard for Fuzzy Markup Language). In addition, he was awarded Certificates of contributions to Human and Smart Machine Co-Learning and contributions to FML-based Machine Learning Competition for Human Prediction and Applications on Game of Go awarded by IEEE SMC 2017 and FUZZ-IEEE 2017, respectively. He was a keynote speaker of Intelligent Agents Symposium of IEEE SSCI 2017 (Hawaii).

He is IEEE CIS Summer Schools Subcommittee Chair in 2018. He was IEEE CIS Tainan Chapter Chair (2015/8-2017/7), IEEE CIS Emergent Technologies Technical Committee (ETTC) Chair from 2009 to 2010, and ETTC Vice-Chair in 2008. He is also an Associate Editor or Editor Board Member of International Journals, such as IEEE Transactions on Computational Intelligence and AI in Games (IEEE TCIAIG), Applied Intelligence, Soft Computing, Journal of Ambient Intelligence & Humanized Computing (AIHC), International Journal of Fuzzy Systems (IJFS), Journal of Information Science and Engineering (JISE), and Journal of Advanced Computational Intelligence and Intelligent Informatics (JACII). According to Google Scholar, Prof. Lee has published over 150 papers and his papers' cited number on Google Scholar is over 3400. His h-index and i10-index are 28 and 61, respectively. Prof. Lee was awarded the outstanding achievement in Information and Computer

IEEE CIS Summer School, Kaohsiung, Taiwan, Aug. 21-24, 2018.

2018, Copyright Reserved, IEEE.



Education & Taiwan Academic Network (TANet) by Ministry of Education of Taiwan in 2009 and the excellent or good researcher by National University of Tainan from 2010 to 2016. He is a senior member of the IEEE CIS and a member of the Taiwanese Association for Artificial Intelligence (TAAI).

# Plenary Talk 7: Introduction to Reinforcement Learning and Its Applications

---

**Date:** 2018/08/24

**Time:** 09:00-10:00

**Place:** 10F Board Room



## **Kao-Shing Hwang**

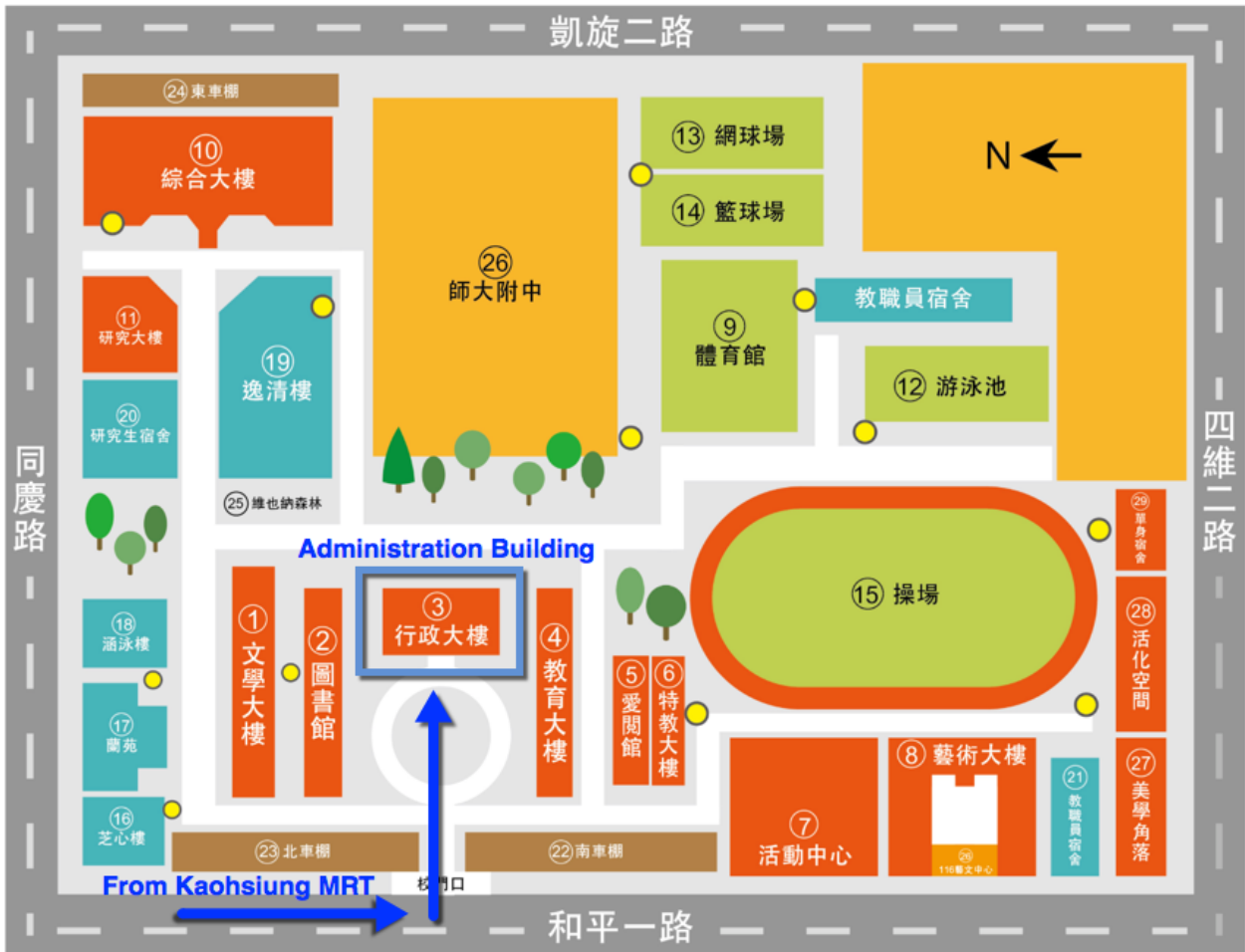
Department of Electrical Engineering  
National Sun Yat-Sen University  
Taiwan

## **Curriculum Vitae**

**Kao-Shing Hwang** (M'93–SM'09) received the M.M.E. and Ph.D. degrees in electrical and computer engineering from Northwestern University, Evanston, IL, USA, in 1989 and 1993, respectively. He was with National Chung Cheng University, Taiwan, from 1993 to 2011. He was the Deputy Director of the Computer Center from 1998 to 1999, the Chairman of the Electrical Engineering Department from 2003 to 2006, and the Director of the Opti-Mechatronics Institute, National Chung Cheng University, from 2010 to 2011. He is currently a Professor of the Electrical Engineering Department, National Sun Yat-sen University, and also an Adjunct Professor with the Department of Healthcare Administration and Medical Informatic, Kaohsiung Medical University, Taiwan. His research interests include methodologies and analysis for various intelligent robot systems, machine learning, embedded system design, and ASIC design for robotic applications. He is a fellow of the Institution of Engineering and Technology.

# Venue

10F Board Room, Administration Building,  
National Kaohsiung Normal University (Ho-Pin Campus)  
116, Heping 1st Rd., Lingya District, Kaohsiung 80201, Taiwan.



# Pictures



Group photo for IEEE CIS summer school on computational intelligence for human and machine co-learning



Dr. Lien-Shang Wu on Plenary Talk 1



Dr. Pau-Choo Chung on Plenary Talk 1



Dr. Kuo-Sheng Cheng on Plenary Talk 1





Dr. Hung-Yu Kao on Plenary Talk 1



Dr. Chen-Fu Chien on Plenary Talk 2



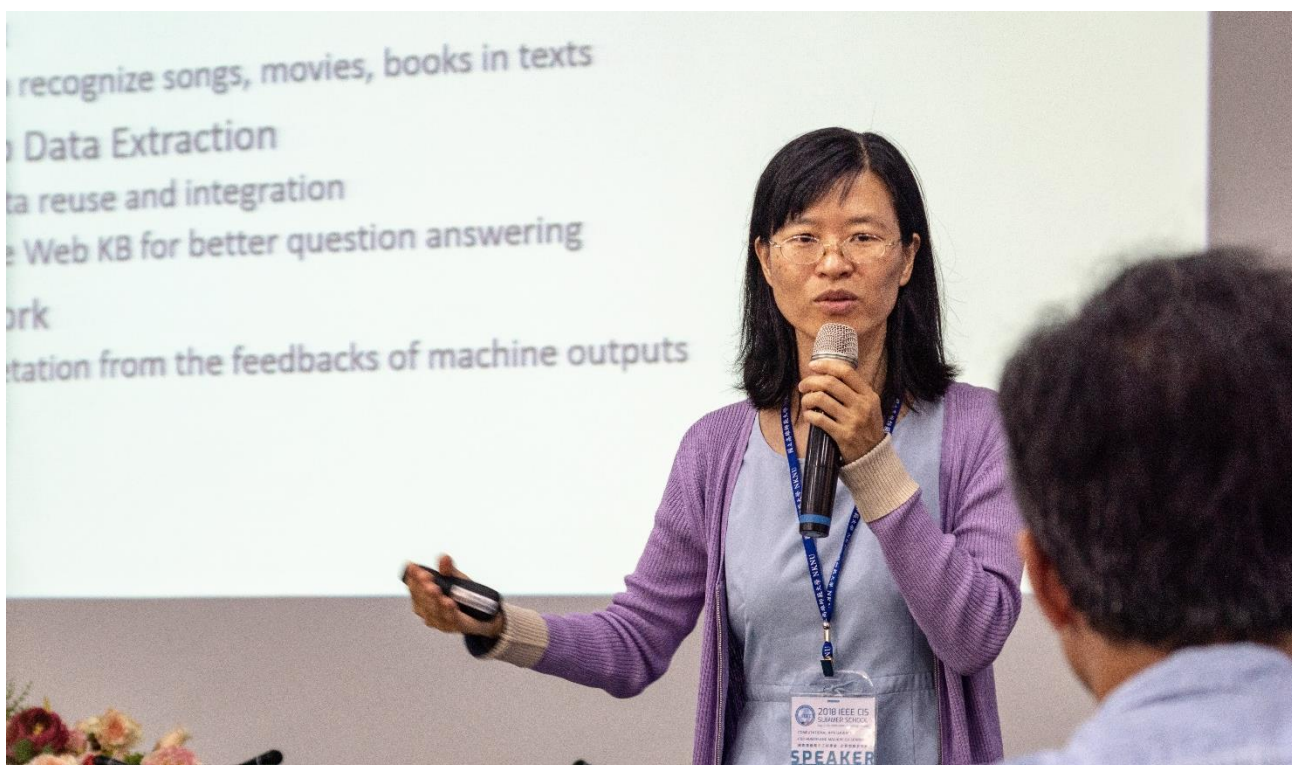
Dr. Yun-Nien Sun on Plenary Talk 2



Dr. Mong Fong Horng on “Trend of AI in IoT”



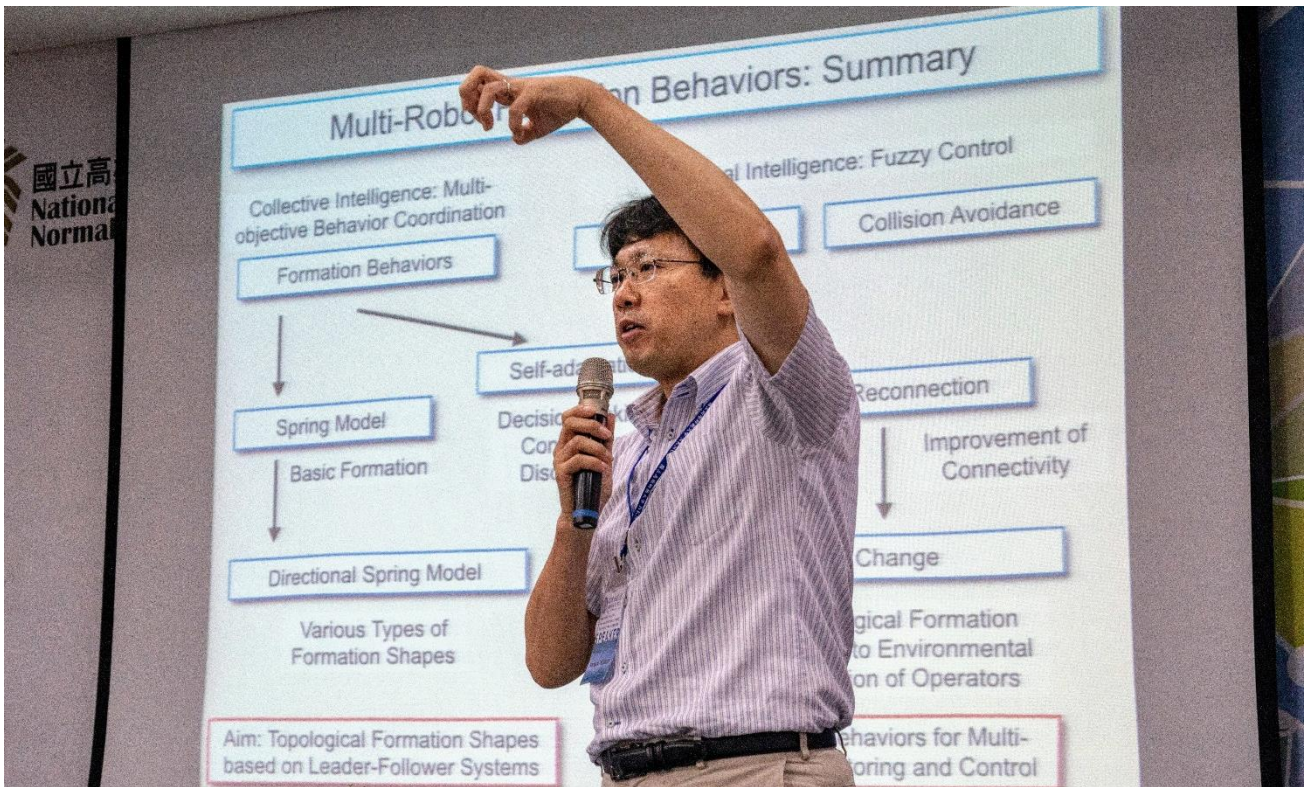
Dr. Hung-Yu Kao on “Text Mining in Deep Learning Era”



Dr. Chia-Hui Chang on  
 “Co-Learning with Computers via Distant Supervision”



Dr. Jacek Mańdziuk on  
 “General Game Playing with Monte Carlo Tree Search”



Dr. Naoyuki Kubota on  
 “Topological Mapping for SLAM and Visualization”



Dr. Chuan-Kang Ting on  
“Evolutionary Computation for Extending Wireless Sensor Network Lifetime”



Dr. Chia-Feng Juang on  
“Learning Techniques and Applications of Data-driven Interpretable Fuzzy Systems”



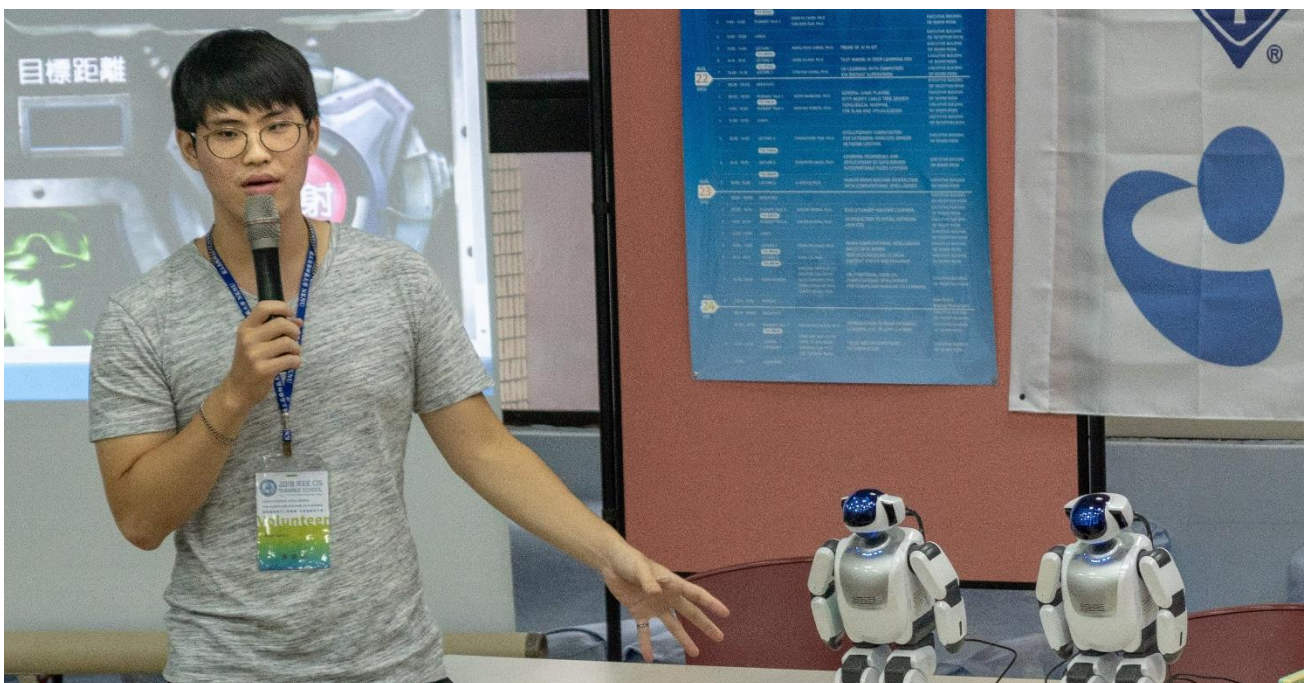
Dr. Li-Wei Ko on  
“Human Brain Machine Interaction with Computational Intelligence”



Dr. Yusuke Nojima on  
“Evolutionary Machine Learning – Toward Explainable AI”



Dr. Chang-Shing Lee on Demo Section



Dr. Chang-Shing Lee's research team on Demo Section



Dr. Chang-Shing Lee' s research team on Demo Section



Dr. Fei-pei Lai on  
“Precision Medicine at NTUH - Current Status and Roadmap”





Professional Go players on Demo Section



Go Master Chun-Hsun Chou on Demo Section



Go Master Chieh-Han Lin on Demo Section



Attendees on Demo Section



Dr. Po-Hsun Cheng on Demo Section



Attendees on Demo Section



Group photo for Demo Section

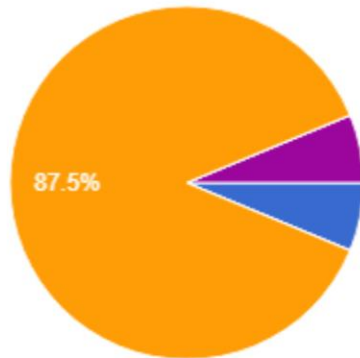


Attendees

# Feedback

## 1. What is your status(您的報名身分為)?

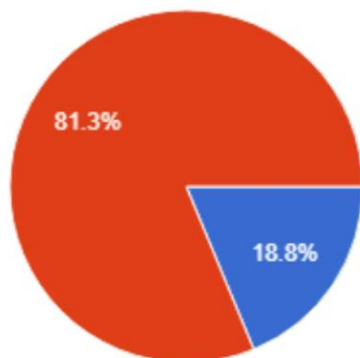
16 則回應



- High School Student (高中生)
- College Student (大學生)
- Master Student (碩士生)
- Doctoral Student (博士生)
- Teacher

## 2. What is your gender(您的性別為)?

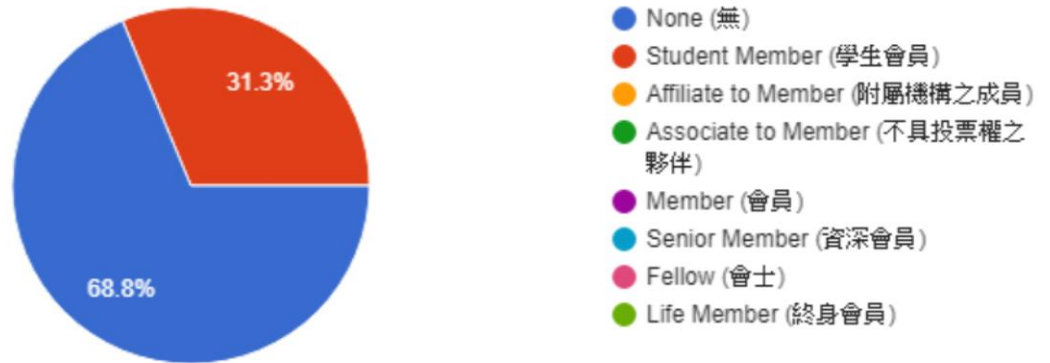
16 則回應



- Female (女)
- Male (男)

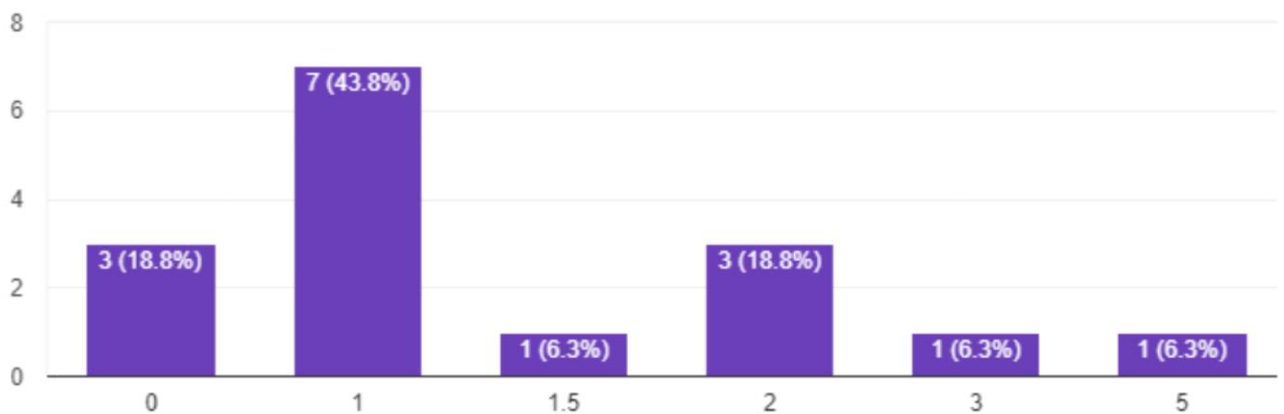
### 3. What is your IEEE membership(您的IEEE會員關係為)?

16 則回應



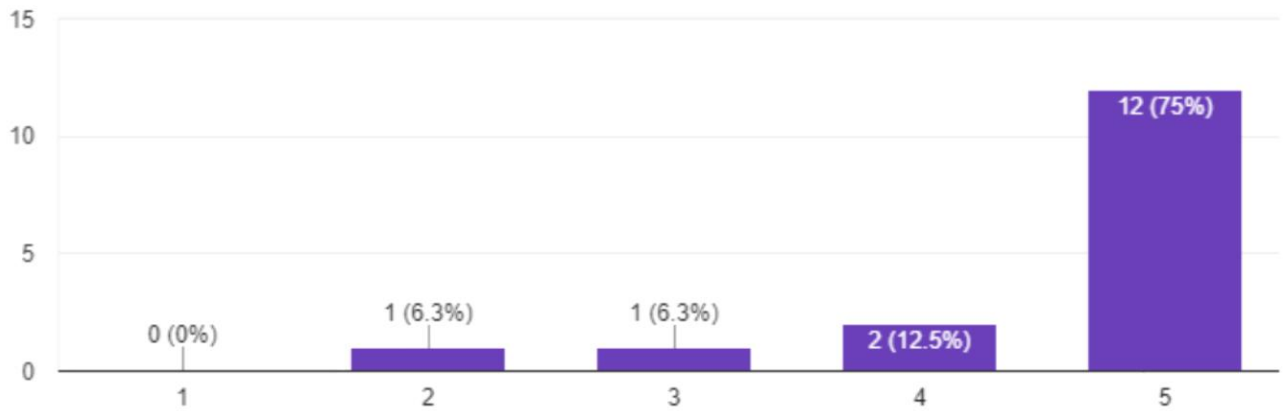
### 4. How many years have you experienced in Computational Intelligence? (您對計算智慧的經驗為幾年?)

16 則回應



### 5. The lecturers are well prepared (講者們有充分準備).

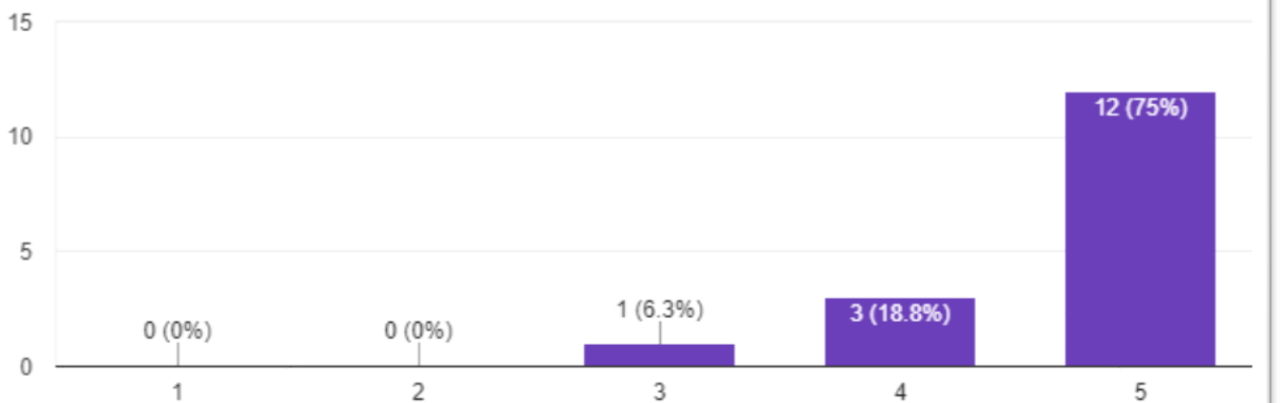
16 則回應



### 6. The lecturers speech with enthusiasm and serious attitude (講者們演講有熱忱且態度認真).

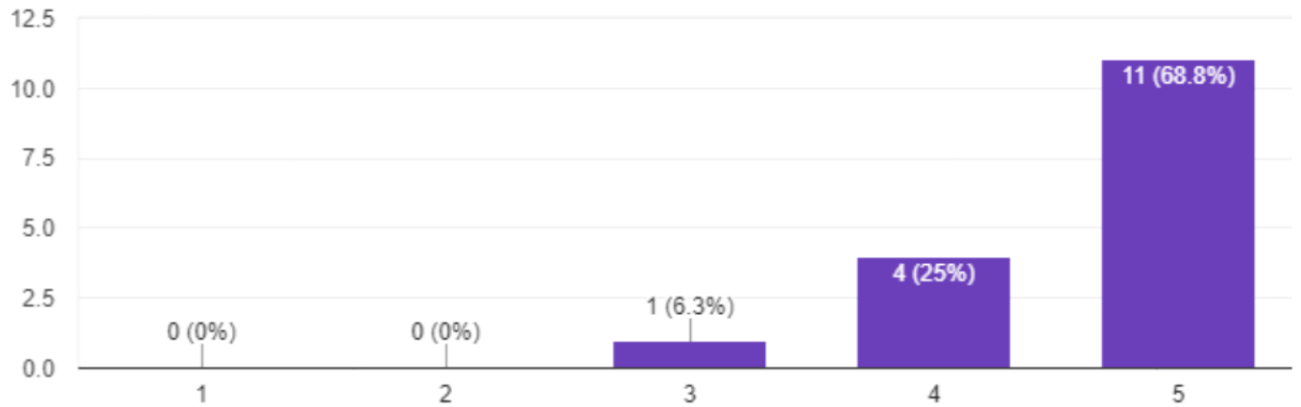
(講者們演講有熱忱且態度認真).

16 則回應



### 7. The lecturers' speech contents are substantial (講者們的演講內容充實).

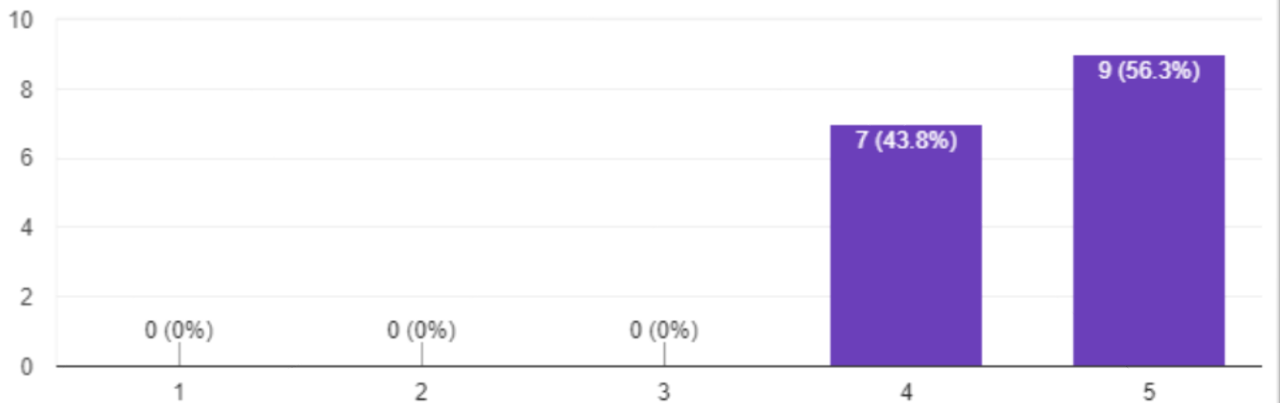
16 則回應



### 8. The lecturers' speeches can boost your interest (講者們的演講能引起您的興趣).

(講者們的演講能引起您的興趣).

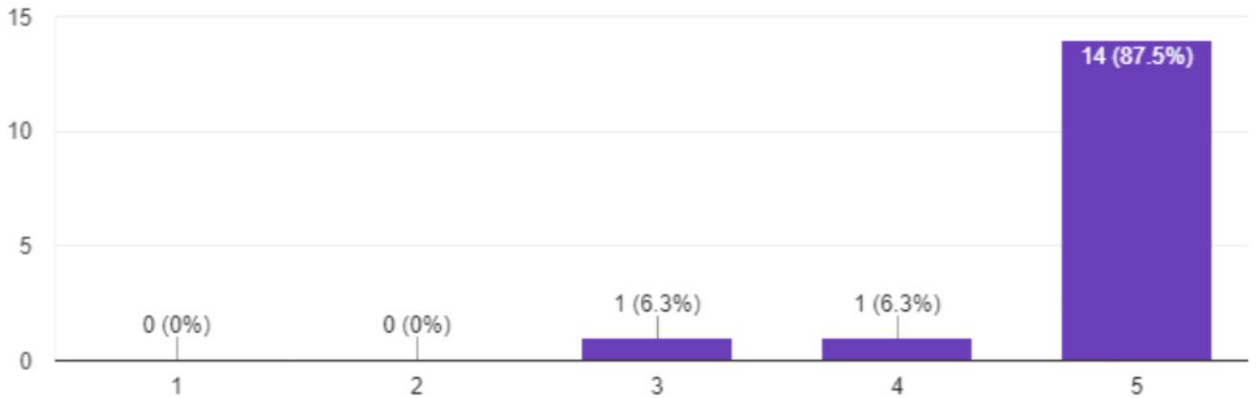
16 則回應





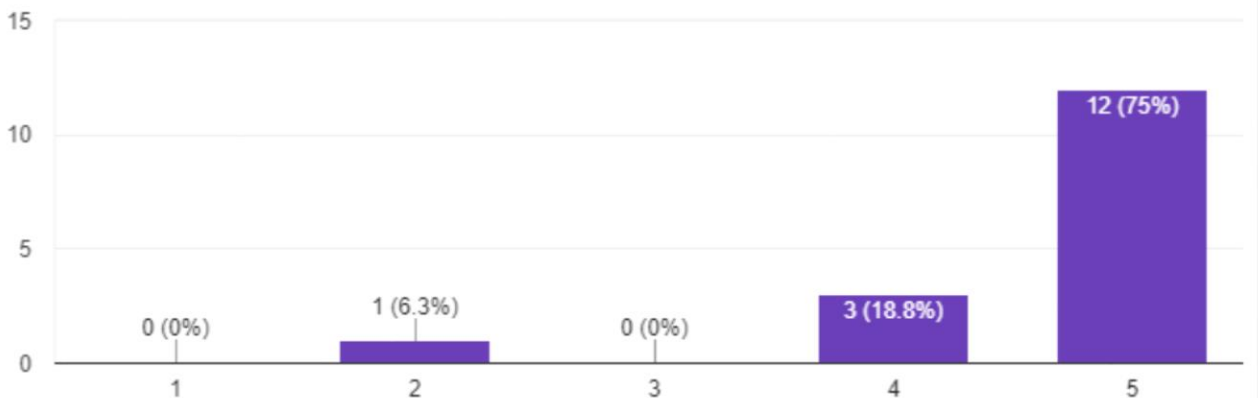
9. You feel that the lectures help you improve your Computational Intelligence knowledge a...演講可以讓您的計算智慧知識與技能可以有所提升).

16 則回應



10. You enjoy the summer school experience (您很享受此次的夏令營).

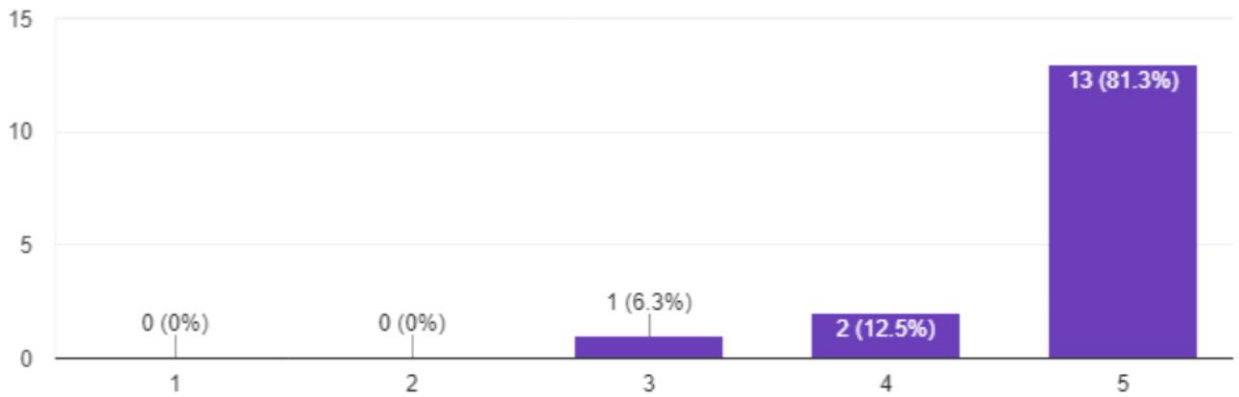
16 則回應





11. If other similar activities were held by IEEE CIS, you would be glad to join them(如果IEEE CIS還有類似的活動再舉辦，您會很高興再參加).

16 則回應





# Notes

A strong southwesterly airstream brought torrential rain to Kaohsiung from midnight to early morning Friday (Aug 24th), causing serious flooding in many areas of the city.

At about 6 a.m., Kaohsiung City Government announced that schools and businesses will be closed Friday (Aug 24th), urging the public to remain vigilant as the downpour continues.

## Directorate-General of Personnel Administration, Executive Yuan

Update Time : 2018/08/24 11:55:02

107/ 8/ 24/ Work and Class Status during Natural Disasters

County/City Government	Work and Class Status during Natural Disasters
Taichung City	Work and Classes Cancelled Today.
Changhua County	Work and Classes Cancelled Today.
Yunlin County	Work and Classes Cancelled Today.
Nantou county	Work and Classes Cancelled Today. Work and Classes as Usual Tomorrow.
Chiayi City	Work and Classes Cancelled Today.
Chiayi County	Work and Classes Cancelled Today.
Tainan City	Work and Classes Cancelled Today.
<b>Kaohsiung City</b>	<b>Work and Classes Cancelled Today.</b>
	Work and Classes as Usual Today.
Pingtung County	MajiaTownship(瑪家鄉):Work and Classes Cancelled Today. ShiziTownship(獅子鄉):Work and Classes Cancelled Today.

The last day of the summer school was called off due to this situation.