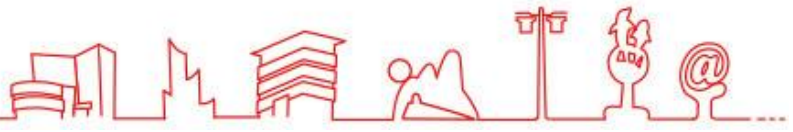




淡江大學
Tamkang University



The International Conference on Recent Advancements in Computing, IoT and Computer Engineering Technology (CICET 2017)

Tamsui, Taipei, October 23-25, 2017

Venue: E680, Main Engineering Building, Tamsui Campus,
Tamkang University, Taipei, Taiwan



VersaSense



CICET'17 Chair's Welcome Message

It is our great pleasure to welcome you to participate in the International Conference on Recent Advancements in Computing, IoT and Computer Engineering Technology (CICET'17) to take place on the Tamsui Campus of the Tamkang University, Taipei, Taiwan, October 23-25, 2017.

CICET'17 provides a communication platform for researchers and practitioners both from academia and industry to share and disseminate their new research findings. CICET'17 also serves as a good conventional conference in the areas covering the spectrum of Computing, Internet of Things (IoT), Computer Engineering Technology and Big Data Analysis.

We would like to thank our colleagues Professors Steven Guan and Jian-Nong Cao who served as Honorary Chairs, and Professors Hui-Huang Hsu and Chien-Chang Chen who acted as Local Chairs. We also wish to thank all program committee members, the authors who submitted papers, speakers, as well as the conference attendees. This conference is held for you, and we thank you for your active participation and wish you to enjoy the conference with fruitful experience.

Finally, we strongly encourage researchers to contribute and make submissions to the next CICET conference.

Ka Lok Man

Woonkian Chong

Owen Liu

Chairs of CICET'17

Date and Location

23-25 October 2017

Location: E680, Main Engineering Building, Tamsui Campus, Tamkang University (TKU)

No.151, Yingzhuan Rd., Tamsui Dist., New Taipei City 25137, Taiwan (R.O.C.)

Host Institution

Tamkang University, Taiwan

Supporters

Research Institute of Big Data Analytics, Xi'an Jiaotong-Liverpool University, China

Swinburne University of Technology Sarawak Campus, Malaysia

Baltic Institute of Advanced Technology, Lithuania

Taiwanese Association for Artificial Intelligence, Taiwan

VersaSense, Belgium

International Journal of Design, Analysis and Tools for Integrated Circuits and Systems

DATICS Research Group

Conference Website: <http://cicet17.datics.net>

Introduction to the conference

The International Conference on Recent Advancements in Computing, IoT and Computer Engineering Technology (CICET) is a communication platform of researchers and practitioners both from academia and industry in the areas of Computing, Internet of Things (IoT), Integrated Circuits and Systems and Computer Engineering Technology. The main target of CICET 2017 is to bring together software/hardware engineering researchers, computer scientists, practitioners and people from industry and business to exchange theories, ideas, techniques and experiences related to all aspects of CICET. Finally, CICET 2017 will take place in The Tamkang University, Taipei, Taiwan, and October 23-25, 2017.

This year CICET has selected Big Data as its central theme. Big Data is in a unique position in computing in that it is not only one of the hottest research areas but has become a competitive necessity in most industries. With the growth of mobile computing and the Internet of Things and the associated increase in data collection capabilities, the volume and variety of data available will only increase. However, in order to effectively and securely collect and utilize this data, new computational tools, models, and platforms need to be created. Because of the practical nature of Big Data, this needs to happen in parallel with the development of industry policies, standards, and applications in order for these new techniques to address and inform the needs of industry.

CICET2017 Conference Program – Day 1 (October 23)

9.30 Registration

10:00 Opening remark (Prof. Chien-Chang Chen, Chairman of Department of Computer Science and Information Engineering, Tamkang University, Taipei, Taiwan)

10:15 Keynote speech (Prof. Hui-Huang Hsu, Dean of College of Engineering, Tamkang University, Taiwan and President of the Taiwanese Association for Artificial Intelligence - AI in Elderly Care)

11:00 Coffee break & Poster session (Chair: Prof. Chien-Chang Chen, Tamkang University, Taiwan; Papers #1 – 5)

1. Vladimir Hahanov, Wajeb Gharibi, Svetlana Chumachenko, Igor Iemelianov, Mykhailo Liubarskyi and Eugenia Litvinova, *Quantum Data Structures for SoC Component Testing*, Kharkov National University of Radioelectronics, Ukraine
2. Kai-Hung Liao and Chi-Yi Lin, *Implementation of IoT Applications based on MQTT and MQTT-SN in IPv6 over Bluetooth Low Energy*, Tamkang University, Taiwan
3. Rūta Užupytė and Tomas Krilavičius, *Identification of Electricity Consumption Profiles based on Smart Meters Data*, Vytautas Magnus university and Baltic Institute of Advanced Technology, Lithuania
4. Yongseok Sim, Jeenmo Yang and Juangtak Ryu, *150W Military Grade Resonant-Reset Forward DC-DC Converter*, Daegu University, South Korea
5. Audrius Varoneckas, Ausra Mackute-Varoneckiene and Tomas Krilavicius, *A Review of Predictive Maintenance Systems in Industry 4.0*, Vytautas Magnus University and Baltic Institute of Advanced Technology, Lithuania

12:00 Lunch - 古今中外 restaurant (in front of the Tamkang Chueh-sheng Memorial Library) sponsored by SOLARI (ASIA) Limited

13:30 Session 1 (Chair: Dr. Owen Liu, Xi'an Jiaotong-Liverpool University, China; Papers #6 – 11)

6. Yujia Zhai, Kejun Qian, Sanghyuk Lee, Fei Xue and Moncef Tayahi, *Modeling of Automotive Engine Dynamics using Diagonal Recurrent Neural Network*, Xi'an Jiaotong-Liverpool University, China
7. Chomtip Pornpanomchai, Jitti Somsiri, Achiraya Toaditthep and Ariya Promdeerach, *Rock-paper-scissors Game between Human and Computer*, Mahidol University, Thailand
8. Muhammad Mazhar Ullah Rathore, Anand Paul, Seungmin Rho and Awais Ahmad, *Smart Transportation Decision Making through Big Graphs and IoT*, Sungkyul University, Anyang, South Korea
9. Gangmin Li and Minghang Chi, *expertSFCF: Improving CF with Expert and Fusion*, Xi'an Jiaotong-Liverpool University, China
10. Yakub Sebastian, Xun Ting Tiong, Valliapan Raman, Alan Yean Yip Fong and Patrick Hang Hui Then, *Advances in Diabetes Analytics from Clinical and Machine Learning Perspectives*, Swinburne University of Technology Sarawak Campus, Malaysia
11. Fan Yang, Danny Hughes and Wouter Joosen, *Rumble: a Low Power Audio Bus for Wireless Communication with Sensors in Liquid and Metallic Environments*, KU Leuven, Belgium

15:30 Coffee break

16:00 Session 2 (Chair: Dr. Yujia Zhai, Xi'an Jiaotong-Liverpool University, China; Papers #12 – 19)

12. Chuang-Yuan Chiu and Ross Sanders, *Quantifying Obesity from Anthropometric Measures and Body Volume Data*, Sheffield Hallam University, UK
13. Gautam Pal, Gangmin Li and Katie Atkinson, *Multi-agent Item to Item Contextual Big Data Recommender System*, University of Liverpool, UK
14. Shih-Hao Chang, *An Indoors Toxic Gas Detection and Positioning System Utilizing Visible Light*, Tamkang University, Taiwan
15. Yuan Ding, Ou Liu, Yiwei Yao and Chi On Chan, *Multi-Objective Portfolio Optimization in the Stock Market*, Hang Seng Management College, Hong Kong.
16. Kai Chen, Yung-Wei Chen, Chih-Chieh Hung and Sy-Yen Kuo, *A Cooperative Energy Efficient Mechanism for Multi-UAV Systems*, National Taiwan University, Taiwan.
17. Youwei Ma and Kaiyu Wan, *Classification of Data Characteristics in Health Care Industry*, Xi'an Jiaotong-Liverpool University, China
18. Yuji Dong and Kaiyu Wan, *Reputation-based Framework with Semantic Match for the Internet of Things*, University of Liverpool, UK
19. Phoenix Feng, Dejun Xie and Woon Kian Chong, *Interconnectedness Analysis of Second Board Markets*, Xi'an Jiaotong-Liverpool University, China

18:30 Award ceremony

19:00 Conference banquet - 1010 湘 restaurant (9F., 8 Zhongshan Rd., – close to the Tamsui MTR Station)

CICET2017 Conference Program – Day 2 (October 24)

9:30 Registration

10:00 MSc and PhD Student Workshop (Chair: Dr. Woonkian Chong, Xi'an Jiaotong-Liverpool University, China; Papers #1 – 5)

1. Yu-Jing Lin and Chien-Chang Chen, *A Text Mining Approach for Analyzing the Politics Similarity of Taiwan Legislative Elections*, Tamkang University, Taiwan
2. Pradeep Sagayam and Yihjia Tsai, *Live Streaming using Web Realtime Communication for an E-class Teaching Platform*, Tamkang University, Taiwan
3. Yi Zhang and Ou Liu, *Social Network Analysis for Campaign Finance Influence Elections*, Xi'an Jiaotong-Liverpool University, China
4. Vijayakumar Nanjappan, *Clothing-based Interfaces for interacting with Mobile Devices*, University of Liverpool, UK
5. Wenye Chen and Yao Bei, *A Framework for Auditing based on Data Analysis – A Simulation Case*, Xi'an Jiaotong-Liverpool University, China

14:00 Excursion to the Chiang Kai-shek Memorial and Farewell reception

CICET2017 Conference Program – Day 3 (October 25)

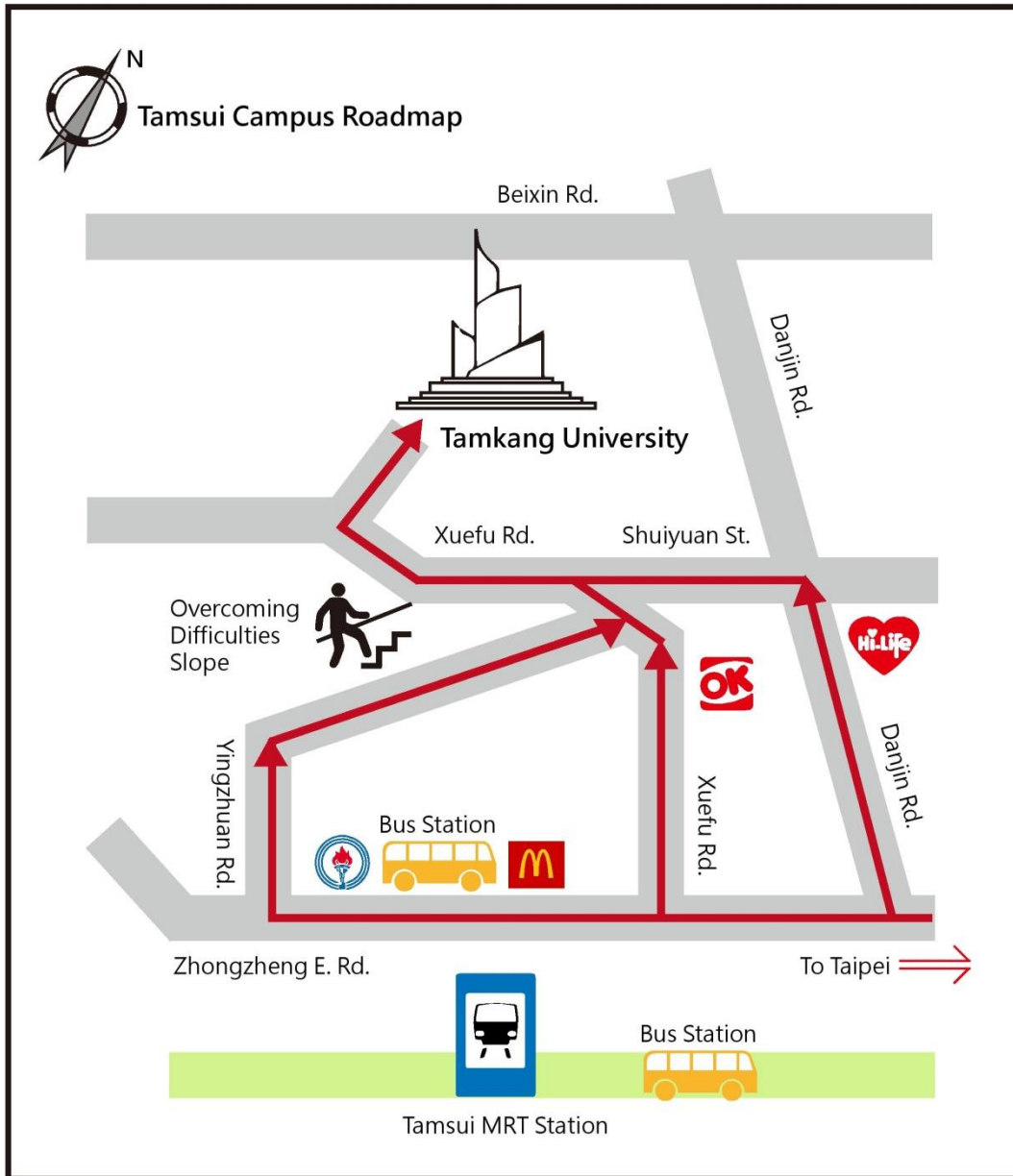
10:00 Steering committee meeting

11:00 Coffee break

11:30 CICET2018 organizing committee meeting

12:30 CICET2017 close

Tamkang University Roadmap



Tamsui Campus address: No.151, Yingzhuang Rd., Tamsui Dist.,
New Taipei City 25137, Taiwan (R.O.C.)
Tel. : +886-2-26215656

Tamsui Campus Map

1	鶯聲銅像廣場	Statue of Mr. Chang Ching-sheng	12	會文館(F)	Hwei-wen Hall (F)	22	文錕音樂廳	Carrie Chang Music Hall
2	大門管制站	Main Entrance Guard House	13	商管大樓(B)	Business and Management Building (B)	23	學人宿舍	Faculty Residences
3	紹興紀念游泳館(N)	Shao-mo Memorial Natatorium Complex (N)	14	海事博物館(M)	Maritime Museum (M)	24	覺生紀念圖書館(U)	Chueh-sheng Memorial Library (U)
4	羅先紀念科學館(S)	Liu-hsien Memorial Science Hall (S)	15	工學館(G)	Engineering Building (G)	25	覺生綜合大樓(I)	Chueh-sheng Memorial Hall (I)
5	鍾靈化學館(C)	Chung-ling Chemistry Hall (C)	16	工學大樓(E)	Main Engineering Building (E)	25	覺生國際會議廳(10樓)	Chueh-sheng International Conference Hall (10th Fl.)
6	圖書館鍾靈分館	Chung-ling Library	17	教育學院(ED)	College of Education (ED)	26	學生活動中心(R)	Student Activity Center (R)
7	傳播館(O)	Communication Hall (O)	18	松濤館(Z)	Sung-tao Hall (Z)	27	教職員停車場	Faculty Parking Lot
8	傳播館(O)	Communication Hall (O)	19	文錕藝術中心	Carrie Chang Fine Arts Center	28	視聽教育館(V)	Audio-visual Education Building (V)
9	紹興紀念體育館(SG)	Shao-mo Memorial Gymnasium (SG)	20	外國語文大樓(FL)	College of Foreign Languages and Literatures (FL)	29	行政大樓(A)	Administration Building (A)
10	羅澤國際學舍(J)	Reitaku International House (J)	21	鶯聲紀念大樓(T)	Ching-sheng Memorial Hall (T)	30	宮燈教室(H)	Chinese Palace-style Classrooms (H)
11	文學館(L)	College of Liberal Arts (L)	21	鶯聲國際會議廳(3樓)	Ching-sheng International Conference Hall (3rd Fl.)	31	覺軒花園	Chueh-hsuan Chinese Garden
			21	鶯聲國際會議廳(4樓)	Ching-sheng International Conference Hall (4th Fl.)	32	守謙國際會議中心	Hsu Shou-Chlien International Conference Center



The CICET conference will be held at E680, Main Engineering Building (*Block 16*), Tamsui Campus, Tamkang University.

Transportation

Tamkang University (TKU)

No.151, Yingzhuan Rd., Tamsui Dist., New Taipei City 25137, Taiwan (R.O.C.)

Taiwan Taoyuan International Airport to the Tamsui Campus of Tamkang University:

(1) By Taxi

Taxi stands are located outside the Arrival Halls of both Terminals 1 and 2. Taxis are available at Taoyuan Airport 24 hours a day. They charge according to the meter and add a 50% surcharge to the metered total (highway tolls not included). A typical taxi fare from Taiwan Taoyuan International Airport to Taipei is approximately NT\$1,100~1,500. It takes about one hour to get to the Tamsui campus. (Recommended if carrying heavy luggage)

(2) By Taoyuan Airport Mass Rapid Transit (MRT)

First, take a subway/MRT from the Airport Terminal 2 station (A13)/Airport Terminal 1 station (A12) to the Taipei Main station (A1). Then, change to the Red Line MRT (Xinyi Line) and leave at the Tamsui station which is the final stop on the red line.

From there, take the R27 bus to the Tamsui Campus. The bus ride should take approximately 10 minutes. Alternatively, you may want to catch a taxi. The taxi ride should take about 5 minutes (approx. NT\$120 per trip).

Taiwan Taoyuan International Airport: (<http://www.taoyuan-airport.com>)

Mass Rapid Transit (MRT): (<http://english.trtc.com.tw>)

Accommodation

1. Hotel Regalees (4 stars), No. 89, Xue-Fu Road, Tamsui District, New Taipei City 251, Taiwan (R.O.C), 25142. (<http://www.regalees-hotel.com.tw/en>)
2. Happiness Danhsui (3 stars), No. 151, Section 1, Shuiyuan Street, Tamsui District, Taipei, Taiwan, 25146. (<http://justad.info/1095337-Happiness-danhsui>)

Conference banquet - 1010 湘 restaurant (<http://www.1010restaurant.com>)

View:



Address:

■ 淡水店 Danshui Store MAP

地址: 新北市淡水區中山路8號9樓【9F., 8 Zhongshan Rd., Tamsui Dist., New Taipei City】

電話: (02)2629-0056 / 網路電話: 070-1012-8590

位於淡水捷運站旁以景觀優美著稱, 配合店內長長一整排透明玻璃窗, 每當夕陽西下, 觀音山、淡水河、藍天白雲與夕陽餘暉交會無比美景。

營業時間: 一~四 11:00~14:30 / 17:00~21:30

五 11:00~14:30 / 17:00~22:00

六 11:00~22:00

日 11:00~21:30

捷運: 淡水信義線【淡水站】1號出口

公車站名: 捷運淡水站

(可連結至 [大都會廣場](#) 網站查詢)

Map:

