C O N T E N T S

Welcome Message

Hello, Welcome to the joint conferences **18th International Conference on Computer Applications (ICCA 2020)** and **12th International Conference on Future Computer and Communication (ICFCC 2020)** in Yangon from 27-28 February, 2020.

ICCA 2020, organized by University of Computer Studies, Yangon under Ministry of Education, Myanmar, provides a forum for the presentation of technological advances and current research results in the fields of theoretical, experimental and applied computing and technologies. ICCA 2020, the 18th in the series that has been held annually since 2003, will bring together leading engineers and scientists in computer and information technology from around the world.

This year, ICCA 2020 will also be held jointly with ICFCC 2020. Both conferences offer an excellent opportunity to learn and share the latest developments to interact with leading experts in the field to strengthen the research laboratories and universities.

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Keynote Speech

Prof. Yutaka Ishibashi, Professor

Nagoya Institute of Technology, Japan

- **Date and Time:** Feb. 27 (Thu) 10:00 – 10:45
- **Title:** Remote Cooperation among Humans and Robots with Force Feedback

Abstract

Recently, remote cooperation among humans and robots attracts increasing attention from many researchers. By using force feedback in the remote cooperation, humans can perceive reaction force via haptic interface devices over a network when the robots having force sensors hit/touch objects. Thus, the usage of force feedback enables us to improve the efficiency and precision of cooperative work. Especially, by using multiple robots, we can do various types of work which only humans cannot do or only robots cannot do. However, when information about force is transmitted over a network, the quality and stability may seriously degraded. To realize stable and high-quality remote robot control with force feedback, we need to integrate and enhance stabilization control and QoS (Quality of Service) control which we have independently studied so far. In the speech, we will explain the current state of study on remote cooperation among humans and robots with force feedback and present new directions of the study.

Biography:

Yutaka Ishibashi received the B.E., M.E., and Ph.D. degrees from Nagoya Institute of Technology, Nagoya, Japan, in 1981, 1983, and 1990, respectively. In 1983, he joined the Musashino Electrical Communication Laboratory of Nippon Telegraph and Telephone Public Corporation (currently, NTT). From 1993 to 2001, he served as an Associate Professor of Department of Electrical and Computer Engineering, Faculty of Engineering, Nagoya Institute of Technology. Currently, he is a Professor of Department of Computer Science, Graduate School of Engineering, Nagoya Institute of Technology. From June 2000 to March 2001, he was a visiting researcher, Department of Computer Science and Engineering, University of South Florida (USF), USA. He was the Head of Department of Computer Science, Nagoya Institute of Technology from 2005 to 2006 and from 2007 to 2009. He is currently a College Director at Nagoya Institute of Technology. His research

interests include multisensory communications, QoS (Quality of Service) control, and remote robot control with force feedback.

He was the Chair of the IEICE Communication Quality Technical Committee from 2007 to 2009. He served as TPC Chair of IEEE CQR (Communications Quality and Reliability) Workshop in 2011 and 2012. He also served as NetGames (Network and Systems Support for Games) Workshop Co-Chair in 2006, 2010, 2014, and 2017, Executive Committee Chair of Tokai-Section Joint Conference on Electrical, Electronics, Information, and Related Engineering in Japan, Chair of IEEE MAW 2017 (Metro Area Workshop in Nagoya, 2017), Conference Co-Chairs of IEEE ICCC 2017 and 2018 and ICECE 2018, Conference Chair of ICCCS 2018, Technical Program Chair of IEEE ICCE-TW 2018, and Conference Co-Chairs of ICFCC 2019 and 2020, ICCET 2019, WSCE 2019, and ICCCI 2020. He was IEEE Nagoya Section Secretary in 2015 and 2016 and IEEE Nagoya Section Chair in 2017 and 2018, and he is currently IEEE Nagoya Section Past Chair. He is further a Steering Committee Member of NetGames. He is a Fellow of IEICE, a Senior member of IEEE, and a Member of ACM, ITE, IPSJ, VRSJ, and IEEJ.

Keynote Speech

Prof. Nobuo Funabiki, Professor

Okayama University, Japan

- **Date and Time:** Feb. 28 (Fri) 9:00 –9:30
- **Title:** Enjoy WLAN studies using Raspberry Pi!

Biodata:

Nobuo Funabiki, Japanese Electrical engineer educator. Member Institute of Electrical and Electronics Engineers, Information Processing Society Japan, Institute of Electronics, Information and Communication Engineers Japan.

Education:

Bachelor of Science, Tokyo University, 1984. Doctor of Philosophy, Tokyo University, 1993. Master of Science, Case Western Reserve University, 1991.

Career:

Engineer Sumitomo Metal Industries, Ltd., Kashima, Japan, 1984-1989, researcher Amagasaki, Japan, 1991-1994, Case Western Reserve University, Cleveland, 1989-1991. Assistant professor information and computer science Osaka University, Toyonaka, 1994-1995, associate professor information and computer science, 1995-2001. Professor communications network engineering Okayama (Japan) University, since 2001.

Achievements:

Nobuo Funabiki has been listed as a noteworthy Electrical engineer educator by Marquis Cd.

Membership:

Member Institute of Electrical and Electronics Engineers, Information Processing Society Japan, Institute of Electronics, Information and Communication Engineers Japan.

Invited Talk

Prof. Norimichi Tsumura, Professor
Chiba University, Japan

- **Date and Time:** Feb. 27 (Thu) 10:45 – 11:15
- **Title:** Affective imaging and biomedical applications

Abstract:

Non-contact HR measurement is getting active research area. Recently remote photoplethysmography (rPPG) measurement based on simple skin optics model has been proposed and it showed the effectiveness. In this talk, we will show an accurate remote observation of the heart rate (HR) and heart rate variability (HRV) based on hemoglobin component estimation which is based on detail skin optics model. We perform experiments to measure subjects at rest and under cognitive stress with the proposed method putting a polarized filter in front of camera to evaluate the principal of the framework. From the results of the experiments, the proposed method shows a high correlation with the electrocardiograph (ECG) which is assumed as the ground truth. We also applied this into affective imaging and biomedical applications.

Biography:

Norimichi Tsumura was born in Wakayama, Japan, on April 1967. He received the B.E., M.E. and D.E. in applied physics from Osaka University in 1990, 1992 and 1995, respectively. He moved to the Department of Information and Image Sciences, Chiba University in April1995, as an assistant professor. He is currently an associate professor in the Department of Information and Computer Sciences, Chiba University, since February 2002, and a researcher in PRESTO, Japan Science and Technology Corporation (JST), since December 2001. He was a visiting associate professor in University of Rochester from March 1999 to January 2000. He was a visiting researcher in Columbia University from April 2012 to March 2013. He is the fellow of the IS&T (Society for Imaging Science and Technology). He received the Optics Prize for Young Scientists (The Optical Society of Japan) in 1995, Applied Optics Prize for excellent research and presentation (The Japan Society of Applied Optics) in 2000, and the Charles E. Ives Award (Journal Award: IS&T) in 2002 and 2005. He received the IS&T fellowship on 2012. He is interested in the color image processing, material appearance, computer vision, computer graphics and biomedical optics.

Invited Talk

Prof. Chih-Peng Fan, Professor
National Chung Hsing University, Taiwan

- **Date and Time:** Feb. 27 (Thu) 11:15 – 11:45
- **Title:** Trend and Development of Driver Behavior
Detection Technologies : From " Driver Only"
to " Full Automation"

Biodata:

Professor, Department of Electrical Engineering, National Chung Hsing University, 8/2013-present; Director, Division of School Development Center, Office of Research and Development, National Chung Hsing University, 4/2017-7/2018; Director, Division of Project Affairs, Office of Research and Development, National Chung Hsing University, 2/2016-3/2017; Associate Professor, Department of Electrical Engineering, National Chung Hsing University, 8/2007-7/2013; Assistant Professor, Department of Electrical Engineering, National Chung Hsing University, 02/2003-08/2007 Design Engineer, Computers & Communications Research Laboratories, Industrial Technology Research Institute, 10/1998-01/2003 Term Engineer, Computers & Communications Research Laboratories, Industrial Technology Research Institute, 02/1998-07/1998.

Research Areas:

VLSI Design and System Simulations of Digital Baseband Transceiver; Digital Image/Video Signal Processing and VLSI Design; Fast Prototype of DSP Systems with FPGA or Embedded SOC platform.

Academic Service:

Served as a Reviewer for a lot of journals: IEEE Transactions on Circuits and Systems, IEEE Transactions on Circuits and Systems, IEEE Transactions on Circuits and Systems for Video TechnologyIEEE Transactions on Multimedia etc. *Served as a Reviewer (or TPC member) for many conferences: IEEE International Symposium on Circuits and Systems (ISCAS), IEEE International Conference on Consumer Electronics (ICCE) etc; *Served for a lot of conferences as session chair, program chair, General chair etc. 2006 IEEE APCCAS; 2007 IEEE TENCON; 2007 IEEE ISPACS; 2016 IEEE ICCE-Taiwan : Technical Program Committee co-chair, 2017 IEEE ICCE-Taiwan; 2018 IEEE ICCE-Taiwan; 2019 IEEE ICCE-Taiwan; 2019 IEEE GCCE-Japan.

Invited Talk

Prof. Yu-Cheng Fan, Professor
National Taipei University of Technology, Taiwan

- **Date and Time:** Feb. 28 (Fri) 9:30 – 10:00
- **Title:** 3D LiDAR and Multimedia Integrated Circuit Design

Biodata:

Yu-Cheng Fan was born in Hsinchu, Taiwan, R.O.C., in 1975. He received the B. S. and M. S. degrees in Electrical Engineering from National Cheng Kung University in 1997 and 1999 respectively, and Ph.D. degree in Electrical Engineering from National Taiwan University in 2005. From 1999 to 2000, he was an IC design engineer in Computer and Communications Research Laboratory (CCL), Industrial Technology Research Institute (ITRI). From 2000 to 2005, he was with the Integrated System Laboratory of National Taiwan University. In 2006, he joined the Department of Electronic Engineering, National Taipei University of Technology, Taipei, Taiwan. Currently, he is a Professor.

Research area:

Consumer electronics, digital watermarking, image and video coding system, digital television broadcasting (DVB), VLSI/SoC design. In 1999, he received 13th Long-Term (Acer) Paper Awards. In 2002, he received Honors of 1st Electronics Innovative Design Award at National Taiwan University. In 2003, he received the Best Paper Award (Best Poster) of the 2003 IEEE International Conference on Consumer Electronics (ICCE). He was an elected Chairman of the IEEE NTU Student Branch in 2003. In 2005, he received IEEE Award for outstanding leadership and service to the IEEE NTU Student Branch. He received Honors of 2nd Taiwan Information Storage Association Ph. D. Dissertation Award in 2005. He received Honors of 19th Long-Term (Acer) Paper Awards at the same year. He is a scholastic honor member of Phi Tau Phi and IEEE Senior Member.

Invited Talk

Prof. Takanobu Otsuka, Professor
Nagoya Institute of Technology, Japan

- **Date and Time:** Feb. 28 (Fri) 10:00 – 10:30
- **Title:** How to build sustainable society with IoT?

Abstract:

With the information society, many systems that make daily life convenient have appeared. With the development of IoT and AI technologies, in the future where all social data is collected and used, "creation of new services" is required. In this lecture, we will introduce what can be done using IoT and AI technologies, and the technologies required for systems as services with the latest trends.

Biography:

Dr. Takanobu Otsuka is Associate Professor of Nagoya Institute of Technology. He received the M.E, and Doctor of Engineering from the Nagoya Institute of Technology in 2011, 2016, respectively. From 2012 to 2015, he was a Assistant Professor of the Nagoya Institute of Technology. From 2015 and 2016, he was a visiting researcher at UCI (University of California Irvine).

His main research interests include IoT, multi-agent systems, intelligent agents, distributed system, and software engineering on offshoring.

Conference Agenda

The 18th International Conference on Computer Applications (ICCA 2020) and

The 12th International Conference on Future Computer and Communication (ICFCC 2020)

27th February, 2020 (Day 1)

Novotel Hotel

Time	Place	Agenda
8:30 – 9:00	Yangon Ballroom	Registration
9:00 – 9:15	Yangon Ballroom	Opening Speech by Union Minister for Ministry of Education
9:15 – 9:30	Yangon Ballroom	Welcome Speech by Rector
9:30 – 10:00	**Coffee Break & Photo Session**	
10:00 – 10:45	Yangon Ballroom	Keynote Speech
10:45 – 11:15	Yangon Ballroom	Invited Talk I
11:15– 11:45	Yangon Ballroom	Invited Talk II
11:45– 13:00	**Lunch**	
13:00– 15:00	ICCA Workshop I	Joint Workshop on Cyber Security and Digital Forensics
	ICCA Workshop II	Joint Workshop on Geographic Information Systems
	ICCA Workshop III	Joint Workshop on Natural Language and Speech Processing
	Paper Session I	Computer Communications and Signal Processing for Consumer Electronics (ICFCC)
	Paper Session II	Information Security and Intelligent Robot Design (ICFCC)
15:00–15:40	**Coffee Break & Poster Session**	
15:40 – 17:00	Paper Session III	Cyber Security and Digital Forensics (ICCA)
	Paper Session IV	Big Data and Cloud Computing (ICCA)
	Paper Session V	Natural Language and Speech Processing (ICCA)
	Paper Session VI	Computer Communications and Signal Processing for Consumer Electronics (ICFCC)
	Paper Session VII	Modern Electronic Technology and Application (ICFCC)
18:00–20:00	**Conference Dinner at Novotel Hotel**	

Keynote Speech

Chair   – Prof. Nobuo Funabiki
Place   – Yangon Ballroom
Time   – 10:00 –10:45

Time	Name	Title	Organization
10:00 –10:45	Prof. Yutaka Ishibashi	Remote Cooperation among Humans and Robots with Force Feedback	Nagoya Institute of Technology, Japan

Invited Talks

Chair   – Prof. Yu-Cheng Fan
Place   – Yangon Ballroom
Time   – 10:45– 11:45

Time	Name	Title	Organization
10:45 – 11:15	Prof. Norimichi Tsumura	Affective imaging and biomedical applications	Chiba University, Japan
11:15 – 11:45	Prof. Chih-Peng Fan	Trend and Development of Driver Behavior Detection Technologies : From " Driver Only" to " Full Automation"	National Chung Hsing University, Taiwan

Joint Workshop on Cyber Security and Digital Forensics

Chair   – Prof. Mie Mie Su Thwin
Place   – Pyay Conference Room
Time   – 13:00– 15:00

Time	Name	Title	Organization
13:00–13:30	Samson Paing Minn	Cybersecurity as a Business Enabler	KBZ Bank, Myanmar
13:30– 14:00	Abhishek Vaish	A framework for Metamorphic Malware Detection	Indian Institute of Information Technology, India
14:00-15:00	UCSY CSF CSIRT Team	CSIRT-Incident Handling for Flash Delivery System	UCSY, Myanmar

Joint Workshop on Geographic Information Systems

Chair   – Prof. Myint Myint Sein
Place   – Nay Pyi Taw Meeting Room
Time   – 13:00– 15:05

Time	Name	Title	Organization
13:00– 13:25	Kyaw Zaya Htun	Rapid Method of Developing Historical Flood Mapping for Response Operations and Community Planning	YTU, Myanmar
13:25– 13:50	Win Ko Ko, Phyo Pa Pa Tun, Myint Myint Sein	Developing the Flood Alarm System for Disaster Mitigation	YTU, UCSY, Myanmar
13:50– 14:15	Thin Lai Lai Thein, Chaw Chaw Khaing	Landslide Preventing in Myanmar	UCSY, Myanmar
14:15– 14:40	Thida Aung, Myint Myint Sein	Estimating Damaged Volumes of 3D Model of Historic Pagodas in Bagan after Earthquake	UCSY, Myanmar
14:40- 15:05	Myint Myint Sein, La-Or Kovavisaruch, Khema Van	ICT Application on Smart Tourism supporting in Ancient Culture Heritage Region	UCSY, Myanmar

Joint Workshop on Natural Language and Speech Processing

Chair   – Prof. Win Pa Pa
Place   – Eureka Meeting Room
Time   – 13:00– 15:05

Time	Name	Title	Organization
13:00– 13:25	Ye Kyaw Thu	Weighted Finite State Transducer based Spelling Checker for Myanmar Language (Burmese)	NECTEC, Thailand
13:25– 13:50	Nway Nway Han	Improved Word Alignment System for Myanmar-English Machine Translation	UCSM, Myanmar
13:50– 14:15	Aye Mya Hlaing, Win Pa Pa	Statistical Parametric Speech Synthesis for Myanmar Language	UCSY, Myanmar
14:15– 14:40	Hlaing Myat Nwe	Named-entity Recognition For Myanmar Language By Using Bi-LSTM-CRF with Word and Character Representation	UTYCC, Myanmar
14:40- 15:05	Aung Sett Paing, Khin Mar Soe	Myanmar Text Summarization using Recurrent Neural Network	UCSY, Myanmar

Paper Session I: Computer Communications and Signal Processing for Consumer Electronics (ICFCC)

Chair   – Prof. Pingguo Huang

Place   – Bagan Meeting Room

Time   – 13:00– 15:00

Note: Oral presentations have been allocated 20 minutes of effective presentation time, including Q/A time between session chair and speakers.

No.	Name	Title	Organization
1. C1004	Toshiro Nunome, Koki Makino	QoE Comparison of AL-FEC Algorithms on H.265/HEVC Video and Audio Transmission with MMT	Nagoya Institute of Technology, Japan
2. C1040	Chia-Wei Chuang, Chih-Peng Fan	Deep–Learning Based Joint Iris and Sclera Recognition with YOLO Network for Identity Identification	National Chung Hsing University, Taiwan
3. C1058	Yasunori Kawai, Koudai Houga, Hiroyuki Kawai, Takanori Miyoshi	Bilateral Tele-Rehabilitation System with Electrical Stimulation by using AWS IoT	National Institute of Technology, Ishikawa College, Japan

Paper Session II: Information Security and Intelligent Robot Design (ICFCC)

Chair   – Prof. Hitoshi Watanabe

Place   – Inle Meeting Room

Time   – 13:00– 15:00

Note: Oral presentations have been allocated 20 minutes of effective presentation time, including Q/A time between session chair and speakers.

No.	Name	Title	Organization
1. C1071	Htwe Htwe Pyone, Khin Than Mya	Secure Healthcare System using Blockchain Technology	University of Computer Studies Myitkyina, Myanmar
2. C1019	Htet Htet Naing, Zin May Aye	Innovation Security of Beaufort cipher by Stream Cipher Using Myanmar-Vigenere Table and Unicode Table	UCSY, Myanmar
3. C1026	Khaing Yee Mone, Yoshio Yamamoto	Development of Spoken Language Recognition System for Humanoid Robot	Tokai University, Japan
4. C1039	Iku Kitanosono, Toshiyuki Haramaki, Hiroaki Nishino	A Fear State Judgement System for Alleviating Fear of Heights Gradually in VR	Oita University, Japan

Paper Session III: Cyber Security and Digital Forensics (ICCA)

Chair   – Prof. Mie Mie Su Thwin
Place   – Pyay Conference Room
Time   – 15:40 – 17:00
Note: Oral presentations have been allocated 20 minutes of effective presentation time, including Q/A time between session chair and speakers.

No.	Name	Title	Organization
1.	Aye Aye Thinn, Mie Mie Su Thwin	A Hybrid Solution for Confidential Data Transfer Using PKI, Modified AES algorithm and Image as a Secret Key	UCSY, Myanmar
2.	Htar Htar Lwin, Wai Phyo Aung, Kyaw Kyaw Lin	Comparison Analysis Android Mobile Forensics Tools	UCSY, Myanmar
3.	Wai Phyo Aung, Htar Htar Lwin, Kyaw Kyaw Lin	Developing and Analysis of Cyber Security Models for Security Operation Center in Myanmar	Moscow Automobile and Road Construction State Technical University, Myanmar
4.	Myint Soe Khaing, Yee Mon Thant, Thazin Tun, Chaw Su Htwe, Mie Mie Su Thwin	IoT Botnet Detection Mechanism Based on UDP Protocol	UCSY, Myanmar

Paper Session IV: Big Data and Cloud Computing (ICCA)

Chair   – Prof. Thandar Thein
Place   – Nay Pyi Taw Meeting Room
Time   – 15:40 – 17:00
Note: Oral presentations have been allocated 20 minutes of effective presentation time, including Q/A time between session chair and speakers.

No.	Name	Title	Organization
1.	Pyae Pyae Win Cho, Thi Thi Soe Nyunt	An Improved Differential Evolution Algorithm with Opposition-Based Learning for Clustering Problems	UCSY, Myanmar
2.	Soe Myint Myat, Than Naing Soe	Preserving the Privacy for University Data Using Blockchain and Attribute-based Encryption	Myanmar Aerospace Engineering University
3.	San San Maw	An Improvement of FP-Growth mining algorithm Using Linked List	UCSM, Myanmar

Paper Session V: Natural Language and Speech Processing (ICCA)

Chair   – Prof. Aye Thida
Place   – Eureka Meeting Room
Time   – 15:40 – 17:00
Note: Oral presentations have been allocated 20 minutes of effective presentation time, including Q/A time between session chair and speakers.

No.	Name	Title	Organization
1.	Win Win Thant, Sandar Khaing, Ei Ei Mon	Preprocessing of YouTube Myanmar Music Comments for Sentiment Analysis	UIT, Myanmar
2.	Myat Sapal Phyu, Khin Thandar Nwet	A Study on a Joint Deep Learning Model for Myanmar Text Classification	UIT, Myanmar
3.	Naing Naing Khin, Khin Mar Soe	University Chatbot using Artificial Intelligence Markup Language	UCSY, Myanmar
4.	Thazin Myint Oo, Ye Kyaw Thu, Khin Mar Soe, Thepchai Supnith	Neural Machine Translation between Myanmar(Burmese) and Dawei (Tavoyan)	UCSY, Myanmar
5.	Thet Thet Zin	Sentiment Polarity in Translation	University of Computer Studies, Thaton

Paper Session VI: Computer Communications and Signal Processing for Consumer Electronics (ICFCC)

Chair   – Prof. Pingguo Huang
Place   – Bagan Meeting Room
Time   – 15:40 – 17:00
Note: Oral presentations have been allocated 20 minutes of effective presentation time, including Q/A time between session chair and speakers.

No.	Name	Title	Organization
1. C1055	May Zin Oo, Yutaka Ishibashi, Khin Than Mya	Influences of Network Delay and Moving Velocity on Virtual Cooperative Work with Haptic Sense	UCSY, Myanmar
2. C1059	Takuya Itokazu, Shinji Sugawara	A Content Sharing System Using Dynamic Fog Consisting of Peer-to-Peer Terminals and Its Simple Evaluation	Chiba Institute of Technology, Japan
3. C1063	Yuichiro Tateiwa, Yoshifumi Hisanaga	A CSP-based Approach to Design a Subnet Solving a Network Construction Exercise for Beginners	Nagoya Institute of Technology, Japan

Paper Session VII: Modern Electronic Technology and Application (ICFCC)

Chair   – Assoc. Prof. Toshiro Nunome
Place   – Inle Meeting Room
Time   – 15:40 – 17:00

Note: Oral presentations have been allocated 20 minutes of effective presentation time, including Q/A time between session chair and speakers.

No.	Name	Title	Organization
1. C1049	Mr. Toshiyuki Haramaki	A Study on Combined Use of Contactless Sensors to Watch Over the Safety and Health of Living Alone	Oita University, Japan
2. C1043	Dung Tien Phan, Assoc. Prof. Tho Thanh Quan, Kim-Anh Thi Vo	A novel clustering-based class-association rule mining method for handling class-imbalanced datasets	Ho Chi Minh City University of Technology, Vietnam
3. C1044-A	Mr. Eisei Yoshida, Tetsuya Yokotani, Kenji Kanai, Hiroaki Mukai	Interoperability between Two Different APIs on the Semantic Level for a Smart City Application	Kanazawa Institute of Technology, Japan

Conference Agenda

The 18th International Conference on Computer Applications (ICCA 2020)

and

The 12th International Conference on Future Computer and Communication (ICFCC 2020)

28th February 2020 (Day 2)

Novotel Hotel

Time	Place	Agenda
8:30- 9:00	Pyay Conference Room	Registration
9:00-9:30	Pyay Conference Room	Keynote Speech
9:30-10:00	Pyay Conference Room	Invited Talk I
10:00-10:30	Pyay Conference Room	Invited Talk II
10:30- 10:50	**Coffee Break**	
10:50 – 12:10	Paper Session I	Cyber Security and Digital Forensics (ICCA)
	Paper Session II	Geographic Information Systems and Image Processing (ICCA)
	Paper Session III	Software Defined Network (ICCA)
	Paper Session IV	Natural Language and Speech Processing (ICFCC)
	Paper Session V	Data Analysis and Data Mining (ICFCC)
12:10– 13:20	**Lunch**	
13:20 – 14:40	Paper Session VI	Natural Language and Speech Processing (ICCA)
	Paper Session VII	Big Data and Cloud Computing (ICCA)
	Paper Session VIII	Networking and Security (ICCA)
	Paper Session IX	Algorithm Design and High Performance Computing (ICFCC)
	Paper Session X	Modern Electronic Technology and Application (ICFCC)
14:40-15:10	**Coffee Break**	
15:10 – 16:30	Paper Session XI	Natural Language and Speech Processing (ICCA)
	Paper Session XII	Big Data and Cloud Computing (ICCA)
	Paper Session XIII	Software Engineering and Modeling (ICCA)
	Paper Session XIV	Communication and Information Network (ICFCC)
	Paper Session XV	Data Mining (ICCA)

Keynote Speech

Chair   – Prof. Yutaka Ishibashi
Place   – Pyay Conference Room
Time   – 9:00 –9:30

Time	Name	Title	Organization
9:00 –9:30	Prof. Nobuo Funabiki	Enjoy WLAN studies using Raspberry Pi!	Okayama University, Japan

Invited Talks

Chair   – Prof. Norimichi Tsumura
Place   – Pyay Conference Room
Time   – 9:30– 10:30

Time	Name	Title	Organization
9:30 – 10:00	Prof. Yu-Cheng Fan	3D LiDAR and Multimedia Integrated Circuit Design	National Taipei University of Technology, Taiwan
10:00 – 10:30	Prof. Takanobu Otsuka	How to build sustainable society with IoT?	Nagoya Institute of Technology, Japan

Paper Session I: Cyber Security and Digital Forensics (ICCA)

Chair   –Prof. Abhishek Vaish
Place   – Pyay Conference Room
Time   – 10:50 – 12:10
Note: Oral presentations have been allocated 20 minutes of effective presentation time, including Q/A time between session chair and speakers.

No.	Name	Title	Organization
1.	Zar Chi Su Su Hlaing, Myo Khaing	A Detection and Prevention Technique on SQL Injection Attacks	University of Computer Studies, Magway
2.	Aye Aye Khine, Hnin Wint Khaing	Credit Card Fraud Detection Using Online Boosting with Extremely Fast Decision Tree	ICTRC, Myanmar
3.	Hay Mar Mo Mo Lwin, Yutaka Ishibashi, Khin Than Mya	Influence of Voice Delay on Human Perception of Group Synchronization Error for Remote Learning	UCSY, Myanmar

Paper Session II: Geographic Information Systems and Image Processing (ICCA)

Chair   – Prof. Thin Lai Lai Thein
Place   – Nay Pyi Taw Meeting Room
Time   –10:50 – 12:10

Note: Oral presentations have been allocated 20 minutes of effective presentation time, including Q/A time between session chair and speakers.

No.	Name	Title	Organization
1.	Nay Win Aung, Thin Lai Lai Thein	Vehicle Accident Detection on Highway and Communication to the Closest Rescue Service	Ministry of Construction, Naypyitaw
2.	Sandar Win, Thin Lai Lai Thein	Real-Time Human Motion Detection, Tracking and Activity Recognition with Skeletal Model	UCSY, Myanmar
3.	Hla Hla Myint, Soe Lin Aung	An Efficient Tumor Segmentation of MRI Brain images Using Thresholding and Morphology Operation	University of Computer Studies, Pinlon

Paper Session III: Software Defined Network (ICCA)

Chair   – Prof. Win Zaw
Place   – Eureka Meeting Room
Time   – 10:50 – 12:10

Note: Oral presentations have been allocated 20 minutes of effective presentation time, including Q/A time between session chair and speakers.

No.	Name	Title	Organization
1.	Myat Thida Mon	Flow Collison Avoiding in Software Defined Networking	UIT, Myanmar
2.	Khaing Suu Htet, Myint Myint Sein	Market Intelligence Analysis on Age Estimation and Gender Classification on Events with deep learning hyperparameters optimization and SDN Controllers	UCSY, Myanmar
3.	Aye Myat Myat Paing	Analysis of Availability Model Based on Software Aging in SDN Controllers with Rejuvenation	UIT, Myanmar

Paper Session IV: Natural Language and Speech Processing (ICFCC)

Chair   – Assoc. Prof. Takanobu Otsuka
Place   – Bagan Meeting Room
Time   – 10:50 – 12:10

Note: Oral presentations have been allocated 20 minutes of effective presentation time, including Q/A time between session chair and speakers.

No.	Name	Title	Organization
1. C1029	Dim Lam Cing, Khin Mar Soe	Building Large Scale Text Corpus for Joint Word Segmentation and Part-of-Speech Tagging of Myanmar Language	UCSY, Myanmar
2. C1011	Thazin Myint Oo, Ye Kyaw Thu, Khin Mar Soe, Thepchai Supnithi	Statistical Machine Translation between Myanmar and Myeik	UCSY, Myanmar
3. C1018	Thein Yu , Khin Thandar Nwet	Sentiment Analysis System for Myanmar News using K Nearest Neighbor and Naïve Bayes	UCSY, Myanmar

Paper Session V: Data Analysis and Data Mining (ICFCC)

Chair   – Asst. Prof. Yuichiro Tateiwa

Place   – Inle Meeting Room

Time   – 10:50– 12:10

Note: Oral presentations have been allocated 20 minutes of effective presentation time, including Q/A time between session chair and speakers.

No.	Name	Title	Organization
1. C1061	Pau Suan Mung, Sabai Phyu	Ensemble Learning Method for Enhancing Healthcare Classification	UCSY, Myanmar
2. C1064	Khin Myo Myat, Si Si Mar Win	Outlier Detection for Structure Data	UCSY, Myanmar
3. C1048	Myint Myint Moe, Khine Khine Oo	Comparative Results of dependent and Independent Variables Focused on Regression Analysis Using Test-Driven Development	UCSY, Myanmar

Paper Session VI: Natural Language and Speech Processing (ICCA)

Chair   – Prof. Khin Mar Soe

Place   – Pyay Conference Room

Time   – 13:20 – 14:40

Note: Oral presentations have been allocated 20 minutes of effective presentation time, including Q/A time between session chair and speakers.

No.	Name	Title	Organization
1.	Hay Man Oo, Win Pa Pa	Myanmar News Retrieval in Vector Space Model using Cosine Similarity Measure	UCSY, Myanmar
2.	Yamin Thu, Win Pa Pa	Generating Myanmar News Headlines using Recursive Neural Network	UCSY, Myanmar

No.	Name	Title	Organization
3.	Honey Htun, Ye Kyaw Thu, Nyein Nyein Oo	English-Myanmar (Burmese) Phrase-Based SMT with One-to-One and One-to-Multiple Translations Corpora	YTU, Myanmar
4.	Hay Mar Su Aung, Win Pa Pa	Analysis of Word Vector Representation Techniques with Machine-Learning Classifiers for Sentiment Analysis of Public Facebook Page's Comments in Myanmar Text	UCSY, Myanmar

Paper Session VII: Big Data and Cloud Computing (ICCA)

Chair   – Prof. Thinn Thu Naing
Place   – Nay Pyi Taw Meeting Room
Time   – 13:20 – 14:40

Note: Oral presentations have been allocated 20 minutes of effective presentation time, including Q/A time between session chair and speakers.

No.	Name	Title	Organization
1.	San Nyein Khine, Zaw Tun	Mongodb on Cloud for Weather Data (Temperature and Humidity) in Sittway	University of Computer Studies, Sittway, Myanmar
2.	Khine Moe Nwe, Yu Mon Zaw	Efficient Mapping for VM Allocation Scheme in Cloud Data Center	UCSY, Myanmar
3.	Lett Yi Kyaw, Sabai Phyu	Scheduling Methods in HPC System: Review	UCSY, Myanmar
4.	Phyo Thu Thu Khine, Htwe Pa Pa Win	Ensemble Framework for Big Data Stream Mining	University of Computer Studies, Hpa-an, Myanmar

Paper Session VIII: Networking and Security (ICCA)

Chair   – Prof. Zin May Aye
Place   – Eureka Meeting Room
Time   – 13:20 – 14:40

Note: Oral presentations have been allocated 20 minutes of effective presentation time, including Q/A time between session chair and speakers.

No.	Name	Title	Organization
1.	Kazuya Kanaishi, Yutaka Ishibashi, Pingguo Huang, Yuichiro Tateiwa	Effect of Stabilization Control for Cooperation between Tele-Robot Systems with Force Feedback by Using Master-Slave Relation	Nagoya Institute of Technology, Japan
2.	Khin Kyu Kyu Win, Thet Nwe Win, Kaung Waiyan Kyaw	Experimental Design and Analysis of Vehicle Mobility in WiFi Network	YTU, Myanmar
3.	Sai Saw Han	Information Security Risk Management in Electronic Banking System	University of Computer Studies, Myeik, Myanmar

No.	Name	Title	Organization
4.	Si Thu Aung, Thandar Thein	Comparative Analysis of Site to Site Layer 2 Virtual Private Networks	UCSY, Myanmar

Paper Session IX: Algorithm Design and High Performance Computing (ICFCC)

Chair   – Assoc. Prof. Raungrong Suleesathira
Place   – Bagan Conference Room
Time   – 13:20 – 14:40

Note: Oral presentations have been allocated 20 minutes of effective presentation time, including Q/A time between session chair and speakers.

No.	Name	Title	Organization
1. C1007	Raungrong Suleesathira	Projected Iterative MVDR Beamforming for Null Broadening and First Sidelobe Suppression in the Presence of DOA Mismatch	King Mpngkut's University of Technology Thonburi, Thailand
2. C1066	Lwin May Thant, Sabai Phyu	Real-time Big Data Analytics for Feature Selection on Apache Spark	UCSY, Myanmar
3. C1060	Eaint Mon Win, May Aye Khine	A Study on Community Overlapping Detection Algorithms in Social Networks	UCSY, Myanmar
4. C1073	Sandar Win, Thin Lai Lai Thein	Effective Multi-View for Human Activity Recognition on Skeletal Model	UCSY, Myanmar

Paper Session X: Modern Electronic Technology and Application (ICFCC)

Chair   – Prof. Tetsuya Yokotani
Place   – Inle Meeting Room
Time   – 13:20 – 14:40

Note: Oral presentations have been allocated 20 minutes of effective presentation time, including Q/A time between session chair and speakers.

No.	Name	Title	Organization
1. C1037-A	Tetsuya Yokotani	The IoT Data Exchange Platform and its International Standardization	Kanazawa Institute of Technology, Japan
2. C1038-A	Tetsuya Yokotani, Yoshiaki Terashima, Masashi Saito	Performance Evaluation On Insertion of Disturbance in Multiplexed Iot Traffic Flows	Kanazawa Institute of Technology, Japan
3. C1045	Muhammad Ahmad Rathore, Seung Hyung Lee, Jong Won Kim	Persistent Operation of OF@TEIN+ Playground Verified by SmartX Multi-View Leveraged Visualization	Gwangju Institute of Science and Technology (GIST), South Korea

Paper Session XI: Natural Language and Speech Processing (ICCA)

Chair   –Prof. Tin Htar Nwe
Place   – Pyay Conference Room
Time   – 15:10 – 16:30

Note: Oral presentations have been allocated 20 minutes of effective presentation time, including Q/A time between session chair and speakers.

No.	Name	Title	Organization
1.	Win Lai Lai Phyu, Win Pa Pa	Building Speaker Identification Dataset for Noisy Conditions	UCSY, Myanmar
2.	Kazuma Takada, Hideharu Nakajima, Yoshinori Sagisaka	Sentence-Final Prosody Analysis of Japanese Communicative Speech Based on the Command-Response Model	Waseda University, Japan
3.	Myat Aye Aye Aung, Win Pa Pa	Time Delay Neural Network for Myanmar Automatic Speech Recognition	UCSY, Myanmar
4.	Sann Su Su Yee, Khin Mar Soe, Ye Kyaw Thu	Myanmar Dialogue Act Recognition (MDAR)	UCSY, Myanmar

Paper Session XII: Big Data and Cloud Computing (ICCA)

Chair   – Dr. Thein Than Thwin
Place   – Nay Pyi Taw Meeting Room
Time   – 15:10 – 16:30

Note: Oral presentations have been allocated 20 minutes of effective presentation time, including Q/A time between session chair and speakers.

No.	Name	Title	Organization
1.	Thet Thet Aung, Thi Thi Soe Nyunt	Community Detection in Scientific Co-Authorship Networks using Neo4j	UCSY, Myanmar
2.	Pau Suan Mung, Sabai Phyu	Effective Analytics on Healthcare Big Data Using Ensemble Learning	UCSY, Myanmar
3.	Than Than Htay, Sabai Phyu	Improving the performance of Hadoop MapReduce Applications via Optimization of concurrent containers per Node	UCSY, Myanmar
4.	Moh Moh Than, Thandar Thein	Energy-Saving Resource Allocation in Cloud Data Centers	UCSY, Myanmar

Paper Session XIII: Software Engineering and Modeling (ICCA)

Chair   – Prof. Khin Nweni Tun
Place   – Eureka Meeting Room
Time   – 15:10 – 16:30
Note: Oral presentations have been allocated 20 minutes of effective presentation time, including Q/A time between session chair and speakers.

No.	Name	Title	Organization
1.	Myint Myint Moe, Khine Khine Oo	Consequences of Dependent and Independent Variables based on Acceptance Test Suite Metric Using Test-Driven Development Approach	University of Computer Studies, Hpa-An, Myanmar
2.	Khin Khin Zaw, Hsu Wai Hnin, Khin Yadanar Kyaw, Nobuo Funabiki	Software Quality Metrics Calculations for Java Programming Learning Assistant System	YTU, Myanmar
3.	Aye Thid, Thanda Shwe	Process Provenance-based Trust Management in Collaborative Fog Environment	Education, Myanmar
4.	Mu Mu Than, Khin Mar Yee, Mar Lar Han, Kyi Lint, Marlar Han, Thet Wai Hnin	Determining Spatial and Temporal Changes of Water Quality in Hlaing River using Principal Component Analysis	Department of Higher Education, Myanmar

Paper Session XIV: Communication and Information Network (ICFCC)

Chair   – Prof. Hitoshi Watanabe
Place   – Bagan Meeting Room
Time   – 15:10 – 16:30
Note: Oral presentations have been allocated 20 minutes of effective presentation time, including Q/A time between session chair and speakers.

No.	Name	Title	Organization
1. C1056	Hitoshi Watanabe, Pingguo Huang, Yutaka Ishibashi	An Investigation on Stability and Operability in Haptic Communication Systems	Tokyo University of Science, Japan
2. C1062	Wai Mar Hlaing, Myint Myint Sein	Neighbor Search with Hash Map Indexing Technique for Complex Networks	UCSY, Myanmar
3. C1076	Chaw Chaw Khaing, Thin Lai Lai Thein	The Analysis of Landslide Based On Geographic Information System in Mon State, Myanmar	UCSY, Myanmar
4. C1067	Tin Lai Lai Mon	GPS Trajectory Cleaning For Driving Behaviour Detection System	UCSY, Myanmar

Paper Session XV: Data Mining (ICCA)

Chair   – Prof. Nang Saing Moon Kham
Place   – Inle Meeting Room
Time   – 15:10 – 16:30

Note: Oral presentations have been allocated 20 minutes of effective presentation time, including Q/A time between session chair and speakers.

No.	Name	Title	Organization
1.	Zayar Aung, Mikhaylov Ilya Sergeevitch, Ye Thu Aung	The Implementation of Support Vector Machines For Solving in Oil Wells	National Research University Of Moscow Power Engineering Institute, Russia
2.	Zayar Aung, Mikhaylov Ilya Sergeevich, Ye Thu Aung	Data Mining to Solve Oil Well Problems	National Research University Of Moscow Power Engineering Institute, Russia
3.	Gantgaw Wuttmhon, Nang Saing Moon Kham	ETL Preprocessing with Multiple Data Sources for Academic Data Analysis	UCSY, Myanmar
4.	May Me Me Hlaing, Nang Saing Moon Kham	Defining News Authenticity on Social Media Using Machine Learning Approach	UCSY, Myanmar

Poster Sessions

ICFCC Poster Session

No.	Name	Title	Organization
1.	Chen-Chien Hsu, Pin-Jui Hwang	Visual Learning from Demonstration Based on Object Detection and Action Recognition	National Taiwan Normal University, Taiwan
2.	Yi-Fang Lee, Ching-Ho Huang, Hsiu-Yen Chu, Hsin-Yu Chiu	The Effect of Phenomenon-based Teaching on Inquiry Learning and STEAM integration ability for Vocational High School Students	National Taiwan Normal University, Taiwan
3.	Mikyung Je, Myeongji Cho, Hayeon Kim, Hyeon S Son	Identification of subnetwork-based infection patterns of mycoviruses	Seoul National University, Republic of Korea
4.	Myeongji Cho, Mikyung Je, Hayeon Kim, Hyeon S Son	Analysis of synonymous codon usage and base composition in polyomavirus VP1 genes: implications in polyomavirus host-specificity	Seoul National University, Republic of Korea
5.	Myeongji Cho, Mikyung Je, Hayeon Kim, Hyeon S Son	Analysis of synonymous codon usage and base composition in polyomavirus VP1 genes: implications in polyomavirus host-specificity	Seoul National University, Republic of Korea
6.	Seona Park, Junghan Ha, Mu-wook Pyeon, Wonwoo Jung	A study on deep learning based real time road information monitoring device for emergency vehicle guidance	Konkuk University, Republic of Korea

ICCA Poster Session

No.	Name	Title	Organization
1.	Myint Myint Maw and Khine Khine Oo	Analysis of Security-awareness Refactoring with Design Pattern	Universities of Computer Studies, Thatton, Myanmar
2.	Thin Thin Yu	Randomize Testing of Pseudorandom Sequences	University of Computer Studies Kalay, Myanmar
3.	Su Su Aung	Computer Based Temperature Storage System in Data Logger via USB	UCSY, Myanmar
4.	Ei Phyu Myint, Myint Myint Sein	Applying Image Preprocessing and Artificial Intelligence for People Detection and Counting	UCSY, Myanmar
5.	Htwe Htwe Pyone, Khin Than Mya	Secure Healthcare System using Blockchain Technology	University of Computer Studies, Myitkyina, Myanmar
6.	Chit Kyin Htoo, Myint Myint Sein	A Comparative Study on Low Level Texture Representation for Moving Target Classification	UCSY, Myanmar
7.	Moe Moe Hlaing,Tin Htar Nwe	Fake Account Detection on Social Network Site by using Latent Dirichlet (LDA) Moel and Weight-based KNN Classifier	University of Computer Studies, Taunggyi, Myanmar
8.	Su Su Win, Mie Mie Su Thwin	Proposed Modern Approach of Vulnerable Assessment Penetration Testing Design for Myitkyina University LAN Security	University of Computer Studies, Myitkyina, Myanmar
9.	Chaw Chaw Khaing, Thin Lai Lai Thein	Spatial Forecast of Landslides Prone Zone Based On Spatial Data	UCSY, Myanmar
10.	Cho Cherry Aung, Thin Lai Lai Thein	3D Reconstruction from Image-based Photogrammetry	UCSY, Myanmar
11.	Linn Linn Thike, Thin Lai Lai Thein	Parking Lot Occupancy Monitoring System using Complemented-ULBP background subtraction and SVM	UCSY, Myanmar
12.	Khin Yadanar Htwe, Thin Lai Thein	Disaster Victim Detection System from Unmanned Aerial Vehicle Images by Using HOG features descriptor and SVM Classifier	UCSY, Myanmar
13.	Win Zaw Latt, Mie Mie Su Thwin	An Authentication measure to avoid Xpath and LDAP injection attacks: Integrating XML and LDAP technology	UCSY, Myanmar
14.	Khin Theink Theink Soe, Tin Htar Nwe	Comparison of Machine Learning Approaches to Pronominal Anaphora Resolution in Myanmar Text	UCSY, Myanmar
15.	Ohn Mar Lwin, Thin Lai Lai Thein	An Efficient Method for Detection and Indication of Pedestrian Crossing on the Road	Myanmar Institute of Information Technology, Mandalay, UCSY,Myanmar

Social Program

Opening Reception

- **Date & Time**: Feb. 27 (Thu) 08:30 – 10:00
- **Location**: Novotel Hotel, Yangon

Conference Dinner

- **Date & Time**: Feb. 27 (Thu) 18:00 – 20:00
- **Location**: Novotel Hotel, Yangon

During this dinner, you will have the opportunity to eat carefully and wonderfully made dishes, while discussing with colleagues, acquaintances, and future business partners.

Useful Information

Registration Desk:

Location: Yangon Ballroom, Novotel Hotel, Yangon

Operation Hours: Feb. 27 (Thu). 08:30 – 9:00

Registration Fee for ICCA 2020

Foreign Participants	: USD 200
Local Participants	: 75,000 Kyats

Registration Fee for ICFCC 2020

	Category	Before Deadline	Onsite
Full Paper	Local (Burman)	380 USD	Unacceptable
	Student	450 USD	
	Regular	520 USD	
Abstract	Local (Burman)	280 USD	300 USD
	Student	320 USD	350 USD
	Regular	350 USD	380 USD
Listener	Local (Burman)	220 USD	250 USD
	Student	250 USD	300 USD
	Regular	300 USD	350 USD
Additional Paper	Local (Burman)	250 USD	Unacceptable
	Student	300 USD	
	Regular	350 USD	
Additional Page	Per Page	50 USD	Unacceptable