

COMPUTER SCIENCE POSTGRADUATE COLLOQUIUM

20 - 22 AUGUST 2019

8:15am – 5:30pm

Sains@USM, Bukit Jambul

#cspc2019

#cspc@usm

#sustainableliving



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Foreword from the Dean of School of Computer Sciences, USM



Professor Dr. Rosni Abdullah
Dean
School of Computer Sciences
Universiti Sains Malaysia



Welcome to CSPC 2019! Since 2004, the Computer Science Postgraduate Colloquium (CSPC) has been the annual meeting ground for our postgraduates to share their knowledge and deliver findings of their research as well as connecting with fellow students, academics and industries. Being able to continue the event throughout these years, I extend my heartiest congratulations to the organising committee, all the sponsors and individuals who have contributed to the organisation and success of the conference.

This year, the theme **"Inspiring Sustainable Living via Computing, Technology and Innovation"** is aimed to promote a research direction towards a holistic and meaningful life for all. The theme highlights the United Nation Sustainable Development Goal (UN SDG) that advocates the students to channel their research towards more meaningful and impactful research and innovations. With three different communication channels - Poster, 3MT and System demo - this colloquium is anticipated to facilitate collaboration with industry and community.

It is hoped that this colloquium will inspire and motivate our postgraduate students to share knowledge and network with other researchers and industry partners and expand their research possibilities. Huge thanks and a very warm welcome are extended to all the invited speakers, sponsors, participants, students and academics to this conference and wish all of you a fruitful event. All the best!

Thank you.

Foreword from the General Chair of CSPC 2019



Dr Nur Hana Samsudin

General Chair

Computer Science Postgraduate Colloquium 2019



CSPC is on the 16th year! Congratulations CS USM.

I would really like to take this opportunity to thank CSPC 2019 Committee who are putting together tremendous effort to pull this event and make it a success. This event will just be another annual tick without your participation. Thank you so very much.

Being an annual event, we tend to forget why we are doing it in the first place. Let us refresh a bit.

The nature of research is individual. Research can be a very lonely journey if not for the environment and a great support system. Sometimes, we tend to be engrossed in the research process, our thoughts and our work progress to the point that we ignore everything else. Knowing this, CSPC was introduced for the postgraduate students to advocate mindfulness, and thus, encouraging ideal life-balanced. In every CSPC event, the content always encouraging communication, meet like-minded people and listen to other people, with the intention that we can inspire and convince ourselves to keep moving forward.

The theme this year: "**Inspiring Sustainable Living via Computing, Technology and Innovation**" advocating us, researchers to position ourselves in societal contribution. No matter what our research is, if all of us play a part in society, we will definitely make this world a better place than yesterday.

To all CSPC and NP2C participants, please enjoy the event and hope you'll have a fruitful day!

Thank you!

About CSPC 2019



Theme

"Inspiring Sustainable Living via Computing, Technology and Innovation"

Introduction

Computer Science Postgraduate Colloquium is a catalyst for Computer Science Postgraduate Students at the School of Computer Sciences, Universiti Sains Malaysia to gather with academics and industry to communicate ideas and to have constructive discussions for the advancement of knowledge and to move the nation forward as a whole.

Originally, CSPCs was the platform for the students to achieve their research progress thresholds, i.e.: passing their Proposal Review and Research Review stage. This resulting a very formal and serious atmosphere and we missed the more important aspects of gathering together: to communicate and to expand research possibilities.

Thus, this year, we will be focusing more on communicating ideas. Students are encouraged to join Poster Competition, 3MT Competition and System Demo. To make it even more interesting, we also co-locate CSPC 2019 with NP2C 2019, the National Postgraduate Poster Competition organized by IEEE.

What is CSPC?

Computer Science Postgraduate Colloquium (CSPC) is introduced in the year 2003 where the first colloquium started as a mini conference where it was organised exclusively for the students of School of Computer Sciences. Realising that this platform is a very good channel for the postgraduate students to meet and share their knowledge, it then becomes an annual event organised by the school.

In the colloquium, postgraduate students, researchers and academic members from the School of Computer Sciences and National Advanced IPv6 Centre (NAv6), USM, gather to share their academic and professional knowledge. It provides a good platform for postgraduate students to present their research work and at the same time encourage communications among the students and staff.



CSPC 2019

The theme this year Inspiring Sustainable Living via Computing, Technology and Innovation is to promote research direction towards holistic and meaningful life for all. This will be tallied with the United Nation Sustainable Development Goal (UN SDG) that call for action for all countries to promote prosperity while protecting the planet. The 17 SDG by UN are:

- | | |
|--|---|
| • No Poverty | • Zero Hunger |
| • Good Health and Well-being | • Quality Education |
| • Gender Equality | • Clean Water and Sanitation |
| • Affordable and Clean Energy | • Decent Work and Economic Growth |
| • Industry, Innovation, and Infrastructure | • Reducing Inequality |
| • Sustainable Cities and Communities | • Responsible Consumption and Production |
| • Climate Action | • Life Below Water |
| • Life on Land | • Peace, Justice, and Strong Institutions |
| • Partnerships for the Goals | |

All of the goals listed in the SDG advocates to the betterment of the future. It should be the action of all level of countries: the poor, rich and the middle income. Thus, during this year CSPC, we would also like to advocate the students to channel their research toward more meaningful and impactful research and innovations towards the people of the world in general.

Objectives

- To provide a platform for postgraduate students to share knowledge and experience
- To open up a way for industry – university communications for a more sustainable relationship in research and innovation
- To foster relationship and communication among postgraduate students and Computer Science staff
- To explore new knowledge in the current state of the art for respective studies in Computer Sciences

Event Venue



Pre-CSPC Workshop (20th August 2019)

School of Computer Sciences Meeting Room (Level 7),
School of Computer Sciences, USM

Computer Science Postgraduate Colloquium (21st August 2019)

Auditorium Murad Mohd Noor
Sains@USM, Bukit Jambul

CSPC Excursion (22nd August 2019)

Teluk Bahang National Park Entrance
Centre for Marine & Coastal Studies (CEMACS),
Universiti Sains Malaysia,
11800 USM, Penang, Malaysia.



“How to Make Yourself an Industry-relevant Graduate”

Alexander Wieneke Global Head of Digital PLM

Recent achievements: Successfully contributed to the reorganization and Agile Transformation of Hilti Global IT; Lead the Future Information Management Strategy at Hilti;

Finished his PhD in Information Systems with honors

Passion: Development and motivating people to explore new boundaries and drive innovation

Fun fact: State champion in springboard diving



Rohit Jain

Global Head of Finance & Controlling IT

Recent achievements: Led global finance IT team to implement operational excellence, Innovation, Digitalization, compliance and taxation topics for our Finance Businesses in 120 countries worldwide.

Passion: To create, seek new challenges and strive for excellence

Fun fact: Never imagined I will rock and roll in the IT industry! 11 Years with Hilti and love to work for many more years in Hilti



At Hilti Global IT we want to hire graduates who has the curiosity and ability to explore different fields of IT with the purpose of identifying unaddressed user needs. We are constantly trying to improve existing IT solutions and identify the potential of new technologies to drive operational excellence as well as disruptive innovation in the aim of making the end user better off and contribute to the company's overall success. Against this background we believe that students become an industry relevant graduate when they are focusing on two aspects. (1) Growing as a person, which means to continuously develop the own personality and (2) growing as a contributor, which means to develop the capabilities to drive and conduct an end2end innovation process.



“Innovation Inside-Out: The Power of Why, How & What in Everything”



Leonard Tan

Director, Product Operations Engineering, Global Configuration Services, DELL EMC

Innovation with Purpose & Decoding the How in Personal Development are the 2 main areas that Leonard is passionate about. This thought process & culture were based on his 22 years experiences working in an innovative company - Dell Technology. Leonard built his career in Dell from a certified six sigma black belt, Product Quality Engineer to Product Operation Engineering Director in Global Configuration Services. He was part of the pioneer team who setup 1st manufacturing plant in Xiamen China and the factory in Bukit Mertajam Penang. He was the Product Manager that develop a Big Data Automation call QVMS & HOST in APCC2 which became a global footprint at that time. Throughout these years of his tenure in Dell, he experiences the transition of his role from a manufacturing industry to services and software defined organizations. Today he runs a global lab in Bukit Minyak office with about 150 software engineers that develop and test the GCS new product software integrations in the supply chain for client globally.



“Lead your Dream, Transform your Life”



Assoc Prof. Dr Foo Keng Yuen
Deputy Director of River Engineering and Urban
Drainage Research Centre, Universiti Sains Malaysia

His research interests are environmental engineering, waste utilization, water treatment technology, catalysis, food security and toxicology, and environmental health. He has involved in different kinds of university, national and international research grants, amounting to approximately RM 8.2 million. His aptitude for high quality research of international standing has been supported by the consultancy projects of exceeding RM 2.1 million, more than 100 international publications, with a total citation of exceeding 6,000, and an author h-index of 40. In term of Intellectual Property Rights, he holds 3 patents, 1 trade-secret and 1 trademark. Foo's scholastic achievements and thought leadership are recognised locally and internationally. He is honoured to be the winner of National Young Scientist Award 2017, International Young Inventor Award, Marquis Who's Who in the World, Top100 Engineers, and Honorary Doctorate of Letters by International Biographical Centre Cambridge, England, and special award or medal winners in International Inventions, Competitions and Exhibitions. He serves as the Editor, Editorial Board Members, Scientific Adviser, Technical Committee, Review Committee, Keynote and Invited Speakers in international scientific journals, conferences, and research seminars. Foo has been nominated as the Chief Consultant for several UNESCO's international workshops, connecting with more than 30 industrial partners, and currently has been appointed as the technical consultant for TG Ocean Sdn. Bhd.

Event Schedule



Day & Date	Time	Program
Tuesday (20/8/2019)	8:30 – 12:30	Pre-CSPC Workshop
Wednesday (21/8/2019)	8:10 – 8:40	Arrival & Registration
	8:40 – 8:45	Welcome Remarks by the General Chair of CSPC
	8:45 – 9:00	Opening Talk by the Dean of School of Computer Sciences, USM
	9:00 – 10:10	CSPC Poster Judging and Demo
	10:10 – 10:30	Tea break Continue Poster & Demo
	10:30 – 11:15	Special Session with HILTI Speaker: Mr. Alexander Wieneke (Global Head of Digital PLM) and Mr. Rohit Jain (Global Head of Finance & Controlling IT) Title: How to Make Yourselves an Industry-relevant Graduate
	11:20 – 11:55	Sharing Talk 1 Speaker: Mr. Leonard Tan, Product Operations Engineering, Global Configuration Services, Dell EMC Title: Innovation Inside-Out: The Power of Why, How & What in Everything
	11:55 – 12:30	Sharing Talk 2 Speaker: Assoc. Prof. Dr. Foo Keng Yuen, River Engineering & Urban Drainage Research Centre, USM Title: Lead your Dream, Transform your Life
		CSPC Attendees NP2C2019 Attendees
	12:30 – 13:00	CS Postgraduate Meeting Lunch Break
	13:00 – 13:30	Lunch Break
	13:30 – 14:00	IEEE NP2C2019 Poster Competition
	14:00 – 15:00	IEEE NP2C Poster Competition
	15:00 – 15:30	3MT IEEE NP2C2019 Poster Competition
	15:30 – 16:30	3MT
	16:30 – 16:50	Tea Break + Continue Viewing for NP2C 2019 Poster Competition
	16:50 – 17:20	Prize Giving & Closing Ceremony Concluding Remarks by CSPC Co-Chair/IEEE NP2C Chair
Thursday (22/8/2019)	8:30 – 17:00	Excursion (Visit to CEMACS, USM)

About Poster, 3MT and System Demo



POSTER COMPETITION

Poster session offers the opportunity for students to share their research works through a compact yet captivating visual form with the audience. Networking and discussions can take place right at the poster corner.

Judges:

- | | |
|--------------------------------|--------------------------------------|
| 1) Assoc. Prof. Dr. Cheah Yu-N | 2) Assoc. Prof. Dr. Zurinahni Zainol |
| 3) Dr Anusha Achuthan | 4) Dr Ahmad Sufril Azlan Mohamed |
| 5) Dr Fadratul Hafinaz Hassan | 6) Dr Mohammed F.R. Anbar |
| 7) Dr Mohd Halim Mohd Noor | 8) Dr Mohd. Heikal Husin |
| 9) Dr Nasuha Lee Abdullah | 10) Dr Syaheerah Lebai Lutfi |
| 11) Dr Umi Kalsom Yusof | |

3MT COMPETITION

The 3 Minute Thesis session offers the opportunity for students to share their entire thesis within 3 minutes. In this very short period of time, students will present about the impact of their research work using one slide.

Judges:

- 1) Assoc. Prof. Ts. Dr. Pang Ying Han - Faculty of Information Science and Technology, Multimedia University (MMU)
- 2) Dr Anusha Achuthan - Advanced Medical and Dental Institute (IPPT) Bertam, USM
- 3) Pn Rosnah Idrus - School of Computer Sciences, USM

SYSTEM DEMO COMPETITION

System demo offers a platform for students to showcase the possible applications and solutions from their research work. Students may exhibit how their research are turned into an invention and they can showcase prototypes that can ease human task or making a more sustainable living via their invention.

Judges:

- 1) Dr Nur Hana Samsudin - School of Computer Sciences, USM
- 2) Ms Maziani Sabudin - School of Computer Sciences, USM

List of Participants: Poster Competition



Category 1: PhD Students [Pre- Research Proposal Level] and Master Students by Research

POS01	Ali Saeed Ali Alomari Cryptocurrency Acceptance Model
POS02	Bello Hassan A Model for User Satisfaction with Summative E-Assessment in Developing Countries: The Moderating Role of Technology Readiness of The Examinees
POS03	Ferdinand Murni Hamundu Indonesia MSMEs Perspective on Factors Affecting Cloud Accounting Adoption
POS04	Haziqah Shamsudin Hybridisation of RF(Xgb) to Improve the Tree-based Algorithms in Learning Style Prediction
POS05	Idrees Fazili Automated Decision Model for Tractography Pipeline Selection
POS06	Idris Na'umma Abdullahi Determinants of Intention to Adopt Facebook as Social Media Marketing Technology among Service-Based Nigerian SMEs
POS07	Noratikah Nordin Modelling an Ontology-driven Approach to Predict Suicidal Attempt
POS08	Oyelami Julius Olusegun The Effect of Culture and Bahavioral Differences as a Human Factor on Information Sharing in the context of Knowledge Management
POS09	Saravanan a/I Sagadevan Cyber Terrorism Recruitment Detection through Deep Learning
POS10	Usman Hamza A Stakeholder-Inclusive Model for DevOps in E-Commerce
POS11	Wilfridus Bambang Triadi A Framework for Detection and Evaluation of Fileless Cryptocurrency-Mining Malware

List of Participants: Poster Competition



Category 2: PhD Students [Post- Research Proposal Level]

POS12	Aditi Gupta Using Greedy Deep Learning Approach for Cross-domain Sentiment Classification in the Product Reviews
POS13	Alaa Ahmed Alzou'bi Landmark Image Recognition Using SNN Clustering Algorithm
POS14	Garba Abdulrauf Sharifai Feature Selection for High Dimensional Imbalanced Class Data using Grasshopper Optimization Algorithm
POS15	Moatsum Alawida Enhancing One Dimension Digital Chaotic Maps for Applications in Cryptography
POS16	Muhammad Rizwan Ghor Bluetooth Low Energy 5 Mesh-Based Hospital Communication Network
POS17	Najihah Ibrahim Enhanced Cellular Automata Based Pedestrian Simulation: Proposed Approaches for Prediction and Prevention in Spatial Layout Design Process
POS18	Nawaf Farhan Fankur Alshdaifat Deep Learning Approaches in Fish Detection and Tracking in Underwater Videos
POS19	Nor Rahayu Ngatirin Fuzzy Logic Based Learning Styles Detection in E-Learning Using Student Performance Information
POS20	Suhaila Farhan Ahmad Abuowaida Food Recognition System Using Deep Learning Method
POS21	Zaher Ali Al-Sai Technology Readiness Assessment for Big Data Analytics

List of Participants: 3MT Competition



3MT01	Addy Suyatno Hadisuwito Modeling of Adjustments to Calculation of Forest Fire Danger Index in Tropical Rainforest Countries
3MT02	Ali Auwal Shehu Analysis of effective Privacy Policies and control to enhance Informed Consent using Machine Learning Approach
3MT03	Anizah Binti Abu Bakar Privacy Preservation QoS Model for Data Exposure
3MT04	Kamal Karkonasasi Factors Affecting SMEs Intention to Use Cloud Computing in Malaysia
3MT05	Muhammad Nifhail Zambri Classification of Video Scenes Based on Their Interestingness
3MT06	Muhammad Ubale Kiru Automatic Door Sensor algorithm for classification based on body measurement
3MT07	Nachaat Abdelatif Ali Mohamed Multi-layer to detect and prevent APT Against credential dumping technique
3MT08	Zaid Abdi Alkareem Alyasseri Biometric User Authentication System Based on EEG Signals

List of Participants: System Demo



DEMO01	Darshan Babu L.Arasu Smart Mirror Design Powered by Raspberry PI
DEMO02	Muhammad Nifhail Bin Zambri Sensing Video Interestingness in Advertisements
DEMO03	Wahida Zakaria Dynamic Emotion Forces - Fuzzy Crowd Evacuation Modelling (DEF-FCEM)

CSPC 2019 Committee Members



Advisor	Prof. Dr Rosni Abdullah Assoc. Prof. Dr Bahari Belaton	
General Chair	Dr Nur Hana Samsudin	
General Co-Chair	Dr Gan Keng Hoon	
Secretary	Ms Anizah Abu Bakar	
Finance	Ms Eliza Yasmin Dahlan Mr Arief Ramadhan Juswa	
Registration Chair	Dr Nur Syibrah Muhammad Naim	
Registration Co-Chair	Ms Haziqah Samsudin	
Program Book Chair	Dr Noor Farizah Ibrahim	
Program Book Co-Chair	Ms Vivian Lee Lay Shan	
Poster Chair	Mr Ahmed Naef	
Poster Co-Chair	Mr Muhammad Rizwan Ghorri	
3MT Chair	Mr Ammar Abasi	
3MT Co-Chair	Mr Abrar Noor Akramin bin Kamarudin	
Demo Chair	Mr Al Yasser Zaid Abdi Alkareem Yahya	
Demo Co-Chair	Mr Sharif Naser Makhadameh	
Talk Chair	Dr Wong Li Pei	
Talk Co-Chair	Dr Sharifah Mashita Syed Mohamad	
Workshop Chair	Dr Fadratul Hafinaz Hassan	
Workshop Co-Chair	Ms Fatima Aswadi	
Logistics Chair	Ms Eliza Yasmin Dahlan	
Logistics Co-Chair	Ms Sheela Muniandy	
Logistics Team	Ms Suraya Abdullah Mr Muhamad Hadzri Yaakop Mr Hilridzuan Romli	Ms Halizah Abdul Razak Ms Rohana Omar Ms Nurul Nadiah
Website, Design & Promotion	Dr Pantea Keikhosrokiani Dr Nur Hana Samsudin	
Technical	Mr Shik Abdulla Mohamed Ali & Technical Team	
Excursion Chair	Ms Maziani Sabudin	
Excursion Co-Chair	Mr Mohd Azam Osman	
Excursion team	Dr Tan Tien Ping Ms Anizah Abu Bakar Mr Abrar Noor Akramin bin Kamarudin	Ms Haziqah Shamsudin Ms Najihah Ibrahim
Souvenir	Dr Nur Intan Raihana Ruhaiyem	
Sponsorship	Dr Nur Hana Samsudin Dr Gan Keng Hoon Dr Pantea Keikhosrokiani	
CS Postgraduate Meeting Coordinator	Ms Haziqah Samsudin Mr Ahmed Naef	Ms Vivian Lee Lay Shan Mr Muhammad Rizwan Ghorri
Emcees	Mr Mohammad Ali Sarvghadi Ms Haziqah Shamsudin	
Floor Manager	Mr Muhammad Rizwan Ghorri	

Acknowledgement



National Postgraduate Poster Competition (NP2C2019)

Institute of Electrical and Electronics Engineers (IEEE)

River Engineering and Urban Drainage Research Centre

Universiti Sains Malaysia

HILTI

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