

## **The 2nd IEEE SEACAS Hackathon (SEACAS Hackathon 2019)**

**Date: 16<sup>th</sup> -19<sup>th</sup> December 2019**

**Venue: Malaysian Research Institute on Ageing (MyAgeing<sup>TM</sup>) & Universiti Putra Malaysia (UPM)**

**Local organizer: IEEE CAS Malaysia Chapter**

### **Monday 16 December 2019**

On 16<sup>th</sup> December 2019, Hackathon participants from Indonesia, Malaysia, Philippines, Singapore, Thailand, and Vietnam were shuttled to MyAgeing<sup>TM</sup> Research Institute from respective hotels. All the hackathon participants and come symposium delegates registered at 9:00am at MyAgeing<sup>TM</sup> meeting room. The event started with a welcome speech from Fakhru Zaman Rokhani, SEACAS Hackathon 2019 general co-chair, and highlighted the importance of technology in Ageing-in-Place and shared the hackathon challenges. Next, welcome speech by IEEE CASS President-Elect, Amara Amara followed by SEACAS 2019 general co-chair, Mohd Nazim Mohtar. Then, a technical talk on Ageing-in-Place challenges and potential solutions were given by the subject matter expert, Prof. Siti Anom Ahmad from MyAgeing<sup>TM</sup>. At 10:00am, participants were brought to visit different research labs at the institute to experience ageing issues in detail and various developed prototypes. By 12:00pm, all the participants and delegates were shuttled to the Lakeside of Engineering Faculty for lunch. The event continued back at 13:00pm until 17:00pm at Seminar Hall Engineering Faculty for the participants to work on their project ideas. Participants were divided into 10 different teams, with two students per team, where each team selected their own project topics. At 17:30pm, all the participants and delegates were shuttled back to their hotel.



Figure 1 shows the lab visit by the participants while Figure 2 shows a participant experienced elderly's limited movement through wearing an Ageing Suit.

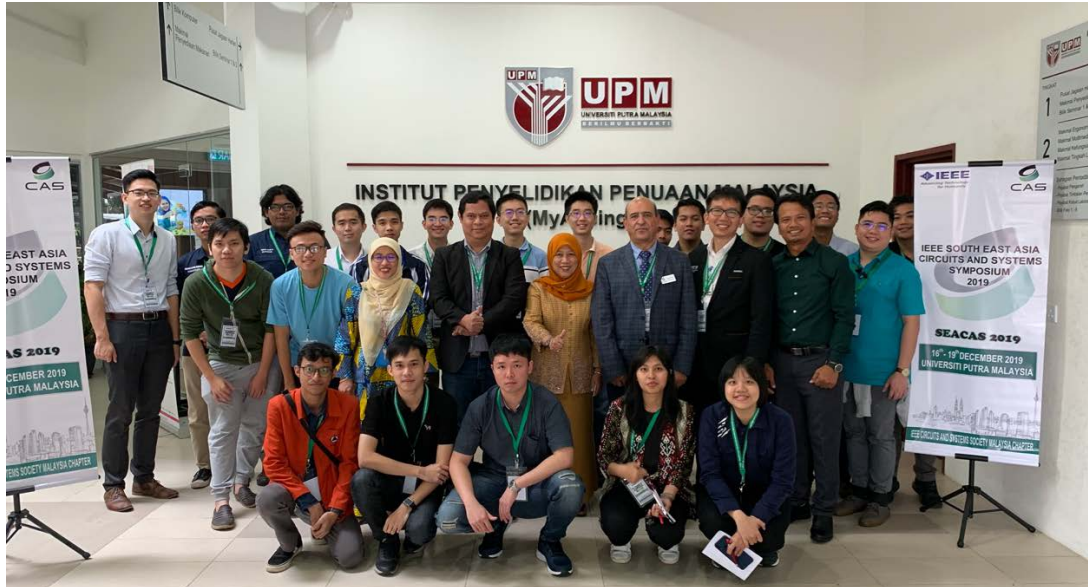


Figure 3 shows the SEACAS Hackathon participants together with the MyAgeing™ Institute Director.

### **Tuesday 17 December 2019**

On 17<sup>th</sup> December 2019, participants were shuttled from their hotel to the Seminar Hall of Engineering Faculty and started to work on their project from 9:00am until 12:00pm. At 12:00pm, participants break for lunch, served at the Lakeside. Working session continued after lunch until 16:30pm and then wrap-up, review and redirection session was held by Hackathon organizer together with MyAgeing™ subject matter experts. Welcome dinner were held from 18:00pm till 20:30pm which gave a great opportunity to student participants to meet and greet with IEEE CAS Society top leadership – Yong Lian, Amara Amara, and Yoshifumi Nishio. The student participants were asked to compete in a social competition – ‘Best Selfie and Creative Caption Contest’ reflecting on their Hackathon experience. The participants were asked to snap pictures during event, upload in Facebook, and write a creative caption to stand a chance to win attractive prizes. All participants back to their hotels by provided shuttles by 21.00pm.



Figure 4 shows some of the students working on their project and Figure 5 shows the wrap-up, review and redirection session for each group.



Figure 6 and Figure 7 show the lunch and welcome dinner at the Lakeside of Engineering Faculty UPM.



### **Wednesday 18 December 2019 (SEACAS)**

On 18 December 2019, provided shuttle service brought all the Hackathon participants from the hotels to Seminar Hall of Engineering Faculty at 8:30am. All students continued their project from 9:00am and break for lunch at 12:00pm. Working session continued after lunch from 13:00pm to 17:30pm. During this time, CASS officers came to seminar hall and met their students. The students had chance to discuss about their projects with the CASS officers, and then Wrap-up, review and redirection was held by Hackathon organizer together with MyAgeing<sup>TM</sup> subject matter experts. Then the participants proceeded to have Grand Dinner held at Le Meridien Hotel Putrajaya from 18:00pm till 21:00pm by provided shuttles. At the grand dinner, IEEE CAS Society leadership Amara Amara and Yoshifumi Nishio, together with SEACAS Hackathon general co-chair Mohd Nazim Mohtar gave welcoming speeches. During the dinner, students made some exciting performances, with special appearance by Yoshifumi Nishio. Representative CASS officers from different countries also gave a short reflection of the Hackathon program. The students totally enjoyed gathering and taking pictures, singing and sharing their experience with others. Instead of one promised prize, two prizes were given away to the winners of the 'Best Selfie and Creative Caption Contest'. All participants shuttled back to their hotels by provided shuttles after the ceremony.



Figure 8 and Figure 9 show some of exciting performances by the students and special appearance by Yoshifumi Nishio.



Figure 10 shows the CASS officers and student participants attended the grand dinner.

#### **Thursday 19 December 2019**

On 19 December 2019 at 8:00am, Hackathon participants arrived at MyAgeing<sup>TM</sup> institute and proceeded with demonstration booth setting up. Between 11.00am and 12:30pm, each team was given 5 minutes to pitch their project ideas and then demonstrated their prototype at their booth in front of more than 80 senior citizens, for the Senior Citizen Choice Award. The first team was from Philippines, presented about “Easy Shower: Gesture Identification Using Photo resistors as Bathing Aid for Older Adults”. Second team was from Malaysia presented about “AI Meal Tracker and Social App”. Third and fourth team were from Indonesia presented about “Heart Disease Monitoring and Alert System” and “Sensor Stick”. The fifth team was from Vietnam presented about “The Magic Spoon”. The sixth team was from Philippines presented about “Sweat Escape: Sweat Detection and Notification System”. The seventh team was from Thailand presented about “Smart Housework Sensors”. Then, eighth team was from Singapore presented about “Smart Bathroom”. The second last team was from Thailand again with the title “Smart Toilet”, followed by the last team from Indonesia. Upon completing all 10 presentations, senior citizens went from booth to booth to experience the prototype and evaluated these projects for the Senior Citizen Choice Award. The event then break for lunch between 12:30pm and 14:00pm. Following the lunch break, final evaluation session by an evaluation panel comprised of IEEE CASS officers (Amara Amara and Yoshifumi Nishio, ) and MyAgeing<sup>TM</sup> subject matter expert (Mohd

Rizal Hussin). Each team was given 7 minutes for presentation, 8 minutes of demonstration, question and answer. Next, between 16:00pm to 17:00pm, jury convened for complete deliberation to select the winner for SEACAS Hackathon 2019, then followed by closing ceremony. The Best Design Award (i.e. Winner of SEACAS Hackathon 2019) went to Vietnam team with the title of “The Magic Spoon”. Then, the first runner-up and the second runner-up went to Thailand teams with the title of “Smart Housework Sensors” and “Smart Toilet”. For the Senior Citizen Choice Award went to Philippines team with the title of “Easy Shower: Gesture Identification Using Photo resistors as Bathing Aid for Older Adults”. All the winners received cash award and IEEE CAS Society student membership for 2020. The Best Design Award winning team were selected to represent South East Asia for the final IEEE CAS Society Student Design Competition at ISCAS’20 in Spain. At the end of the event, we took some pictures with everyone that contributed to this event, including the delegates, participants, volunteers and the organizers.

**Fakhrul Zaman Rokhani, CASS Malaysia Chapter**





Figure 11 shows the evaluation session by more than 80 senior citizens for the Senior Citizen Best Award project.





Figure 12 and Figure 13 show the presentation by one of the competing team during the final evaluation session and deliberation session by the juries.



Figure 14 shows the Hackathon participants posing with some of the senior citizen attendees during the event.



Figure 15 shows the final pose with all Hackathon participants and delegates at the end of the event.