



Symposium on Acoustic, Speech and Signal Processing (SASSP 2019)

Centre for Advanced and Professional Education (CAPE), Level 16, Menara 2, Menara Kembar Bank Rakyat,
Jalan Rakyat, Brickfields, 50470 Kuala Lumpur,
20th March 2019

IEEE Signal Processing Society Malaysia Chapter and Institute of Autonomous System, Universiti Teknologi PETRONAS (UTP) will jointly organize the **7th IEEE Symposium on Acoustics, Speech and Signal Processing (SASSP 2019)**, on **20th March 2019** at Universiti Teknologi PETRONAS, Center for Advanced and Professional Education (CAPE), **Kuala Lumpur**. This FREE event, open to all IEEE members and non-members, is organized:

- to bring the university and industry community together to share and discuss the latest trends in **acoustic, speech and 1D signal processing, analysis and real-time implementation**, and
- to promote IEEE Signal Processing Society Malaysia Chapter to the Malaysian academic and industry community as a forum for professional networking and advancement.

PROGRAM

Venue : Seminar Room 2 & 3 Centre for Advanced and Professional Education (CAPE), Menara Kembar Bank Rakyat, KL Sentral.

0830 – 0900 : Registration

0900 – 0910 : Opening Remarks by the Chairman of SASSP 2019

0910 – 0920 : Welcome Speech

0920 – 1030 : **Keynote Speech #1 Professor Junzo Watada**

1030 – 1045 : Tea Break

1045 – 1100 : IEEE Membership Drive

1100 – 1150 : **Keynote Speech #2 Dr. Dinesh Sathyamoorthy**

1150 – 1240 : **Keynote Speech #3 Dr. Kushsairy Abdul Kadir**

1240 – 1400 : Lunch Break

1400 – 1640 : 3Minute Abstract (3MA) Presentation

1640 – 1700 : Closing and Tea

ORGANIZING COMMITTEE

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Syed Khaleel Ahmad (India)

Hezerul Abdul Karim (MMU)

Abstract Submission Deadline

5th March 2019

Notification of Acceptance

10th March 2019

Registration Open Date

01th March 2019

Registration Due Date

16th March 2019

ABSTRACT SUBMISSION FOR REGULAR PRESENTATION

Prospective presenters are invited to submit a ONE-page(A4)double column abstract of their work. The selected presenters will receive a certificate of appreciation as **Invited Speaker**.

REGISTRATION

Whether you are presenting or just attending the symposium, please register via the website http://sps.ieeemy.org/public_html/sassp2019/ by 10th March 2019. For any enquiries, please email: sassp.ieeesps@gmail.com.

Free registration and admission for members and non-members! Lunch and refreshments provided to all presenters!

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KEYNOTE SPEAKERS

	<p>KEYNOTE I: Professor Junzo Watada, (Professor, Universiti Teknologi PETRONAS) Human Centered Data Mining from Macro-Ergonomic Perspective</p> <p>We discuss two industrial macro-ergonomic problems. Without considering human aspects it is not possible to clarify the problems. Today, affective engineering, macro-ergonomics play a pivotal role in fixing various problems. In the talk we will explain two real cases from Fujitsu Co. Ltd and Panasonic Corporation. One is how to forecast the number of remaining bugs after delivery. The other is the analysis of the fatal accidents analysis. Both the cases were successfully to have solved the problems by employing the concept "macro ergonomics" and "human centered data mining". That is, the forecast of remaining bugs were treated on basis of human centered data mining bug cases in the computer company in 1990s. Also we applied the macro ergonomic model to human errors analysis of Panasonic Corporation in 1990s.</p>
	<p>KEYNOTE II: Dr. Dinesh Sathyamoorthy, (Senior Research Officer, Science & Technology Research Institute for Defence, Malaysia) Global Positioning System (GPS) Receiver Evaluation via GPS Simulation: Focus on Jamming and Spoofing</p> <p>Global Navigation Satellite Systems (GNSS) are being increasingly used for a variety of important applications, including public safety services (police, fire, rescue and ambulance), marine and aircraft navigation, vehicle theft monitoring, cargo tracking, and critical time synchronisation for utility, telecommunications, banking and computer industries. The rapid growth of GNSS applications is due the quality of service provided by GNSS, ease of use and low user cost. However, GNSS signals are vulnerable to jamming and spoofing, which are surprisingly simple to conduct by even relatively unsophisticated adversaries. Jamming refers to the blocking of GNSS signals, rendering GNSS receivers in the affected areas inoperable, while spoofing refers to forging and transmission of navigation messages in order to manipulate the navigation solutions of GNSS receivers. Jamming is not surreptitious and affects both civilian and military GNSS signals, while spoofing is surreptitious and primarily affects civilian GNSS signals; military GNSS signals are less affected by spoofing as they are encrypted and authenticated. Due to the increasing reliance of various industries on GNSS, the consequences of GNSS service disruption can be severe, in terms of safety, environmental and economic damage. This presentation highlights on research conducted in STRIDE on the evaluation of Global Positioning System (GPS) receivers to jamming and spoofing using GPS simulation.</p>
	<p>KEYNOTE III: Dr. Kushsairy Abdul Kadir (Universiti Kuala Lumpur British Malaysia Institute (UniKL-BMI) Kuala Lumpur, Malaysia) Signal Processing Technique Application to Rehabilitation Robot</p> <p>Paralysis and Spasticity are mainly common effect of stroke which brings the person towards the disability of limbs movement by injured the brain. The best way to recovery the post-stroke patient is rehabilitation therapy from the different problems with muscle weakness/rigidity, abnormal movement, lack of sensitivity, joint rigidness, and orientation abnormality. Thus, robotic structure involved with this therapy activity is known as rehabilitation robot which usually used for rehabilitation exercises.</p> <p>Bio-medical signals are responsible to rule and drive rehabilitation protocols and devices. Surface Electromyography (sEMG) is a reference technique that used for acquisition of bio-medical signal to activate the rehab robot. Functional Electrical Stimulus (FES) technique is used to activate the disable muscle by placing the stimulator detector on the particular surface. The EMG driven FES neuroprosthesis is usually controlled by volitional sEMG technique. The rehabilitation treatment outcome can also be predicted by the analysis of bio-medical signals. Furthermore, time-domain bio-signal processing also used in health monitoring system which will observe the improvement of the patient.</p>

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