COLLEGE OF ENGINEERING AND PHYSICS

Electrical Engineering Department

PRESENTS SEMINAR 211-10

Mental Stress and Depression: Intelligent Assessment, Intervention and Mitigation Approaches

Date:	Tuesday, December 7, 2021
Time:	01: 10 PM – 02: 00 PM
Location:	Bldg. 59-2015

Speaker:

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Abstract:

Mental illness is a rising concern all over the world. People suffer from its effect on their mental and physiological health. As more people seek clinical care to address this problem, literature has reported that there is a shortage of clinical professionals to meet the public service. Despite the usage of brain-imaging modalities to provide computer-aided diagnosis, patient interaction is still the key in identifying diagnosis and treatment planning of mental health. These interactions, in addition to appointments for physiological check-ups, are time-consuming and dependent on subjective responses of patients and the emotional connection between patients and psychiatrist. This talk will discuss the machine learning based brain mapping approaches for stress assessment, intervention and mitigation. The discussion will include issues related to the neurosignal processing, real-time assessment for wearable devices and intervention approaches using neurofeedback training.

Bio:

Dr. SYED SAAD AZHAR ALI is an Associate Professor in the Department of Electrical and Electronics Engineering, and engaged with the Centre of Intelligent Signal and Imaging Research, Universiti Teknologi PETRONAS, Malaysia. He has also worked with Air University and Iqra University, Pakistan. He received the B.E. degree in Electrical Engineering from NED University, Pakistan, and the Master and Doctoral degrees in Electrical Engineering (with focus on Nonlinear Control) from the King Fahd University of Petroleum & Minerals, Saudi Arabia. His research focus has been on neurosignal processing, intelligent control, signal processing, underwater robotics and imaging. He has been involved in neurosignal processing and neurofeedback since 2014. He has authored over 80 peer-reviewed publications, including four books/chapters. He has supervised several MSc and Ph.D theses. He is the PI for several national and international level funded research projects.