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Cordially Invites you to the

CIS Distinguished Lecture at IDRBT Doctoral Colloquium

Date & Time
Friday, 9th December, 2016,
9:30am to 10:30am

Venue
Room 205, IDRBT,
Castle Hills, Venkatadri Colony,
Masab Tank, Hyderabad.

On

"BCI--Brain Computer Interface vs Bio-Computational Intelligence"

By

Prof. Chin-Teng (CT) Lin
Distinguished Professor,
University Technology of Sydney, Australia

NO REGISTRATION FEE
Event open to all

Registration through email by 7th December 2016.

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Brief about the Speaker

Dr. Chin-Teng Lin received the B.S. degree from the National Chiao-Tung University (NCTU), Taiwan in 1986, and the Master and Ph.D. degree in electrical engineering from Purdue University, West Lafayette, Indiana, U.S.A. in 1989 and 1992, respectively. He is currently a Chair Professor of Electrical and Computer Engineering and Director of Brain Research Center, National Chiao-Tung University. He is also invited as the International Faculty of the University of California at San Diego (UCSD) from 2012 and Honorary Professorship of University of Nottingham from 2014. Dr. Lin's research focuses on machine-intelligent systems, including algorithm development and system design. He has published over 190 journal papers, and is the coauthor of Neural Fuzzy Systems (Prentice-Hall) and author of Neural Fuzzy Control Systems with Structure and Parameter Learning (World Scientific). Dr. Lin has been serving as Editor-in-Chief of IEEE Transactions on Fuzzy Systems since 2011, and has served on the Board of Governors of IEEE Circuits and Systems Society, IEEE Systems, Man, and Cybernetics Society, and IEEE Computational Intelligence Society. Dr. Lin is an IEEE Fellow.

Abstract

Brain-Computer interface (BCI) is to enhance human brain's capability in interacting and communicating with the environment directly. BCI plays an important role in natural cognition, which is to study the brain and behavior at work. Human cognitive functions such as perception, attention, situational awareness, and decision making are omnipresent in our daily life activities. For instance, driving is one of the most common attention-demanding tasks in our daily routine. When drivers lost their attention, they had appreciably reduced the perception, recognition and vehicle control abilities. Hence, how to effectively prevent and enhance the human cognitive functions has become a very important issue. Recently, many investigators had developed novel algorithms based on computational intelligence (CI) technologies to monitor, maintain, or track the human cognitive states and operating performance. In this lecture, I shall introduce the fundamental physiological changes of the human cognitive functions at work first and then explain how to utilize these main Bio-findings and CI techniques (Bio-CI) to develop the monitoring and feedback systems. We shall also introduce the real-life applications of BCI on various aspects including clinics, homecare, personnel training, or even computer gaming.