

Short
Course
on

INTELLIGENT TECHNIQUES FOR REHABILITATION ROBOTICS

23rd December, 2013 || Venue– CISIR, UTP, Bandar Seri Iskandar, Perak

This short course covers the advancements in rehabilitation robotics, acquisition of EMG signals and modeling of EMG signals using intelligent techniques such as Genetic Algorithms (GA) and Particle Swarm Optimization (PSO). Participants will be having hands-on experience in the use of EMG signal acquisition system and modeling using the GA and PSO.

Target Audience: 1-Day short course for Lecturers, Researchers, Postgraduate Students, and Industry Researchers. Medical Engineering Students, Biomedical Engineers and Electronic Engineers

Course Objectives

- to provide state-of-the art on Robotics Rehabilitation technologies
- to introduce EMG system
- to provide hands-on experience for sEMG signal acquisition system and modeling using GA and PSO

Resource Person

Associate Professor Dr Irraivan Elamvazuthi



He obtained his PhD from the Department of Automatic Control & Systems Engineering, University of Sheffield, UK in 2002. Currently, he is an Associate Professor at the Department of Electrical and Electronic Engineering, Universiti Teknologi PETRONAS (UTP). Before joining UTP, he has worked at University Kuala Lumpur, Standards and Industrial Research Institute of Malaysia (SIRIM) and UMW Industrial Power. His research interests include Control & Systems Engineering with focus on Energy, Robotics and Bio-Medical Applications. He is a member of IEEE, IFAC and Robotics & Automation Society (RAS) IEEE Malaysia Chapter.

Registration Fees

IEEE Student Members/ IEEE RAS Member	RM 450
Student Non-Member	RM 500
Full IEEE Member	RM 550
Non-Member	RM 600

The fee is per person and includes lunch, refreshments and short course materials. A certificate of attendance will be given at the end of the course. Participants are encouraged to bring their own Laptop.

Note: - Registration should be completed 5 days before course commencement. First-come, first-served

For any further information, please contact:

Mr. Dileep Kumar (Research Scientist),
Centre for Intelligent Signal and Imaging (CISIR)
Email: dileep.utp@gmail.com or
dileep.kumar@petronas.com.my
Phone/Mobile : 0195591650

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Program Schedule

DAY	TIME	DESCRIPTION
23rd Dec 2013	0900 -1045	Introduction to Rehabilitation Robotics
	1045 – 1100	Break
	1100 – 1300	Introduction to Basic Electromyography & Application of EMG System Acquisition Processing Analysis
	1300 – 1400	Lunch
	1400 – 1445	Modeling of EMG signals using Intelligent Techniques Genetic Algorithms (GA) Particle Swarm Optimization (PSO)
	1445 – 1645	Hands-on Session
	1445 – 1700	Certificate Presentation

Participants Registration Form

Name		<p>Mode of Payment (please tick (X) on appropriate)</p> <table border="1" style="width: 100%; text-align: center;"> <tr><td><input type="checkbox"/></td><td>Bankers Cheque</td></tr> <tr><td><input type="checkbox"/></td><td>Demand Draft</td></tr> <tr><td><input type="checkbox"/></td><td>Online Transation</td></tr> <tr><td><input type="checkbox"/></td><td>Cash Deposit</td></tr> </table> <p>For On-line transaction and cash deposit to ITP account, please use the account information below INSTITUTE OF TEKNOLOGI PETRONAS SDN BHD (352875-U): 0809-0004124-054 (CIMB Bank Berhad, Batu Gajah)</p> <p>Kindly fill the registration form and send a scan copy of filled form to one of the below e-mails: dileep.utp@gmail.com or dileep.kumar@petronas.com.my</p>	<input type="checkbox"/>	Bankers Cheque	<input type="checkbox"/>	Demand Draft	<input type="checkbox"/>	Online Transation	<input type="checkbox"/>	Cash Deposit
<input type="checkbox"/>	Bankers Cheque									
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About Centre for Intelligent Signal and Imaging Research (CISIR)

Centre for Intelligent Signal and Imaging Research (CISIR) of Universiti Teknologi PETRONAS is a leading intelligent signal and imaging research centre in Malaysia and the region. Research at CISIR explores the use of signal and image processing, computer vision, 3D imaging, spatial analysis and computational intelligent techniques in providing solutions for medical and industrial applications. The Centre designs hardware platforms using embedded systems approach in implementing the real-time solutions. In achieving real-time performance, optimisation methods such as the use of multi-core CPU, co-processing and graphics processing unit (GPU) are implemented. A wide range of short courses are offered at CISIR in the Year 2014. For the short courses offered in 2014, follow the link below

Short Courses: http://www.utp.edu.my/CISIR/index.php?option=com_content&view=article&id=128&Itemid=176

Website: <http://www.utp.edu.my/CISIR/>

Contact: Mr Dileep Kumar (Research Scientist)

Email: dileep.utp@gmail.com **Phone:** +60-195591650

