ADMISSION

Target Audience: Engineering & Medicine (Scientist, Doctors, Physiotherapist, PhD Students, Research Scholars).

Poster Session: Participants can present their research work through posters in the area of the main topic of the workshop including robotic mechanisms, modelling, control, case studies, clinical intervention and their applications in rehabilitation. **Best student Poster will be judged and awarded by a jury of experts.**

Maximum seats: 40

REGISTRATION

Participants shortlisted for the workshop will be notified through E-mail and they will have to pay a registration fee of Rs. 2500/- per person through electronic bank transfer to the following account:

Account Name	Account Number	IFSC Code
Director CSIO	**30267029400**	**SBIN0001443**

Registration includes a workshop kit, access to all lectures, lunches, coffee breaks and a social event with gala dinner.

The registration will be opened until the 12th of February 2019 at: www.lirmm.fr/robo-rehab-2019/

ACCOMMODATION

Limited paid accommodation may be provided on first come first serve basis.

Contact

For more information, please contact:
robo-rehab-2019@lirmm.fr

IFCPAR / CEFIPRA: This workshop is supported by Indo-French Centre for the Promotion of Advanced Research, a model for international collaborative research in advanced areas of Science & Technology: http://www.cefipra.org/

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PROGRAM SCHEDULE :

	9:30-10:30	10:30-11:30	11:30-12:00	12:00-01:00	1:00-1:30	1:30-2:30	2:30-3:30	3:30-4:00	4:00-5:00
Tuesday 26th Feb. 2019	Inauguration • French Scientific Attache • Director CEFIPRA • Director CSIO • Organizers	Lecture 1 Wearable Robotics Samer Mohammed LISSI/UPEC, France	Coffee break	Lecture 2 Clinical Rehabilitation I Chitra Kataria ISIC Delhi, India	Short Lecture Neuro-Robotics Mitasuhiro Hayashibe Tohoku University, Japan	Lunch	Lecture 3 Medical Robotics Antoine Ferreira PRISME, France	Coffee Break	Lecture 4 Artificial Intelligence Deepak Joshi IIT Delhi, India
Wednesday 27th Feb. 2019	Lecture 5 Robotic Control Ahmed Chemori LIRMM/CNRS, France	Lecture 6 Mechanism & Mechatronic Ekta Singla IIT Ropar, India		Lecture 7 Clinical Rehabilitation II Prof Jean-Michel Gracies CHU Mondor, France	Discussions & Networking		Lecture 8 Haptic Control Mohamed Djemai LAMIH/CNRS, France		**Poster Session**
Thursday 28th Feb. 2019	Lecture 9 Robotic Surgery Bernard Bayle ICUBE/CNRS, France	Lecture 10 Orthopaedic Assessment Aditya Aggarwal PGIMER, India		Lecture 11 Robotic Devices Neelesh Kumar CSIR-CSIO, India			Lecture 12 Orthotics PJ Singh Tynor, Mohali, India		**Awards & Closing Ceremony**

INDO-FRENCH WORKSHOP ON ROBOTICS FOR REHABILITATION (Robo-Rehab 2019)

CEFIPRA

February 26-28, 2019

Coordinated by

AHMED CHEMORI — LIRMM
NEELESH KUMAR — CSIR-CSIO
SAMEER MOHAMMED — LISSI

CSIR-CSIO Diamond Jubilee Year (2018-19)

CSIR-Central Scientific Instruments Organisation
Sector 30-C Chandigarh, India

Robo-Rehab 2019: Rehabilitation with the help of semi and fully automatic controlled robots are emerging for assistance and therapy. It is a multidisciplinary field&requires participation from Engineers (electronics, control, mechanical, biomechanics) and doctors & Physiotherapist. The robotic devices are developed for assisting different sensorimotor functions of arm, hand, leg, ankle and also full body in extreme case. The rehabilitation is also more effective and efficient with development of therapeutic training and quantification of sensorimotor performance. There is a high demand to develop simpler mechanism with patient tailored adaptive control to assist the individuals suffering of motor impairments, due to stroke, spinal cord injuries etc. The workshop will cover the knowledge dissemination for development of intelligent robotic aids, mechanical design and control. The user and Industry perspective will also be explained. The workshop is aimed to create an international network of similar researchers of India & France, for the benefit of human kind.

SPEAKERS

Ahmed Chemori is a tenured Research Scientist in Automatic Control and Robotics for the French National Center for Scientific Research (CNRS), at the Montpellier Laboratory of Computer Science, Robotics and Microelectronics (LIRMM). His research interests include nonlinear (adaptive and predictive) control and their real-time applications in different fields of robotics.

Samer Mohammed is an Associate Professor in computer science at the Laboratory of Image, Signal and Intelligent System (LISSI) - University of Paris-Est Créteil (UPEC). His research domain concerns mainly the modeling, identification and control of robotic systems (wearable robots) but also artificial intelligence and decision support theory.

Antoine Ferreira is a Professor of robotics engineering with the Laboratoire PRISME, Ecole Nationale Suprieured' Ingnieurs de Bourges, Bourges, France. His research interests include the design, modeling, and control of micro- and nanorobotic systems using active materials, micro and nanomanipulation systems, biological nanosystems, and bionanorobotics.

Jean-Michel Gracies is a Professor and Chair in the Department of Rééducation Neurolocomotrice at Hôpital Henri Mondor, Créteil, France. He has an expertise in neurorehabilitation of movement, pathophysiological concepts, neurorehabilitation programs, and clinical research projects for syndromes such as spastic paresis, parkinsonian syndromes, tremors, peripheral facial palsies, and other movement disorder.

Bernard Bayle is a Professor at Télécom Physique Strasbourg, University of Strasbourg, France. He heads the Control, Vision and Robotics research group of ICUBE Laboratory. His research interests include design, modeling and control of robotic systems, with a focus on medical robotics and force feedback.

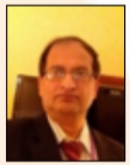
Mohamed Djemaï is University Polytechnic Hauts-de France, Valenciennes, France and a member of LAMIH Laboratory (CNRS - UMR). His research interests are mainly related to nonlinear control systems, observation, and fault detection theory including hybrid system, variable structure systems and time scale systems, with applications to power systems, robotic and vehicles.

Neelesh Kumar is working as Principal Scientist in Biomedical Instrumentation Unit of CSIR-Central Scientific Instruments Organisation, Chandigarh. His area of research are techniques of gait assessment, sensor development, design and development of assistive devices and methods to quantify rehabilitation.

Ekta Singla is an Assistant Professor at IIT Ropar. Her current research interest is inclined towards the task-based design and motion planning for assistive technologies, advanced directions of Modular robotics and Hybrid manipulators and unified approaches for Optimal synthesis and Performance analysis of Manipulators.

Deepak Joshi is working as an Assistant Professor in Indian Institute of Technology (IIT), Delhi. He has been working in the area of neural prosthetic design and development and currently exploring visual motor control for seamless transition in powered prosthesis and the role of artificial proprioception in lower limb prosthesis and gait rehabilitation.

PJ Singh is CEO of Tynor Orthotics, the reputed company providing world class and innovative solutions in orthopedics and allied fields, through focus on R & D. In addition to its' already existing 140+ product base, the company is also focused on R&D of advanced therapeutic devices.



Aditya Aggarwal is an OrthopaedicSurgeon with a sub specialty in arthroscopy surgery and has an experience of more than 35 years. Currently, he is a professor and head of orthopaedics unit II at PGI, Chandigarh.

Chitra Kataria is Chief of Rehabilitation Services & Principal at Indian Spinal Injuries Centre, New Delhi. She has an experience in the field of Spinal Cord Injury rehabilitation and patient management with disabilities such as musculoskeletal and neurological disorders.

Lectures and materials

All lecture materials will be available online on the website of the workshop: www.lirmm.fr/robo-rehab-2019/

Venue

CSIR-Central Scientific Instruments Organisation
Sector 30-C Chandigarh-160030, India

Industrial Partner :

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