

MRGO6306 Robotic Rehabilitation Therapy 機器人康復治療 (2 credit units)

2022/23

Module Head: Dr. Ronald Wong

Session	1	2	3	4	5	6	7	8	Exam
Date	12/5/23 (F)	19/5/23 (F)	1/6/23 (Thu)	2/6/23 (F)	8/6/23 (Thu)	9/6/23 (F)	10/6/23 (S) AM	10/6/23 (S) PM	17/6/23 (S)
Time	1830-2130	1830-2130	1830-2130	1830-2130	1830-2130	1830-2130	1000-1300	1400-1700	PM
Venue	CUHKMC IACR	ZOOM	OLC SR	CUHKMC 10/F CR	ZOOM	CUHKMC 10/F CR	CUHKMC RC	CUHKMC RC	CSB SR

Contents

Mini-module	Topic	Speaker	Session	Time slot
Indications in Robotic Rehabilitation	Exoskeleton introduction and implementation	Prof. WEE Seng Kwee	1	12/5/2023 (Fri) 18:30-21:30
Neuroplasticity principles	<ol style="list-style-type: none"> Principles of Neuroplasticity Principles of Gait Locomotor Training Traditional Physiotherapist Practice in Neuroplasticity Rehabilitation 	Janette Tartabini (ZOOM)	2	19/5/2023 (Fri) 18:30-21:30
Introduction of Robotics technology	Introduction to Robotics for Rehabilitation – End effector based robotic rehabilitation Introduction to Robotics for Rehabilitation – Exoskeleton based robotic rehabilitation Researches and Cases	Michael Glover / Janette Tartabini	3	1/6/2023 (Thu) 18:30-21:30
Applications in Robotic Rehabilitation	EksoNR exoskeleton clinical application, EksoNR application and skills lab	Michael Glover / Janette Tartabini	4	2/6/2023 (Fri) 18:30-21:30
	Exoskeleton for treating Cerebral palsy	Prof. Mayte VEGA (ZOOM)	5	8/6/2023 (Thu) 18:30-21:30
	Exoskeleton for treating stroke and multiple sclerosis	Jason Redhead	6	9/6/2023 (Fri) 18:30-21:30
Practicum	Robotic rehabilitation for Real Patient Cases (1) Upper Limb Robot	Mr. Benjamin Lau	7	10/6/2023 (Sat) 10:00-13:00
	Robotic rehabilitation for Real Patient Cases (2) Exoskeleton		8	10/6/2023 (Sat) 14:00-17:00

Venue:

CUHKMC IACR	Interactive classroom, 10/F, CUHK Medical Center, Shatin
CUHKMC 10/F CR	Classroom 1005-1006, 10/F, CUHK Medical Center, Shatin
CUHKMC RC	Alex Wong Sports Medicine and Rehabilitation Centre, 1/F, CUHK Medical Center, Shatin
OLC SR	Seminar Room, Orthopaedic Learning Center, 1/F, Li Ka Shing Specialist Clinic (North Wing), Prince of Wales Hospital, Shatin
CSB SR	Seminar Room, 2/F, Lui Che Woo Clinical Sciences Building, Prince of Wales Hospital, Shatin
ZOOM	Online session by ZOOM (the ZOOM link will be released)

Brief Description:

Introduction of Robotic Rehabilitation for Neuroplasticity Rehabilitation and therapeutic application of exoskeleton for rehabilitation

介紹以機器人康復治療的神經可塑性康復，及外骨骼在康復中的治療應用。

Learning Outcome:

Students will understand the followings:

1. Principles Neuroplasticity and Rehabilitation;
2. Principles of Robotic Rehabilitation and its application;
3. Updated with the Latest information of Robotic Rehabilitation Technology

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With each assignment, students will be required to submit a signed [declaration](#) that they are aware of these policies, regulations, guidelines and procedures.

- In the case of group projects, all members of the group should be asked to sign the declaration, each of whom is responsible and liable to disciplinary actions, irrespective of whether he/she has signed the declaration and whether he/she has contributed, directly or indirectly, to the problematic contents.
- For assignments in the form of a computer-generated document that is principally text-based and submitted via VeriGuide, the statement, in the form of a receipt, will be issued by the system upon students' uploading of the soft copy of the assignment.

Assignments without the properly signed declaration will not be graded by teachers.

Only the final version of the assignment should be submitted via VeriGuide.

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Speakers:

Prof. Ronald WONG (Module head)	BCMPH, MBChB (CUHK), MRCSEd, PhD (CUHK), FHKCOS, FHKAM (Orth) Clinical Assistant Professor, Department of Orthopaedics and Traumatology, The Chinese University of Hong Kong
Prof. WEE Seng Kwee	PhD (Neurorehabilitation), University of Southampton, United Kingdom Associate Professor, Singapore Institute of Technology Principle Physiotherapist, Tan Tock Seng Hospital, Singapore
Janette Tartabini	DPT (UM), MPT (OSU), BSc AHS (BGSU) Doctor of Physical Therapy, Clinical Manager: Asia Pacific, Ekso Bionics Holdings Inc
Michael Glover	BSc AMP (OSU) Physical therapist, Neurological clinical specialist Global Director of Clinical Experience, Ekso Bionics, Richmond, California
Prof. Mayte Vega	20 years neuropediatrics clinical experience. 12 years experience with robotic devices for children and adult. Master in Pediatrics, San Pablo CEU University, Madrid. Osteopath C.O , The University of Alcalá de Henares, School of Osteopathy of Madrid. Associate Professor, Physiotherapy in Pediatrics, Francisco de Vitoria University, Madrid. Professor at Pediatric Master, San Pablo University, Madrid. Professor at Pediatric Master Osteopath, School of Osteopathy of Madrid.
Jason Redhead	Bachelor of Physiotherapy (BPhy), Otago, New Zealand Senior Physiotherapist and Advanced Technology Clinical Lead Royal Rehab, NSW, Australia
Mr. Benjamin LAU	MSc in Manipulative Physiotherapy (PolyU), BSc (Hon) in Physiotherapy (PolyU) Registered Physiotherapist, CUHK Medical Center