

Winter 2021 Newsletter

Impact

Touching lives, making an impact

COVER STORY

Renovation Project of RS Laboratories and Rehabilitation Clinic/Service Centre

To provide best possible infrastructure and equipment for training physiotherapists and occupational therapists, the Department of Rehabilitation Sciences at The Hong Kong Polytechnic University (RS, PolyU) has upgraded and improved its laboratories and teaching-related facilities during the period 2018-2020. The renovation project was also intended as a response to the HKSAR Government's plan to increase publicly funded training places for allied health professionals (including physiotherapists and occupational therapists) so as to relieve the shortage of healthcare manpower.

The related renovation works were carried out in two phases and supported by funding from the Food and Health Bureau (FHB) of the HKSAR Government. Phase I covers the laboratories on the 8th floor of ST wing and room W210, where Tam Wing Fan Rehabilitation Service Centre (Occupational Therapy), recently established with a generous donation from Mr Tam and his family, is located. Phase II renovation

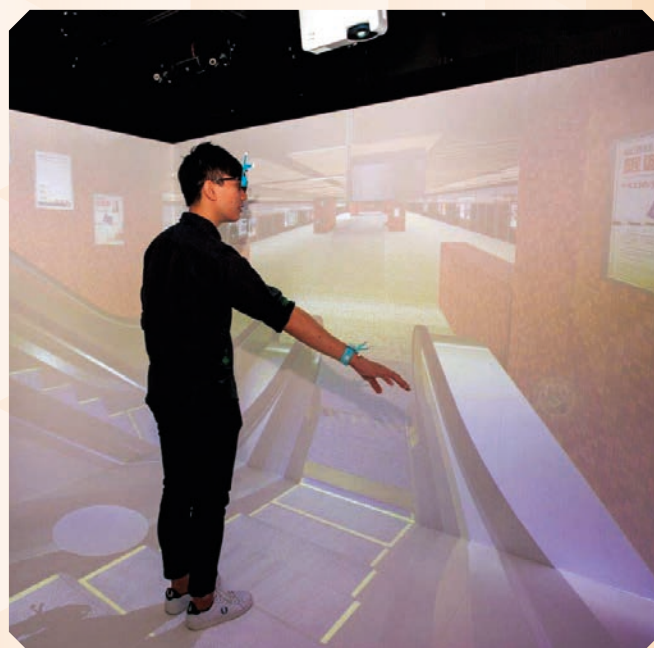
focuses on the Rehabilitation Clinic in room AG056, the laboratories on the ground floor, 1st floor and 4th floor of ST wing as well as the 4th floor of QT wing.

In addition to the alternations and improvement works of our existing facilities, we also made funding requests for buying and installing new state-of-the-art equipment in the freshly renovated laboratories and clinic/service centre. With enhanced infrastructure, new equipment and modern technology, our laboratories and clinic/service centre are much better equipped to conduct interdisciplinary, innovative and translational research, as well as develop new assistive devices for rehabilitation and provide professional rehabilitation services to those in need. They also serve as great educational platforms for our faculty members to deliver high-quality training of physiotherapists and occupational therapists, who will in turn serve society with their advanced knowledge and evidence-based practice skills in the future.

East-meets-West and Psychosocial Rehabilitation Laboratory

Location: ST816

The research team at the East-meets-West and Psychosocial Rehabilitation Laboratory strives to understand the benefits and mechanisms of complementary and alternative therapies in treating diverse populations. The laboratory is equipped with VirCube, an immersive and interactive virtual reality solution designed for rehabilitation. VirCube can create a safe and 1-to-1 scale virtual environment, and the research team aims to design immersive virtual experiences that facilitate the delivery of complementary and alternative therapies such as mind-body exercises, and augment their effectiveness. The laboratory also has research equipment for measuring and monitoring biological and neurophysiological activities, such as electromyography (EMG) and electroencephalogram (EEG). Relevant biological and neurophysiological data will help to reflect participants' responses, inform the progress of training, and understand the underlying mechanisms. For example, EMG is adopted in research on relaxation training, cardio-output (e.g., heart rate variability) is measured for studying self-regulation of children with autism spectrum disorder, and EEG monitoring is incorporated in studies of transcranial direct current stimulation (tDCS).



With the East-meets-West and Psychosocial Rehabilitation Laboratory, RS will conduct rigorous research on the application of evidence-based complementary and alternative therapies to psychosocial rehabilitation.

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Assistive Technology Laboratory

Location: ST814

The Assistive Technology Laboratory located on ST 8th floor has a total floor space of 92 m², with 3 functional rooms and 2 functional areas. The 3 functional rooms, dedicated to different areas of research, are the Neuromodulation Research Laboratory, the Driver Assessment Rehabilitation Laboratory, and the Assistive Technology Products and Technical Workshop. There is also a functional area for displaying AT products, and another area for robotic therapy and upper-limb motion studies.

The Assistive Technology Laboratory is equipped with state-of-the-art facilities including robots (e.g. end-effectors and exoskeletons for physical rehabilitation, social robots for psychosocial rehabilitation), a brain-computer interface (BCI) system, brain modulation devices such as TMS and tDCS, neurofeedback and EEG systems, and a portable motion capture and analysis system.



X-reality Rehabilitation Laboratory

Location: ST402



The Mix-reality (X-reality) Rehabilitation Laboratory magnificently combines reality and imagination, by using virtual reality (VR) and/or augmented reality (AR) in the development of rehabilitation protocols for clinical practice.

The use of AR in rehabilitation allows the combination of real and virtual worlds, real-time interaction, and accurate 3D registration of virtual and real objects, thus promoting better training outcomes.

Research on the effects and implications of AR in the field of rehabilitation for different populations and health needs is rapidly increasing. One of the research aims of this laboratory is to measure and understand the impact of an AR mobile application on the ever-growing elderly population in our community. Successful transfer of their research findings to daily functions via AR can improve, for instance, the safety of older adults at home and in the community, and contribute to the realisation of aging-in-place.

Basic Science Research in Rehabilitation Laboratory

Location: ST812 & ST813



The new Basic Science Research in Rehabilitation Laboratory brings together previously disparate capacities under one roof on the 8th floor of the ST wing. The modernised, integrated arrangement will facilitate synergistic interactions and foster interdisciplinary and

translational research, both within RS and across PolyU departments.

The laboratory comprises nine sections with a total floor space of 163 m². It is able to support more than 20 people working simultaneously. The **main wet lab area** houses twelve 2.5 m-long laboratory benches, and is equipped with state-of-the-art equipment for diverse assays of biological materials – from structural and functional evaluation to the quantification of protein and gene expression. The **microscopy section** houses three sets of microscopes with the latest image analysis software and hardware for automated three-dimensional quantitative morphometric investigations. The separate **biosafety level-2 (BSL-2) section**, maintained under negative pressure, is equipped with three Class-II biological safety cabinets for cell and tissue culture experiments and the safe handling of human specimens. The **orthopaedic and surgery section** is an air-tight room designed for orthopaedic measurements and small rodent surgery. A 24-h temperature-regulated room is dedicated for **cryo-storage**, where four ultra-low (-80°C) freezers, eight refrigerators, and liquid nitrogen are kept. The **histology processing section** is equipped with two fume hoods for routine histochemistry, immunocytochemistry, and the post-mortem dissection of wet tissues. Finally, three interconnected procedural rooms have been built for *in vivo* experiments in behaving animals, with diverse equipment specialising in **cardiopulmonary**, **cognitive neuroscience** and **rodent behavioural analyses**.

Spinal Research Laboratory

Location: ST106

The Spinal Research Laboratory is equipped with state-of-the-art technology to disentangle factors that may affect neck and back pain. It is run by world-class researchers specialising in spinal research, who have been educating both undergraduates and postgraduates to conduct related scientific studies. Many of their findings have been published in prestigious international peer-reviewed journals such as *Clinical Orthopaedics and Related Research*, *Automation in Construction*, *European Journal of Pain*, *The Journal of Bone and Joint Surgery*, and *Applied Ergonomics*. In addition to conducting research, the newly renovated lab is one of the most advanced spinal research centres in Asia to provide both assessment and treatment to people with different types of spinal disorders.



COVER STORY

Neurorehabilitation Laboratory

Location: ST012

The Neurorehabilitation Laboratory features the Computerized Dynamic Posturography system (Bertec) which allows for the accurate and comprehensive assessment of sensory organisation of balance control. In addition to balance evaluation, the system incorporates virtual reality features and can be used for rehabilitative training for improving balance performance in different patient populations.



Wellness & Exercises Laboratory

Location: ST010

Health and wellness are the keys to a long, active and enjoyable life. The Wellness & Exercises Laboratory focuses on understanding and promoting lifetime physical activity, health, and well-being across the lifespan. Their ongoing research projects investigate the short-term and long-term effects of different types of exercises, physical training and health educational programmes on the body functions, activity and community participation of different populations, from young people to older adults, and of people with stroke and cancer.

The Wellness & Exercises Laboratory is equipped with different types of equipment to provide training and to investigate the physiological, physical and psychosocial factors underlying health behaviours. The research team emphasises the translation of research findings into practice in order to promote health and wellness of different populations. Their findings have been published in prestigious international peer-reviewed journals such as *Age and Ageing*, *Stroke*, and *Movement Disorders*.

Chan Sui Kau and Chan Lam Moon Chun Sports Training and Rehabilitation Laboratory

Location: ST011

The research foci of this laboratory are on the early detection, assessment, prevention and rehabilitation of musculoskeletal problems so as to optimise sports performance and functions. The research team develops new technologies for the early detection of musculoskeletal problems across life span and activity levels from athletes to the elderly. They use state-of-the-art approaches such as MRI, shearwave elastography and electromyography coupled with kinetic analysis to study the physical and biomechanical properties of muscles and tendons. Clinical research aside, they also commit themselves to studying the mechanisms underpinning the clinical problems. A major line of their research is on musculoskeletal pain management, muscle training and performance optimisation. The research team integrates new rehabilitative concepts into muscle training and conditioning and explores how the change of physiological environment during exercise may enhance soft tissue regeneration. They also marry artificial intelligence with mobile app design for screening pre-clinical joint degeneration in community-dwelling seniors so as to provide them with timely rehabilitation.

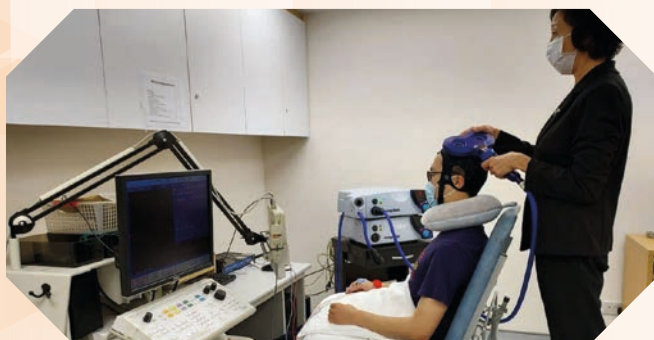


In addition to conducting research, the newly renovated laboratory also provides an excellent environment for both undergraduate and postgraduate students to conduct related scientific researches.

Neural Control Laboratory

Location: ST010b

The Neural Control Laboratory conducts research which aims to understand the neurophysiology such as brain excitation and inhibition underlying movement control. Their research team also strives to understand whether functional recovery after rehabilitation in people with neurological disorders such as stroke and Parkinson's disease is associated with these neurophysiological changes. Besides, they use transcranial magnetic stimulation (TMS) and transcranial direct current stimulation (tDCS) to modulate brain activity before or during exercise training to promote the training effect.

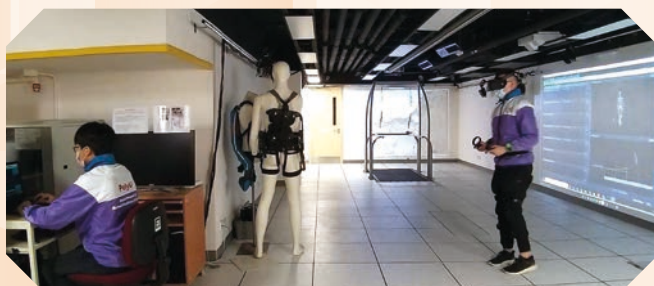


Gait and Motion Analysis Laboratory

Location: ST004

The main objective of PolyU's Gait and Motion Analysis Laboratory is to uncover, through biomechanical and ergonomics studies, the causes of injuries and work-related or sport-related musculoskeletal disorders (MSDs). The research team also strives to enhance workers'/patients' safety, productivity and efficiency, advance fundamental knowledge about the mechanisms of muscle fatigue and musculoskeletal injuries/disorders in sport and occupational settings.

Besides, through their research projects, the research team develops knowledge that can be applied to improve the effectiveness of training programmes and rehabilitation interventions, with a view to reducing the burden of MSDs, increasing sport safety in the field, reducing risks and improving occupational performance. They also aim to help highly qualified research students build a successful career, such as being a healthcare professional and/or an independent clinical scientist.



Cardiopulmonary and Exercise Physiology Laboratory

Location: QT409



The Cardiopulmonary and Exercise Physiology Laboratory is located on the 4th floor of QT wing of The Hong Kong Polytechnic University. Their research not only focuses on cardiopulmonary and exercise-related physiological assessments for a wide range of population such as children, adolescents, adults and elderly who have normal or deprived health, but also aims to examine the effectiveness of different rehabilitative strategies and exercise programmes in improving cardiopulmonary functions, and to explore the underlying physiological mechanisms involved.

The laboratory is well equipped with state-of-the-art equipment, including the body plethysmography for comprehensive assessments of respiratory functions, the cardiopulmonary exercise test (CPET) for assessing oxygen consumption by using mobile and stationary devices in exercise tests and/or physical activities conducted indoor and outdoor, comprehensive assessments for assessing pulse wave velocity and autonomic nervous system activity, as well as non-invasive assessments of cardiac output during exercise.

In addition to evaluating the functional performance and physiological mechanisms in "humans", the research team conducts a series of animal studies in the field of cardiopulmonary science and exercise physiology in another laboratory located on the 8th floor of ST wing to complement the findings of human studies with the findings obtained in basic science studies, so as to provide comprehensive scientific evidence in the field of cardiopulmonary physiotherapy.

COVER STORY

Rehabilitation Clinic*Location: AG056*

The Rehabilitation Clinic was established in 1993 as a service extension of the Department of Rehabilitation Sciences. It moved to the current location at AG056 in 2003, offering full service to clients. As a university-based clinic, it provides physiotherapy service to members of the PolyU community as well as the general public. The target groups are the elderly and adults with musculoskeletal and neurological disorders.

Supported by FHB funding, the Rehabilitation Clinic underwent a full-scale renovation in 2020 and came up with a new look to serve its clients in the fourth quarter of 2020. The newly renovated Clinic with its upgraded, state-of-the-art equipment provides the best environment and hardware for physiotherapists to deliver quality service to the community.

To facilitate a speedy recovery in clients with musculoskeletal disorders, the Clinic introduces new equipment like Anti-Gravity Treadmill and Skillmill. This equipment also allows physiotherapists more choices in training to meet clients' outcomes or targets. Running has always been a popular sport and a lot of people suffer from pain during and after running. The Clinic introduces new technologies to assess the running pattern of clients, allowing them to have a better understanding of their running postures and gaits, so as to look for their pain origins when they run. Physiotherapists believe that prevention is better than cure and hope their clients can enjoy running as much as possible.

The Clinic has been facing an increasing demand for service from the aging population. High-tech equipment like exoskeleton is used to improve the efficiency and effectiveness of training to clients with stroke and Parkinson's disease. The Clinic has also developed physiotherapy services to children with special needs after renovation. Making use of artificial reality interactive devices and software, physiotherapists can conduct effective training to these children.

Lastly but most importantly, the Clinic as a university-based unit is a place to nourish undergraduate and postgraduate physiotherapist students. It has a Clinical Education Unit to conduct clinical observation, bedside teaching and clinical placements for local and overseas physiotherapist students. The Clinic aims to achieve excellence in service provision and clinical education, and make contributions to society.

**Tam Wing Fan Rehabilitation Service Centre
(Occupational Therapy)***Location: W210 & W211*

Tam Wing Fan Rehabilitation Service Centre (Occupational Therapy) established in November 2020 is the first university-based comprehensive OT centre in Hong Kong. It is named after Mr Tam Wing Fan in recognition of his and his family's contribution to the University.

Located on the podium floor of W Core in PolyU campus, the Centre is composed of 4 specialty treatment rooms. They are the Neurological Treatment Room, the Orthopaedic and Surgical Treatment Room, the Paediatric Treatment Room, and the Psychosocial and Integrative Rehabilitation Treatment Room. There is also a Clinical Education Unit designed for the clinical placement of students.

The Centre is equipped with state-of-the-art equipment, including end-effectors and exoskeletons for upper-limb training, immersive virtual reality equipment, a brain-computer interface system, non-invasive brain stimulation devices, and setups for neurofeedback and biofeedback. These devices are of great clinical benefit to elderly patients suffering from chronic diseases like stroke and dementia.

The Centre's service targets also include children suffering from autism spectrum disorder, developmental delay and specific learning disorder. The Centre's experienced occupational therapists will conduct sensory integration assessments with these children, and games, social robots and interactive virtual reality training will be delivered as treatments.

In addition, occupational therapists will provide treatments such as constraint-induced movement therapy and neuro-developmental treatment for people with upper-limb functional impairment, as well as splinting rehabilitation programmes and pressure therapies for people with musculoskeletal, scar and surgical problems. Moreover, they will perform work assessments, treatments and training on clients suffering from work injuries, so as to help them return to work.



Highlight I: Advanced equipment in three major laboratories

Laboratory	Equipment
Chan Sui Kau and Chan Lam Moon Chun Sports Training and Rehabilitation Laboratory <i>Location: ST011</i>	<ul style="list-style-type: none"> • SUPERSONIC IMAGINE Aixplorer Shearwave Elastography Ultrasound System • AMTI Force Sensing Treadmill System • HUMAC NORM Isokinetic Multi-Joint Evaluation and Training System • NORAXON Telemetric Surface Electromyography System • HOGGAN Handheld Dynamometer • Delfi Blood Flow Restriction Tourniquet System • TECHNOGYM Strength Training Systems • TOTAL GYM Encompass PowerTower Training System • Espresso GO Recumbent Bike • PRECOR Total-Body Elliptical Fitness Crosstrainer
Wellness & Exercises Laboratory <i>Location: ST010</i>	<ul style="list-style-type: none"> • TecnoBody D-WALL Elite • VaSera VS-2000 Vascular Screening System • EchoS Echolight Ultrasound • LOGIQ e Ultrasound System • DIKABLIS Eye Tracking Glasses • HUMAC NORM Isokinetic Testing System • Zebris FDM-T Treadmill System • Monark 894E Ergomedic Peak Bike
Basic Science Research in Rehabilitation Laboratory <i>Location: ST812 & ST813</i>	<ul style="list-style-type: none"> • General <p>Fumehood (staining), fumehood (general), autoclave, water bath, ultra low-temp freezers, spark-proof fridge, fridges, Milli-Q Direct Water Purification System, ice maker, dessicator, dishwasher, flammable liquid storage cabinet, acid liquid cabinet, chemical waste bin, biological waste freezer, plate shaker, vortex mixer, balance (4-digit), thermo centrifuge, orbital shaker, Eppendorf Centrifuge, pH meter, hotplate, tube roller, sonicator, Eppendorf ThermoMixer</p>
	<ul style="list-style-type: none"> • Histology <p>Tissue processor, cryostat, sliding microtome, microtome, embedding centre, microscope, isoflurane anesthesia system</p>
	<ul style="list-style-type: none"> • ELISA, molecular assay and liquid handling <p>RT-qPCR with PC * 2, T100 thermal cycler, Chemidoc, Nanodrop, QIAgility</p>
	<ul style="list-style-type: none"> • Cell culture <p>Incubators, biosafety cabinet, liquid nitrogen storage tank, microplate reader</p>
	<ul style="list-style-type: none"> • Behavioural test <p>Behavioural test accessories, AnyMaze system, avoidance system, shuttle boxes (mice), shuttle boxes (rat), PC for shuttle boxes, operant conditioning (mice), operant conditioning (rat), PC for operant conditioning, fear conditioning (mice), fear conditioning (rat), PC for fear conditioning, waste bin (biological waste), startling reflex (mice), startling reflex (rat), PC for startling reflex, rat forced-swimming test cylinders * 4, rat Y-maze, water maze and rack, plus-maze (rat), running wheels (rat)</p>

Highlight II: Sharing by Ms Choi, a patient at Tam Wing Fan Rehabilitation Service Centre (Occupational Therapy)

After having a stroke, I received rehabilitation treatment in Singapore and Taiwan for some time. Some progress had been made, and I supposed there would still be room for improvement. One day I found on the Internet that PolyU had established a new centre for occupational therapy (i.e., Tam Wing Fan Rehabilitation Service Centre [Occupational Therapy]), equipped with the most advanced facilities and experienced therapists. I decided to go there to give it a try. The Centre has not disappointed me in the least. It employs new treatment methods, combining PolyU's scientific research with clinical practice. Its state-of-the-art rehabilitation equipment as well as the treatment and training protocols prescribed by my therapist have improved the functional ability of my upper limbs and hands. My muscles are less stiff than before. I can wash my hair with both hands now and my self-care ability has improved a lot. I even shared my experience with other patients and recommended that they go to the Centre to try it out themselves.



Ms Choi receives occupational therapy to improve her upper limb and hand functions at Tam Wing Fan Rehabilitation Service Centre (Occupational Therapy).

► The 12th Pan-Pacific Conference on Rehabilitation

RS hosted the 12th Pan-Pacific Conference on Rehabilitation (12th PPCR) on 27-28 November 2021, with the theme of "Innovations and Technological Developments in Rehabilitation". Due to the continuous spread of the pandemic and the social distancing measures, the PPCR had to be held online this time. Still there were encouraging responses and the active participation of people from the related sectors across different regions, including experts, scholars, clinicians, healthcare administrators and students in Hong Kong, mainland China and overseas countries.

We are delighted to have over 300 people registering for the conference, one third of which are from overseas institutions. Out of the 129 abstract submissions we accepted, 51 were selected for platform presentation, with the rest of the papers presented in poster format. A post-conference workshop was also conducted on 3 December 2021 by Prof. Susan Whitney, on the topic of the "Advances in the treatment of benign paroxysmal positional vertigo". The workshop attracted more than 70 people to register.

The opening ceremony, with Mr Kok Che-leung (Deputy Director of Social Welfare [Services], Social Welfare Department), Prof. Christopher Chao (Vice President [Research and Innovation], PolyU) and Prof. David Shum (Dean, Faculty of Health and Social Sciences, PolyU) as the officiating guests, marked the kick-off of the event. We are honoured to have invited Prof. Christopher Chao to deliver a welcome address and Mr Kok Che-leung to give a speech at the ceremony.

As an essential part of the conference programme, the Organising Committee had invited six distinguished speakers from prestigious universities to deliver keynote lectures on wide-ranging topics in rehabilitation: Prof. Douglas Gross and Prof. Jeffrey Hausdorff shared about the application of machine learning and low-cost technologies to rehabilitation; Prof. Susan Whitney and Prof. William Miller updated us on the advances in the use of technology in clinical interventions and rehabilitation care provision; Prof. Alyssa Wise lectured on the application of advances in data technologies to rehabilitation education; and Prof. Masud Husain talked about the neurology

of apathy and motivation. In addition to the aforementioned keynote lectures, workshop and platform presentations conducted online, around 100 local participants even had a chance to visit RS's advanced equipment and laboratories on the spot in an Engagement Hub session on 27 November.

The PPCR was inaugurated in Guangzhou in 1998 and has since become an iconic biannual event of our department. The 12th PPCR aims to foster multi-disciplinary collaborations among rehabilitation professionals, academics, students and healthcare administrators in the Asia-Pacific region and beyond. We are gratified by the great support we received from different parties for this big event, and look forward to seeing you all again in the next PPCR.



Mr Kok Che-leung (Deputy Director of Social Welfare [Services], Social Welfare Department; middle), Prof. Christopher Chao (Vice President [Research and Innovation], PolyU; 2nd right), Prof. David Shum (Dean, Faculty of Health and Social Sciences, PolyU; 1st right), Prof. Hector Tsang (Chair Professor and Head of RS, PolyU; 2nd left) and Dr Andy Cheng (Chairman of the Organising Committee of the 12th PPCR, Associate Head of RS, PolyU; 1st left) officiated at the ribbon-cutting ceremony.



Prof. Christopher Chao delivered a welcome address at the opening ceremony.



Mr Kok Che-leung gave a speech at the opening ceremony.



Prof. Christopher Chao presented a certificate of appreciation to Prof. Patrick Yung, Chairman of the Department of Orthopaedics & Traumatology, CUHK.



Prof. David Shum presented a certificate of appreciation to the representative of Yan Oi Tong.



Prof. Hector Tsang presented a certificate of appreciation to the representative of Heep Hong Society.



Representatives of the supporting organisations visited RS's laboratories and advanced equipment.



A group photo

MoU Signing Ceremony between RS of PolyU and SoD of HKAPA

A Memorandum of Understanding (MoU) Signing Ceremony was held between RS of PolyU and the School of Dance of The Hong Kong Academy for Performing Arts (SoD of HKAPA) on 15 October 2021, signifying a closer and more concrete collaborative relationship between RS and SoD.

In his speech for the event, Prof. Hector Tsang (Cally Kwong Mei Wan Professor in Psychosocial Health, Chair Professor of Rehabilitation Sciences and Head of RS) said the main purpose of the MoU was to facilitate further discussions between the two parties so as to explore collaborative opportunities on Dance Science, Dance Rehabilitation and Injury Prevention. He went on to explain that with the signing of the MoU, RS and SoD would: 1) explore the development of educational and academic exchange activities and cooperative activities for their students, faculty members and staff respectively; 2) seek to share resources with each other, including their qualified specialists and facilities, to support



A group photo with the faculty of RS, PolyU and that of SoD, HKAPA after the MoU Signing Ceremony.

the collaborative activities; 3) explore the possibilities of research collaboration in the areas of Dance Science, Dance Rehabilitation and Injury Prevention.

RS high-flyer students made the acquaintance of elite alumni at High Table Dinner

A High Table Dinner of the High-Flyer Mentorship Programme was successfully held in the evening of 4 November 2021, with almost 100 participants joining the event. Prof. Kwok-yin Wong, Vice President (Education) of PolyU, and Prof. David Shum, Dean of Faculty of Health and Social Sciences of PolyU, graced our event as VIPs.

After almost two years of pandemic and social distancing, this is the first so-called "big banquet" we organised. The participants, including around 40 mentors and staff and 60 high-flyer students, had a great time together as far as the evening went. The new mentors and mentees were excited to get to know each other, while the current mentors and mentees had a very enjoyable time catching up on each other after their absence from this kind of social gathering for a long time.

We are honoured to have invited Prof. Kwok-yin Wong to deliver an opening address. He said that the aim and significance of our High-Flyer Mentorship Programme, launched in February 2019, were to provide a platform for the top year-1 students to meet with the elite alumni from the physiotherapy and occupational therapy sectors, so as to acquire practical knowledge outside the classroom and receive advice from the experienced mentors on their academic and career development. He believed the programme had matched the high-flyers to the most suitable mentors, and the high-flyers would grab the good opportunity to broaden their horizons and interpersonal network through interaction with their worldly-wise mentors.

Highlights of the event also included the sharing by Prof. Hector Tsang (Cally Kwong Mei Wan Professor in Psychosocial Health, Chair Professor of Rehabilitation Sciences and Head of RS) in his capacity as a mentor and his mentee, as well as the presentation by three top students. At the end of the dinner, Prof. Tsang delivered his vote of thanks to the participants. He hoped the mentorship programme would allow experienced and accomplished physiotherapists and occupational therapists from various sectors of Hong Kong to share their experience and offer some guidance to our high-quality students, so as to help students develop their future career in the two professions.



Prof. Kwok-yin Wong (Vice President [Education], PolyU; 5th right), Prof. David Shum (Dean of Faculty of Health and Social Sciences, PolyU; 4th right), Mr Jimmy Wu (Director [District Health Centre Team], Food and Health Bureau, HKSAR Government; 3rd left), and Prof. Hector Tsang (Cally Kwong Mei Wan Professor in Psychosocial Health, Chair Professor of Rehabilitation Sciences and Head of RS; 6th left) took photos with 4 high-flyers who shared their learning experience at the High Table Dinner.

Experiences and feelings shared by recipients of the Bronze Award of The 7th China International College Students' "Internet+" Innovation and Entrepreneurship Competition

Dino Lee Leung Pong, Matthew Lo Cheuk Long, Afifah Har Wing Yiu and Heyson Ngai Chu Hei (MOT 2019 graduates)

It is hard to put our feelings into words. Above all, we are very glad to receive this award from Mr Alfred Sit, JP, Secretary for Innovation and Technology, at the Hong Kong Science Park. We are deeply honoured by this recognition of our effort.

It began with a student project for the subject "Environmental Issues in OT Practice" of our MOT programme. We designed and created a prototype of an assistive device—Cupensator, which is a drinking aid to help sufferers of Parkinson's disease better handle a drinking cup by reducing unwanted oscillations caused by tremors.

This assistive device could not have been accomplished without the guidance and support from many nice people around us. First of all, we would like to express our sincere gratitude to Prof. Kenneth Fong,

our project supervisor, for his patient guidance throughout our study. We would also like to thank Mr Eddie Hai for his kind guidance and advice on this project. The two mentors are the role models to guide us all along in our early stage of professional development as an emerging occupational therapist. Besides, we owe a debt of gratitude to the Knowledge Transfer and Entrepreneurship Office at PolyU for their nomination and sponsorship. Finally, we are grateful to each other for giving mutual support and care throughout this project. We have shared our joys and sorrows along the way.

Last but not least, we would like to express our heartfelt gratitude to our parents and significant others for their endless support and love, and to God for showing us the way all along.



Photo of two team members, Mr Matthew Lo Cheuk Long (left) and Mr Dino Lee Leung Pong (right).



Dino and Matthew shared their delight with Prof. Kenneth Fong, their project supervisor (1st left), at the award presentation ceremony.



A group photo of Mr Alfred Sit, JP, Secretary for Innovation and Technology (5th right), and the winning teams.



The assistive device "Cupensator"

Visits — PolyU Senior Management and other organisations



Visit by Vice President (Research and Innovation), PolyU (2 November 2021)



Visit by Heep Yunn School (4 November 2021)



Visit to TWGHs Jockey Club Rehabilitation Complex (8 November 2021)



Visit by Yuen Long Merchants Association Secondary School (8 November 2021)



School talk to Kiangsu-Chekiang College (Shatin) (12 November 2021)



Visit by Prof. Paul Yip, The University of Hong Kong (8 December 2021)

Welcome new faculty members

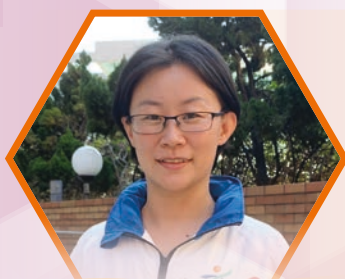
Dr Eugene Yujun Fu received his BEng in Software Engineering from Zhejiang University before coming to Hong Kong, where he obtained his MSc in Multimedia Information Technology from City University of Hong Kong, and his PhD in Computing from The Hong Kong Polytechnic University. After that, he worked as a postdoctoral fellow at the Department of Computing, The Hong Kong Polytechnic University.

Dr Fu is very interested in interdisciplinary research that applies artificial intelligence, machine learning, deep learning, signal processing and multimedia computing to human-centered problems. His prior work has covered diverse fields ranging from fight detection, behaviour understanding, physiological signal measurement, mental stress monitoring to eye healthcare and firefighting engineering. He has presented his research at prestigious conferences and published in reputable journals including AAAI, ACMMM, COMPSAC, IHCI, and FSJ. He has also been invited to serve as program committee member and reviewer for multiple renowned conferences and journals, such as CHI, ACMMM, and IHCS.

His current focus is on AI systems using multimodal human-centered signals (e.g., physiological signals, gaze interaction, body movement, image/video signals, etc.) to infer users' health problems, and eventually, ensure their health.



Dr Eugene FU
*Research Assistant Professor
(Machine Learning and
Artificial Intelligence)*



Dr Yingqi GUO
*Research Assistant Professor
(Healthy Ageing)*

Dr Yingqi Guo received her Bachelor of Engineering from the China University of Geosciences and her Master of Science from the University of Chinese Academy of Sciences. She accomplished her PhD at the Department of Social Work and Social Administration, The University of Hong Kong, and her PhD thesis is about the community environment and mental health in Hong Kong. Dr Guo has research experience in the benefits of greenness and recreational facilities to Hong Kong older adults' mental health. She also participated in the WHO's multi-country research on healthy ageing indicators. Dr Guo joined RS, PolyU, as research assistant professor in November 2021. She is interested in the research on the application of 3S techniques (GIS/RS/GPS), wearable devices, big data and artificial intelligence in rehabilitation sciences.

Dr Tang received his bachelor's degree and master's degree in occupational therapy from The Hong Kong Polytechnic University (PolyU). He attained his professional doctoral degree with the generic award in occupational therapy from PolyU in 2021. He specialises in paediatrics and research on students with special educational needs. Dr Tang is a registered occupational therapist with a wide range of solid experience in paediatric rehabilitation of children with autism spectrum disorders, attention deficit and hyperactivity disorders, specific learning difficulties, developmental delay and visual impairment for more than 15 years. Before joining PolyU, Dr Tang provided services at various non-governmental organisations and private clinics, devoting himself to enhancing healthcare services. He is currently a clinical associate in occupational therapy at PolyU and has been serving as a technical advisor for the Employees Retraining Board (ERB) to provide consultation since 2017.



Dr Wilson TANG
*Clinical Associate
(Occupational Therapy)*



Mr Kino LAM
*Clinical Associate
(Occupational Therapy)*

Mr Kino Lam graduated with a bachelor's degree in occupational therapy from The Hong Kong Polytechnic University and obtained his master's degree in mental health from The Chinese University of Hong Kong.

Prior to joining PolyU, Mr Lam had served in public hospitals for more than a decade, and has accumulated extensive clinical experience in psychiatric rehabilitation services including adult psychiatric rehabilitation, substance abuse treatment, and rehabilitation and treatment of various types of emotional disorders (e.g., depression, anxiety, obsessive-compulsive disorder and post-traumatic stress disorder). During the period 2018–2020, he received extensive training in metacognitive therapy (MCT), a new wave of psychotherapy, at the MCT Institute in Manchester of UK. In December 2020, he became the first Asian to qualify as a psychotherapist of MCT. Mr Lam has published two journal articles and one book on metacognition. His main clinical interests and focuses are the integration of psychotherapy with lifestyle redesign and the promotion of mental health to the public.



Postgraduate Scheme in Rehabilitation Sciences

Master of Science in Rehabilitation of People with Developmental Disabilities



Aim of the Programme

This programme can enrich students' knowledge and leadership through a variety of subjects, both theoretical and practical, which are relevant to the global needs of people with developmental disabilities. You will find this programme intellectually helpful to your career development. The programme also enhances the application of inter-disciplinary team approach and evidence-based practice to develop attitudes and qualities appropriate for independent and partnership professional practice for people with developmental disabilities. On completion, you will be better equipped with an advanced knowledge for practice in the field of developmental disabilities.

Entrance Requirements

- A Bachelor's degree in occupational therapy, physiotherapy, psychology, nursing, social work, speech therapy, education or related health care disciplines from PolyU or a recognised institution or the equivalent, preferably with one year of post-qualification work experience with people with developmental disabilities; OR
- A professional diploma in occupational therapy, physiotherapy, psychology, nursing, social work, speech therapy, education or related health care disciplines from PolyU or a recognised institution or the equivalent, with two years of work experience and evidence of continuous education over the past two years.

Unique Features

Studies are multi-disciplinary and students are selected from different professional backgrounds sharing an interest in working with people with developmental disabilities. The teaching team includes multi-disciplinary member such as paediatricians, occupational therapists, physiotherapists, speech therapists, educators, social workers, psychologists. The programme's nature not only advances your knowledge of professional practice, but also expands your perspective in the field of rehabilitation.

Tuition Fee

Local Students: \$6,000 per credit

Non-local Students: \$6,000 per credit

Structure

2 Compulsory Subjects (9 Credits)

- Research Methods and Data Analysis (3 credits)
- Project Study (6 credits)

5 Core Subjects (15 credits)

2 Elective Subjects (6 credits)

Proposed Study Plan (tentative)

PROPOSED STUDY PLAN		
FULL-TIME (1 Year of Completion)	Year 1 Semester 1	3 core subjects, 1 elective subject
		Project Study
	Year 1 Semester 2	1 compulsory
		2 core subjects, 1 elective subject
		Project Study (could be extended to summer term)

PROPOSED STUDY PLAN		
PARTTIME (2 Year of Completion)	Year 1 Semester 1	2 core subjects
	Year 1 Semester 2	2 core subjects
		1 compulsory subject
	Year 2 Semester 1	1 core subject, 1 elective subject
		Project Study
	Year 2 Semester 2	1 elective subject
		Project Study (could be extended to summer term)

Enquiry

For academic matter, please contact:

Dr Will Chien

Email: will.chien@polyu.edu.hk

For general enquiries, please contact:

General Office

Tel: (852) 2766 6728 Email: rsdept@polyu.edu.hk