

Winter 2020 Newsletter

Impact

Touching lives, making an impact

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COVER STORY

Opening Ceremony of OT Clinic

Thanks to a generous donation from Mr Tam Wing Fan and his family, the Tam Wing Fan Rehabilitation Service Centre (Occupational Therapy), the first-ever university-based OT clinic in Hong Kong, was officially opened on 18 November 2020. The Centre, named after its donor Mr Tam Wing Fan, a distinguished Hong Kong architect and philanthropist who generously supported education, research and community service, is the second rehabilitation centre operated by the Department of Rehabilitation Sciences (RS) on the PolyU campus. With state-of-the-art equipment, veteran academic researchers and experienced occupational therapists, this new Centre provides comprehensive OT services for people of all age groups, including treatments for musculoskeletal, neurological and mental health dysfunctions. In view of the ageing population and the rising needs for primary healthcare services in the community, the Centre will become a service point for the public, with an emphasis on elderly

care and offering treatments for common neurological diseases, elderly falls and fractures, and mental health conditions.

Located in W210 and W211, Ho Lu Kwong Building at PolyU, the Centre boasts cutting-edge equipment including rehabilitation robots such as end-effectors and exoskeletons for upper-limb training of patients with hemiparesis after stroke and cerebral palsy, as well as social robots, immersive virtual reality equipment, a brain-computer interface (BCI) system, and neurofeedback and biofeedback devices. The Centre's occupational therapists are experts in providing evidence-based practice for patients, such as constraint-induced movement therapy (CIMT) and neurodevelopmental treatment for improving arm motor impairment resulting from neurological challenges, cognitive rehabilitation of stroke or brain injury victims, and stress management for people with emotional disorders.



Mrs May Tam (middle), Dr Lawrence Li (3rd left, Deputy Chairman of Council, PolyU), President Jin-Guang Teng (4th left), Dr Katherine Ngan (4th right, Chairman of University Court, PolyU, and Chairman of PolyU Foundation), guests and other University's management at the plaque unveiling ceremony of Tam Wing Fan Rehabilitation Service Centre (Occupational Therapy)

The Centre's main service areas



Mind and cognition



Hand and upper-limb rehabilitation



Learning and developmental disabilities

▶ A talk on “Caregiver support services for families with the elderly, health patients and children with special educational needs” by Prof. Hector Tsang

Invited by the Alumni Affairs and Development Office of PolyU, Prof. Tsang delivered a thematic talk online about “Caregiver support services for families with the elderly, health patients and children with special educational needs” on 19 October 2020.



▶ Congratulations to Dr Andy Cheng for winning the 12th Hong Kong Outstanding OSH Employee Award

Dr Andy Cheng, Associate Professor and Programme Leader of RS MOT Programme, received the Bronze Award of the 12th Hong Kong Outstanding OSH Employee Award Scheme.

Jointly organised by the Occupational Safety and Health Council, the Labour Department, members of the Labour Functional Constituency of the Legislative Council and employee representatives of the Labour Advisory Board, the 12th Hong Kong Outstanding OSH Employee Award Scheme aims to recognise employees across various industries with outstanding performance in promoting safety culture in their workplaces, including employees who have valuable contribution in fighting against COVID-19.

Our warm congratulations to Dr Cheng, and deep appreciation for his effort in making our workplace safer and healthier.



Prof. Tsang's recent article about qigong was published in *International Journal of Geriatric Psychiatry*

Prof. Hector Tsang's team has recently published a research article titled "Qigong for the treatment of depressive symptoms: Preliminary evidence of neurobiological mechanisms" in *International Journal of Geriatric Psychiatry (IJGP)*, impact factor: 2.675, volume 35, issue 11, and a photo related to this article is used as the cover image of that issue. The article reported the preliminary evidence of the neurobiological mechanisms of antidepressant qigong based on a randomised controlled trial. Older adults who had received qigong training (Eight-section Brocades) significantly showed larger increases in serotonin and brain-derived neurotrophic factor (BDNF) measured from blood samples, and decreases in salivary cortisol levels, compared with control group participants. Also, the study found preliminary support that qigong reduced depressive symptoms through the neuroendocrine pathway of Hypothalamus-Pituitary-Adrenal (HPA) axis, since the changes in cortisol mediated the effects of qigong on depressive symptoms. The findings brought important new information that explains the antidepressant effect of qigong in older adults with depressive symptoms. It reported the preliminary evidence that qigong practice can regulate activities in HPA axis and reduce stress and consequently, depressive symptoms. The article and the cover page of the related *IJGP* issue can be accessed here: <https://onlinelibrary.wiley.com/toc/10991166/2020/35/11>.



Prof. Tsang's recent article about qigong was published in *International Journal of Geriatric Psychiatry*, with its related photo selected as the cover image.

Prof. Kenneth Fong succeeded in getting HK\$9.19 million from the current round of RIF for his project "Wearable closed-loop neural control 'Remind-to-move' treatment for hemiparetic upper extremity in people with hemiplegia after stroke"

The Research Grants Council (RGC) announced the funding results of the Research Impact Fund (RIF) 2020/21. Among the 28 preliminary proposals submitted by PolyU, 11 proposals were shortlisted for submission of full proposals and 3 proposals were selected for interview. Finally, the project proposed by Prof. Kenneth Fong (Professor and Programme Leader of BSc [Hons] in Occupational Therapy, RS) obtained the RGC funding support of HK\$9.19 million in total.

With Prof. Kenneth Fong as the Project Coordinator, the project team includes Prof. Hector Tsang (Cally Kwong Mei Wan Professor in Psychosocial Health, Chair Professor of Rehabilitation Sciences and Head of RS, PolyU), Prof. Thomas Choi (Professor, School of Nursing, PolyU), Dr Vivian Lou (Director of Sau Po Centre on Ageing, The

University of Hong Kong) and Dr Gary Lau (Clinical Assistant Professor, Faculty of Medicine, The University of Hong Kong).

The key objectives of the project include: (i) to develop a bilateral arm movement synchronised recording system; (ii) to develop a novel closed-loop sensorimotor protocol and prototyping of devices; (iii) to examine event-related desynchronisation (ERD) as a neuro-marker for motor trajectory. The project is expected to create great impact in clinical, scientific and industrial aspects.

Let's express our warm congratulations to Prof. Fong and his team on this great achievement.

RS year-one students are awarded entry scholarships

We are very pleased to announce that RS admittees in this academic year perform extremely well in winning over 190 JUPAS and non-JUPAS entry scholarships, an attainment as outstanding as their predecessors.

PolyU offers altogether 322 academic scholarships to JUPAS admittees. Out of these 322 scholarships, 110 go to PT freshmen and 63 go to OT freshmen admitted through JUPAS. These two figures make up a total of 173, or 53.7% of all scholarships of the same category offered to all academic departments of PolyU.

As to the entry scholarships for outstanding IB results, RS takes up 13 of them, with all awardees from PT, which constitute 65% of all scholarships of the same category offered at PolyU.

Finally, among the non-JUPAS admittees being awarded the Entry Scholarship for Outstanding GCEAL/IAL Results, 4 of them are from PT and 1 from OT. These figures make up a total of 5, or 71% of all scholarships of this type.



PolyU senior management visited RS

President Jin-Guang Teng (President), Dr Miranda Lou (Executive Vice President), Prof. K. Y. Wong (Vice President [Education]) and Dr Terence Lau (Interim Associate Vice President [Innovation and Technology Development]) visited RS in recent months. During the visits, Prof. Hector Tsang and relevant RS colleagues showed the latest developments in teaching, research and services to the PolyU senior management group.



President Jin-Guang Teng (middle, 1st row)



Dr Miranda Lou (2nd left, Executive Vice President)



Prof. K. Y. Wong (2nd right, Vice President [Education])



Dr Terence Lau (3rd right, Interim Associate Vice President [Innovation and Technology Development])

Visits by our close partners

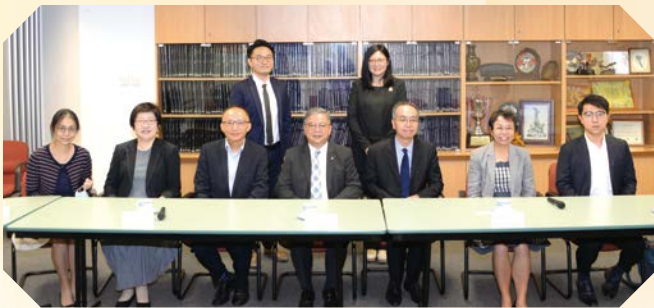
RS has built a close relationship with various clinical partners, NGOs and government departments, who visited our facilities and discussed further collaboration with us in recent months.



Dr Tony Ko (3rd left, Chief Executive of Hospital Authority), Mr Daniel Lo (2nd left, Deputising Chief Manger [Allied Health], Hospital Authority) and Dr Deacons Yeung (2nd right, Director [Cluster Services], Hospital Authority) visited our virtual reality facilities.



Mr Cliff Au (Deputy Chief Executive Officer, Yan Oi Tong) visited RS's new research laboratories and renovated clinics.



Mr Johann Wong (3rd right, Deputy Secretary for Labour and Welfare [Welfare] 2, Labour and Welfare Bureau) and Mr Tan Tick Yee (3rd left, Assistant Director [Elderly], Social Welfare Department) visited and discussed further collaboration with RS.



Mr Eddie Suen (2nd right, 1st row; Chief Executive Officer, SAHK) and Dr Ivan Su (1st right, 1st row; Head of Professional and Programme Development, SAHK) visited RS.

RS designed new dual-task exercise for stroke patients to effectively reduce the risk of falls and fall-related injuries

RS conducted the world's first study to examine the effect of dual-task exercise on the dual-task mobility and falls in people living with a chronic stroke, and subsequently designed an eight-week community-based rehabilitation programme for 84 people with chronic stroke.

According to Prof. Marco Pang Yiu-chung (Professor-PT) who led the study, single-task training on balance and gait is typically implemented during conventional rehabilitation. However, the rate of falling remains high (up to 73%) after the stroke survivors have returned to community living. It was revealed that dual-task exercises were able to help reduce the risk of falls and injurious falls by 25.0% and 22.2% respectively, bringing about significant improvement to the dual-task mobility of people post-stroke. As such, the programme has the potential to roll out in community and home-based settings, where healthcare resources are scarce. The study, titled "Dual-task exercise reduces cognitive-motor interference in walking and falls after stroke: A randomized controlled study", appeared in *Stroke*, a peer-reviewed medical journal published by the

American Heart Association. More information about the study can be accessed here: file:///C:/Users/rstmp2020/Downloads/20200917_PolyU_Dual_Task_Exercise_PPT_Eng_final.pdf.



RS Inauguration Ceremony 2020/21

The Inauguration Ceremony 2020/21 of RS was held on 2 September 2020, marking the beginning of a new academic life for a new cohort of students. Due to the current COVID-19 epidemic, the Inauguration Ceremony was held online for the first time. Despite this difficult condition, we still had over 300 guests and students joining our ceremony online.

In the opening address, Prof. Hector Tsang (Cally Kwong Mei Wan Professor in Psychosocial Health, Chair Professor of Rehabilitation Sciences and Head of RS) said that he was honoured to deliver the first speech in his second term of headship at RS for the Inauguration Ceremony, which was also his fourth speech for the same event since he assumed his position as Head in 2017. He was glad that RS had made great achievements in the areas of education, research and knowledge transfer over the past three years. He especially mentioned the establishment of the Tam Wing Fan Rehabilitation Service Centre (Occupational Therapy) in rooms W210/W211 with a generous donation from Mr and Mrs Tam. With the opening of this Centre, RS can provide more high-quality OT services using world-class rehabilitation equipment. He concluded that although for most of the last academic year, we could not enjoy a normal, face-to-face university life due to the social

movements and the Covid-19 outbreak, surprisingly a majority of the students had a good overall impression of their online learning experiences.

We were honoured to have Prof. Herman Lau (Director of Allied Health, CUHK Medical Centre) as our officiating guest and give us a speech. As our outstanding alumnus, he hoped that all of the freshmen would take their professors as exemplars and become educators and researchers in the next generation, taking the important role of nurturing future talents or becoming top scientists in the two professional disciplines.

We were also pleased to have the pre-recorded video from Mr Daniel Lo (Deputy Chief Manager - Allied Health, Hospital Authority), who is also a former PolyU PT student. He encouraged the freshmen to be passionate about their study and work, so as to prepare themselves to become health professionals upon graduation.

Following a series of prize presentations to the top students, Prof. Hector Tsang made a closing remark with warm congratulations to the recently promoted staff members, and a vote of thanks to all the guests who attended the ceremony.



Welcome to our NEW faculty members

Dr Al Zoubi attained his BSc degree in physiotherapy from Jordan University of Science and Technology (JUST) and professional MSc degree from New York Institute of Technology (NYIT). He earned his research-based MSc and PhD degrees in rehabilitation with a major in musculoskeletal rehabilitation and a minor in low back pain from McGill University. He later completed postdoctoral training in measurement and knowledge translation in evidence-based practice at McGill University. Dr Al Zoubi taught in the professional Master in Physical Therapy and Occupational Therapy programmes as well as in the graduate rehabilitation sciences programme at McGill University. He worked as a licensed physiotherapist in Jordan and Canada for several years, focusing on musculoskeletal and geriatric conditions.

Dr Al Zoubi's research focuses on implementing clinical practice guideline recommendations and best practices to improve patient care and health outcomes, developing innovative outcome measures for lumbar spine mobility, developing a robust measurement approach for constructs around evidence-based practice using modern measurement theory, bridging the evidence-to-practice gaps in rehabilitation practices based on theoretical approaches, and understanding the health indicators for people with back pain and older adults. He is an expert in methodologies of knowledge synthesis such as scoping reviews, systematic reviews, meta-analyses and clinical practice guidelines. Furthermore, he has a wide expertise in measurement, quantitative and qualitative methodologies, and large database analyses.

Dr Al Zoubi has received numerous academic awards, fellowships, and grants from several research agencies such as the Canadian Institutes of Health Research (CIHR), the Centre for Interdisciplinary Research in Rehabilitation of Greater Montreal (CRIR), and Richard and Edith Strauss Foundation of Canada. His research has been published in recognised peer-reviewed international journals such as *Implementation Science*, *BMC Health Services Research*, *BMC Musculoskeletal Disorders*, *Clinical Rehabilitation*, and *Journal of Manipulative and Physiological Therapeutics*.



Dr Fadi Mohammad Qassim Al Zoubi
Assistant Professor (PT)

Dr Sai Kam Hui received his Bachelor's degree in medical engineering (2005) and Doctor of Philosophy's degree in electrical and electronic engineering (2009) from The University of Hong Kong.

Dr Hui received his postdoctoral training in MRI from three different institutes in the United States, namely the Methodist Hospital at Houston (2009), The University of Texas Health Science Center at San Antonio (2010), and the Medical University of South Carolina (2011). He was appointed as Research Assistant Professor at The Center for Biomedical Imaging, Medical University of South Carolina in 2012. He left the United States in 2013.

As an MRI scientist, Dr Hui's researches on the brain have morphed from the characterisation of anatomy at the regional level (using diffusion MRI) to that at the system level (diffusion and functional MRI). His overall goal is to fill the critical knowledge in the link between the static anatomical connections and the dynamic functional connections across the brain in the hope of elucidating the neurophysiological mechanisms underlying cognition and stroke recovery.



Dr Sai Kam Hui
Assistant Professor (OT)



Dr Michael Yeung
Research Assistant Professor
(Neuroscience and Neurological Rehabilitation)

Dr Yeung obtained his BSSc in Psychology and PhD in Psychology (Neuropsychology) from The Chinese University of Hong Kong. He was a postdoctoral researcher at the Montreal Neurological Institute of McGill University, Canada, before joining PolyU. Dr Yeung conducts researches in neuropsychology and cognitive neuroscience, with focuses on the functions of human frontal lobes, including executive function, socioemotional function, and decision-making. He is particularly interested in understanding the typical and atypical development and aging of frontal lobe functions, as well as in identifying the link between frontal lobe dysfunction and cognitive impairment in psychiatric and neurological patients. His research typically involves the use of neuropsychological assessment, eye-tracking, and neuroimaging techniques such as functional near-infrared spectroscopy (fNIRS) and electroencephalography (EEG), as well as the study of patients with frontal lobe damage. Dr Yeung also actively takes part in the development of neuroscience-based cognitive interventions.

Dr Joni Zhong graduated from the South China University of Technology (Guangzhou, China) with double bachelor's degrees in control science and computer science. He then obtained his MPhil at The Hong Kong Polytechnic University and PhD at the University of Hamburg, Germany. Before returning to PolyU, he had been a researcher at the University of Hertfordshire (UK), the University of Plymouth (UK), Waseda University (Japan), the National Institute of Advanced Industrial Science and Technology (Japan), etc, where he established close interdisciplinary collaborations with researchers in neuroscience, cognitive sciences and philosophy from the EU, Japan and the UK.

Dr Zhong had received a 3-year Marie-Curie fellowship for his PhD study. He had also received such awards as the Best Student Paper at ICANN 2011, the Best Theory Paper at ICMIC 2017 and the Best Paper Nomination at Cyber 2019. He had organised a few special sessions and workshops at IEEE SMC 2020, IEEE ICDL-EpiRob 2020, ICIRA 2019, etc, and been a guest editor of several journals such as *IEEE Transactions on Cognitive and Developmental Systems*, *Interaction Studies*, *Journal of Ambient Intelligence and Humanized Computing*, etc.

His research interests centre around assistive technologies based on wearable devices, IoT devices and robotics. Theoretically, he particularly advocates the involvement of a human in the learning loop (i.e. human-in-the-loop learning) and predictive modelling. His current research focuses on cognitive assistive robots and their usage in elderly healthcare and wellbeing.



Dr Joni Zhong
Research Assistant Professor
(Assistive Technology)



Mr Kenneth Chung
Clinical Associate (PT)

Mr Kenneth Chung completed his Bachelor's degree in Physiotherapy at The Hong Kong Polytechnic University and Master's degree in Sports Medicine and Health Science at The Chinese University of Hong Kong. After graduation, he worked as a physiotherapist in the Hospital Authority and gained a wide range of clinical exposures from acute to infirmary care at various units, including specialties of adult intensive care unit, acute stroke unit, general medical and surgical units, orthopedics, oncology, burns unit and geriatric rehabilitation. After leaving the public hospital, Mr Chung served in the day rehabilitation centre as well as the care and attention home for the elderly run by community-based NGOs.

Mr Chung joined the Hand Therapy Specialty Group (HTSG) of the Hong Kong Physiotherapy Association as an executive committee member in 2009, and was nominated to be the chairperson of HTSG in 2017. His participation in HTSG has helped his PT colleagues improve their knowledge and skills in hand rehabilitation. By joining PolyU as a Clinical Associate, he hopes to use his knowledge and experience to educate the new generation of physiotherapists.

Mr Eugene Kwok received his bachelor's degree in physiotherapy and master's degree in manipulative therapy from The Hong Kong Polytechnic University. He also received postgraduate training in the field of acupuncture from various institutes and obtained a professional diploma from the Sun Yat-sen University of Medical Sciences in China and a postgraduate diploma in acupuncture studies from HKU School of Professional and Continuing Education.

Mr Kwok has gained extensive clinical experience in different clinical settings, including both acute inpatient and outpatient physiotherapy settings before working in various private clinics. He has provided physiotherapy treatment for a wide clientele including athletes, patients suffering from work injuries and office workers.

He is passionate about pursuing continuing education particularly in the field of manual therapeutics and acupuncture therapy. In recent years, he begins to further enrich his knowledge about different special acupuncture therapies. By joining RS of PolyU, he hopes to share his clinical experience with the forthcoming generations of physiotherapists



Mr Eugene Kwok
Clinical Associate (PT)



Mr Stanley Wu
Clinical Associate (PT)

Mr Stanley Wu obtained his Bachelor of Science (Honours) in Physiotherapy from The Hong Kong Polytechnic University. He also completed his Master's degree in Psychology of Education at the City University of Hong Kong. To further equip himself for teaching, he obtained his Postgraduate Diploma in Education from Hong Kong Baptist University, specialising in physical education.

After his graduation, Mr Wu had worked in various settings including clinical and educational settings. He had also worked in community and private settings, for non-governmental organisations, professional sports teams, etc. He has developed his interests in paediatric area during his work in these settings. Before joining RS of PolyU, he was senior physiotherapist in one of the major NGOs in Hong Kong. He possesses extensive administrative experience and clinical experience in treating children with developmental difficulties. In the aspect of education, he had been invited to teach children-related subjects in various tertiary institutions including PolyU. He had also been visiting lecturer at Sichuan University, China, and had shared his clinical knowledge with students of master's programmes in physiotherapy in mainland China. As a clinical educator for several years, he has been motivating physiotherapy students to apply their classroom knowledge to authentic clinical practice.

Mr Wu is keen to nurture young people. He had guided physiotherapy students to overseas placement trips to places like Xinjiang, Vietnam etc, to widen their horizons as well as inspire them through service learning. Joining RS as a clinical associate, he hopes to impart his knowledge and experience to the future physiotherapists.