Christopher Wee Keong Kuah

Senior Principal Occupational Therapist, Rehab Therapy Services, Tan Tock Seng Hospital

Research Interests:

- Neurorehabilitation
- Upper Limb Rehabilitation
- Rehabilitation Technologies
- Telerehabilitation

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Biography

Mr Christopher Kuah is currently based at the Clinic for Advanced Rehabilitation Therapeutics where his work focuses on outpatient neurorehabilitation and the application of rehabilitation technologies. He received his professional qualification in 1995 from Nanyang Polytechnic (Singapore) and was awarded in 2002 the Master of Science in Neurorehabilitation from Brunel University, UK. In 2009, he received Ministry of Health HMDP sponsorship to study application of rehabilitation robotics and telehealth platforms in Japan and Canada. He is actively involved with Rehabilitation Research Institute of Singapore since its inception in 2014 and remains actively involved in collaborative rehabilitation technology research and innovation projects for hospital as well as home-based applications.

Selected Publications

- Tanczak N, Plunkett TK, Lin S, Kuenzler L, Lau M, **Kuah WKC**, Ng CY, Gassert R, Chua K, Lambercy O. Feasibility of post-stroke hand rehabilitation supported by a soft robotic hand orthosis in-clinic and at-home. J Neuroeng Rehabil. 2025 Aug 21;22(1):183. doi: 10.1186/s12984-025-01717-6. PMID: 40842028; PMCID: PMC12369101.

- Sidarta A, Lim YC, **Kuah CWK**, Chua KSG, Ang WT. Relearning Upper Limb Proprioception After Stroke Through Robotic Therapy: A Feasibility Analysis. J Clin Med. 2025 Mar 23;14(7):2189. doi: 10.3390/jcm14072189. PMID: 40217638; PMCID: PMC11989307.

- Aguirre-Ollinger G, Chua KSG, Ong PL, **Kuah CWK**, Plunkett TK, Ng CY, Khin LW, Goh KH, Chong WB, Low JAM, Mushtaq M, Samkharadze T, Kager S, Cheng HJ, Hussain A. Telerehabilitation using a 2-D planar arm rehabilitation robot for hemiparetic stroke: a feasibility study of clinic-to-home exergaming therapy. J Neuroeng Rehabil. 2024 Nov 26;21(1):207. doi: 10.1186/s12984-024-01496-6. PMID: 39593101; PMCID: PMC11590240.

- Noronha B, Ng CY, Little K, Xiloyannis M, **Kuah CWK**, Wee SK, Kulkarni SR, Masia L, Chua KSG, Accoto D. Soft, Lightweight Wearable Robots to Support the Upper Limb in Activities of Daily Living: A Feasibility Study on Chronic Stroke Patient. IEEE Trans Neural Syst Rehabil Eng. 2022;30:1401-1411. doi: 10.1109/TNSRE.2022.3175224. Epub 2022 May 30. PMID: 35576429.

- Li L, Foo MJ, Chen J, Tan KY, Cai J, Swaminathan R, Chua KSG, Wee SK, Kuah CWK, Zhuo H, Ang WT. Mobile Robotic Balance Assistant (MRBA): a gait assistive and fall intervention robot for daily living. J Neuroeng Rehabil. 2023 Mar 1;20(1):29. doi: 10.1186/s12984-023-01149-0. PMID: 36859286; PMCID: PMC9979429.

- Lambercy O, Lehner R, Chua K, Wee SK, Rajeswaran DK, **Kuah CWK**, Ang WT, Liang P, Campolo D, Hussain A, Aguirre-Ollinger G, Guan C, Kanzler CM, Wenderoth N, Gassert R (2021). Neurorehabilitation from a distance: can intelligent technology support decentralized access to quality therapy. Front. Robot. AI 8:612415. doi: 10.3889/frobt.2021.612415.

- Budhota A, Chua KSG, Hussain A, Kager S, Cherpin A, Contu S, Vishwanath D, **Kuah CWK**, Ng CY, Yam LHL, Loh YJ, Rajeswaran DK, Xiang L, Burdet E, Campolo D. Robotic Assisted Upper Limb Training Post Stroke: A Randomized Control Trial Using Combinatory Approach Toward Reducing Workforce Demands. Front Neurol. 2021 Jun 2;12:622014. doi: 10.3389/fneur.2021.622014. PMID: 34149587; PMCID: PMC8206540.

- Chua KSG, **Kuah CWK** (2017). Innovating with rehabilitation technology in the real world: promises, potentials, and perspectives. APMR 96(10), Suppl, S150-6.

- Ang KK, Guan CT, Phua KS, Wang CC, Zhou LJ, Tang KY, Joseph GJE, **Kuah CWK**, Chua KSG (2014). Brain-computer interface-based robotic end effector system for wrist and hand rehabilitation: results of a three-armed randomized controlled trial for chronic stroke. Front Neuroeng. Jul 29;7:30. doi: 10.3389/fneng.2014.00030.

Notable Innovation Awards & Grants from Past 5 Years

Name of Awards & Grants	Year Obtained
NHG Innovate Award: Excellence in Healthcare Digital Transformation Team: TRUST (Telerehabilitation Robotics for Upper Limb Rehabilitation after Stroke)	2025