Chan Yam Meng

MEng (AI/ML), BSc (Hons)

Research Fellow, Vascular Surgery Service, Department of General Surgery, Tan Tock Seng Hospital

Research Interests:

- Diabetic complications
- Vascular conditions
- Image recognition
- Artificial Intelligence

Biography

Mr Chan Yam Meng is a Vascular Research Fellow in the Department of General Surgery at Tan Tock Seng Hospital. He holds a Master's degree in Engineering (Research) from Nanyang Technological University (Singapore), specializing in Machine Learning and Image Recognition. His research focuses on diabetic complications and technological innovation, with a strong interest in translational research that bridges clinical needs and practical AI solutions to enhance workflow efficiency and quality of care.

Selected Publications

- Oei, C. W., Ng, E. Y. K., Ng, M. H. S., **Chan, Y. M.**, Subbhuraam, V., Chan, L. G., & Acharya, U. R. (2025). Automated risk prediction of post-stroke adverse mental outcomes using deep learning methods and sequential data. Bioengineering, 12(5), 517. https://doi.org/10.3390/bioengineering12050517

- Oei, C. W., **Chan, Y. M.**, Zhang, X., Leo, K. H., Yong, E., Chong, R. C., Hong, Q., Zhang, L., Pan, Y., Tan, G. W. L., & Mak, M. H. W. (2024). Risk prediction of diabetic foot amputation using machine learning and explainable artificial intelligence. Journal of Diabetes Science and Technology, 19(4), 1008–1022. https://doi.org/10.1177/19322968241228606

- Lo, Z. J., Mak, M. H. W., Liang, S., **Chan, Y. M.**, Goh, K., Lai, P., Tan, H. M. A., Thng, P., Rodriguez, J., Weyde, T., & Smit, S. (2023). Development of an explainable artificial intelligence model for Asian vascular wound images. International Wound Journal, 20(12), 4312–4325. https://doi.org/10.1111/iwj.14565

- Oei, C. W., Ng, E. Y. K., Ng, M. H. S., Tan, R.-S., **Chan, Y. M.**, Chan, L. G., & Acharya, U. R. (2023). Explainable risk prediction of post-stroke adverse mental outcomes using machine learning techniques in a population of 1,780 patients. Sensors, 23(18), 7946. https://doi.org/10.3390/s23187946

- Yong, E., Gong, H., Liew, H., **Chan, Y. M.**, Neo, S., Pan, Y., Pua, U., Lo, Z. J., Zhang, L., Mak, M., Chong, L., Hong, Q., Tan, G. W. L., Chua, M. J., Fadil, M. F. M., & Chandrasekar, S. (2023). Getting a foothold on diabetic foot disease – Outcomes of a multidisciplinary clinical pathway for inpatient diabetic foot care: A 17-year institutional review. *The International Journal of Lower Extremity Wounds, 22*(2), 1–9. https://doi.org/10.1177/15347346231183740

- Chan, K. S., Lo, Z. J., Wang, Z., Bishnoi, P., Ng, Y. Z., Chew, S., Chong, T. T., Carmody, D., Ang, S. Y., Yong, E., **Chan, Y. M.**, Ho, J., Grave, N., & Harding, K. (2023). A prospective study on the wound healing and quality of life outcomes of patients with venous leg ulcers in Singapore – Interim analysis at 6-month follow-up. *International Wound Journal, 20*(3), 1–10. https://doi.org/10.1111/iwj.14132

- **Chan, Y. M.**, Ng, E. Y. K., Jahmunah, V., Koh, J. E. W., Oh, S. L., Han, W. S., Yip, L. W. L., & Acharya, U. R. (2021). Automated detection of glaucoma using elongated quinary patterns technique with optical coherence tomography angiogram images. *Biomedical Signal Processing and Control, 69*, 102895. https://doi.org/10.1016/j.bspc.2021.102895

- Chan, K. S., **Chan, Y. M.**, Tan, A. H. M., Liang, S., Cho, Y. T., Hong, Q., Yong, E., Chong, L. R. C., Zhang, L., Tan, G. W. L., Chandrasekar, S., & Lo, Z. J. (2021). Clinical validation of an artificial intelligence-enabled wound imaging mobile application in diabetic foot ulcers. *International Wound Journal, 18*(5), 1–11. https://doi.org/10.1111/iwj.13603

- Lo, Z. J., Lim, X., Eng, D., Car, J., Hong, Q., Yong, E., Zhang, L., Chandrasekar, S., Tan, G. W. L., **Chan, Y. M.**, Sim, S. C., Oei, C. W., Zhang, X., Dharmawan, A., Ng, Y. Z., Harding, K., Upton, Z., Yap, C. W., & Heng, B. H. (2020). Clinical and economic burden of wound care in the tropics: A 5-year institutional population health review. *International Wound Journal, 17*(2), 601–613. https://doi.org/10.1111/iwj.13333

- **Chan, Y. M.**, Ng, E. Y. K., Jahmunah, V., Koh, J. E. W., Oh, S. L., Yip, L. W. L., & Acharya, U. R. (2019). Automatic detection of glaucoma using optical coherence tomography angiogram images. *Computers in Biology and Medicine, 115*, 103483. https://doi.org/10.1016/j.compbiomed.2019.103483

Notable Research Awards & Grants from Past 5 Years

Name of Awards & Grants	Year Obtained
Ng Teng Fong Healthcare Innovation Programme (NTF-HIP): Development of callus imaging model for classification of callosity levels to predict signs of diabetic foot ulceration/recurrence	2023
Ng Teng Fong Healthcare Innovation Programme (NTF-HIP): Development of a Predictive Model for Analyzing Asian Wound Images using Artificial Intelligence	2023