


## Curriculum Vitae

Personal Information	
Title	Asst. Prof.
Name	Ai Peng Tan
Degree	MD, MMed (Diag Radiol)
Country	Singapore
Affiliation	National University of Singapore
	
Educational Background	
<ul style="list-style-type: none"> <li>• MD, National University of Malaysia (UKM 2006)</li> <li>• Fellow of the Royal College of Radiologists, since 2012</li> <li>• Master of Medicine (Diagnostic Radiology), National University of Singapore (2012)</li> <li>• European Diploma in Neuroradiology (EDiNR), European Society of Neuroradiology (2019)</li> </ul>	
Professional Career	
Current Appointments	
July 2021 -	Senior Consultant Radiologist (Neuroradiology), Department of Diagnostic Imaging, National University Hospital, Singapore
July 2023-	Research Director, Department of Diagnostic Imaging, National University Hospital, Singapore Research Director, Department of Diagnostic Radiology, National University of Singapore
Nov 2024 -	Assistant Professor (Clinician-Scientist Track), Yong Loo Lin School of Medicine, National University of Singapore (NUS)
May 2017 -	Consultant, National University Cancer Institute of Singapore (NCIS)
November 2019 -	Principal Investigator, Institute of Human Development and Potential (IHDP), Agency for Science, Technology and Research
2021 -	Principal Investigator, Brain-Body Initiative Program, A*STAR
Jan 2025 -	Primary Member, Human Potential Translational Research Programme (HRTRP), Yong Loo Lin School of Medicine, National University of Singapore (NUS)
Sept 2024 -	Co-Chair, ISMRM Singapore Chapter
2022-	Member of NHG Domain Specific Review Board (DSRB)
2025-	Clinician Scientist Mentor, Diagnostic Radiology Residency Program

### Research Biosketch

Dr. Ai Peng Tan is an Assistant Professor at the NUS YLLSoM and a Senior Consultant Pediatric Neuroradiologist at the National University Hospital, Singapore. She is a Clinician-Scientist funded by the National Medical Research Council and a Principal Investigator at the A\*STAR Institute for Human Development and Potential (A\*STAR IHDP). At IHDP, Dr Tan assumes leadership of the Neuroimaging Domain and spearheads neuroimaging research pertaining to GUSTO, the biggest birth cohort study in Singapore. Dr. Tan completed her Pediatric Neuroradiology Fellowship at Great Ormond Street Hospital for Children, NHS Foundation Trust, which included a pivotal research attachment at the Centre for the Developing Brain, King's College London. This experience laid the foundation for a distinguished career in pediatric brain mapping research. Dr. Tan possesses in-depth knowledge of various advanced neuroimaging techniques, including diffusion tensor imaging and functional MRI, that form the basis of human brain mapping. Her research focuses on clinical translation of MRI-based brain connectivity profiling, particularly in neurodevelopmental and mental health disorders. She is currently recognized as the sole neuroradiologist in Singapore actively conducting research in the mapping of the developing human brain. Driven by a vision to embed MRI-based brain network profiling into clinical practice for children with neurodevelopmental and neuropsychiatric disorders, Dr. Tan is also actively engaged in the development of brain-network targeted interventions to further advance this critical field of research. Her work has resulted in high-impact publications and competitive grant awards. Internationally recognized for her expertise, she is a frequent invited speaker and collaborator in global brain development research consortia.

### Main Scientific Publications

- Chan, S. Y., Chuah, J. S. M., Huang, P., & Tan, A. P. (2024). Social behavior in ASD males: The interplay between cognitive flexibility, working memory, and functional connectivity deviations. *Developmental Cognitive Neuroscience*, 71, 101483. <https://doi.org/10.1016/j.dcn.2024.101483>
- Chan, S. Y., Low, X. Z., Ngoh, Z. M., Ong, Z. Y., Kee, M. Z. L., Huang, P., ... Tan, A. P. (2024). Neonatal nucleus accumbens microstructure modulates individual susceptibility to preconception maternal stress in relation to externalizing behaviors. *Journal of the American Academy of Child and Adolescent Psychiatry*. <https://doi.org/10.1016/j.jaac.2023.12.011>
- Chan, S. Y., Ngoh, Z. M., Ong, Z. Y., Teh, A. L., Kee, M. Z. L., Zhou, J. H., ... Tan, A. P. (2024). The influence of early-life adversity on the coupling of structural and functional brain connectivity across childhood. *Nature Mental Health*. <https://doi.org/10.1038/s44220-023-00162-5>
- Chan, S. Y., Ong, Z. Y., Ngoh, Z. M., Chong, Y. S., Zhou, J. H., Fortier, M. V., ... Tan, A. P. (2022). Structure-function coupling within the reward network in preschool children predicts executive functioning in later childhood. *Developmental Cognitive Neuroscience*, 55, 101107. <https://doi.org/10.1016/j.dcn.2022.101107>
- Chuah, J. S. M., Manahan, A. M. A., Chan, S. Y., Ngoh, Z. M., Huang, P., & Tan, A. P. (2024). Subregion-specific thalamocortical functional connectivity, executive function, and social behavior in children with autism spectrum disorders. *Autism Research: Official Journal of the International Society for Autism Research*. <https://doi.org/10.1002/aur.3280>
- Huang, P., Chan, S. Y., Ngoh, Z. M., Ong, Z. Y., Low, X. Z., Law, E. C., ... Tan, A. P. (2024). Screen time, brain network development and socio-emotional competence in childhood: moderation of associations by parent-child reading. *Psychological Medicine*, 1–12. <https://doi.org/10.1017/S0033291724000084>
- Huang, P., Tint, M. T., Lee, M., Ngoh, Z. M., Gluckman, P., Chong, Y. S., ... Tan, A. P. (2023). Functional activity of the caudate mediates the relation between early childhood microstructural variations and elevated metabolic syndrome scores. *Neuroimage*, 278, 120273. <https://doi.org/10.1016/j.neuroimage.2023.120273>
- Yu Chan, S., Fitzgerald, E., Ming Ngoh, Z., Lee, J., Chuah, J., Shu Ming Chia, J., ... Peng Tan, A. (2024). Examining the associations between microglia genetic capacity, early life exposures and white matter development at the level of the individual. *Brain, Behavior, and Immunity*. <https://doi.org/10.1016/j.bbi.2024.04.038>
- Zhang, S., Larsen, B., Sydnor, V. J., Zeng, T., An, L., Yan, X., ... Yeo, B. T. T. (2024). In vivo whole-cortex marker of excitation-inhibition ratio indexes cortical maturation and cognitive ability in youth. *Proceedings of the National Academy of Sciences of the United States of America*, 121(23), e2318641121. <https://doi.org/10.1073/pnas.2318641121>



**The 13<sup>th</sup> International Congress on MRI & 30<sup>th</sup> Annual Scientific Meeting of  
KSMRM & 7<sup>th</sup> Annual Meeting of ASMRM [ ICMRI 2025 & ASMRM 2025]**

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