RATTHAPORN Boonsuth

DEPARTMENT OF RADIOLOGIC TECHNOLOGY

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Education

2019 - 2023
University College London (UCL), London, UK
PhD Institute of Neurology (Ph.D.)

2018 - 2019
University College London (UCL), London, UK
MSc Advanced Neuroimaging (M.Sc.)

2010 - 2013
Chiang Mai University, Chiang Mai, Thailand
Bachelor of Science in Radiologic Technology (First Class Honors) (B.Sc.)

Research areas of interest

- Quantitative MRI (qMRI) and neuroimaging
- AI/machine learning for medical image analysis
- Neuroimaging applications in neuroscience and clinical diagnostics
- Biomedical data science and image processing

Research theme

Quantitative MRI and Medical Image Analysis

Development and application of advanced quantitative MRI techniques and AI-driven approaches to investigate brain structure, function, and connectivity in health and disease. Research integrates cutting-edge neuroimaging methods including diffusion tensor imaging, magnetisation transfer, quantitative relaxometry, and functional MRI with machine learning and deep learning algorithms for automated analysis, pattern recognition, and clinical decision support. Expertise spans both central and peripheral nervous systems, ultra-high field imaging (3T and 7T), population-specific imaging protocols, with applications in neurodegenerative diseases and neurological disorders.

Publication

2025   Pinyopornpanish K, Yarach U, Angkurawaranon C, Soontornpun A, Chawalparit O, Ngamsombat C, **Boonsuth R**, Suwannasak A, Vichianin Y, Muangpaisan W, Dumrikarnlert C. (2025). Creation of structural MRI brain templates for Thai population. *Quantitative Imaging in Medicine and Surgery*, 15(12):11729-42.

2023   **Boonsuth R**, Battiston M, Grussu F, Samlidou C, Calvi A, Samson RS, Gandini Wheeler-Kingshott CAM, Yiannakas MC. (2023). Multi-parametric quantitative MRI of the healthy sciatic nerve. *Scientific Reports*, 13(1):6565.

2021   Yarach U, Saekho S, Setsompop K, Suwannasak A, **Boonsuth R**, Wantanajittikul K, Angkurawaranon S, Angkurawaranon C, Sangpin P. (2021). Accelerated 3D T1-weighted MRI using compressed sensing. *Magma*, 34(6):915-927.

   Boonsuth R, Samson RS, Tur C, Battiston M, Grussu F, Schneider T, Yoneyama M, Prados F, Ttofalla A, Collorone S, Cortese R, Ciccarelli O, Gandini Wheeler-Kingshott CAM, Yiannakas MC. (2021). Assessing nerve damage in MS using magnetisation transfer ratio. *Frontiers in Neurology*, 12:763143.

2018   **Boonsuth R**, Kaewjaeng S, Kaewkhao J, Lai CWK, Kothan S. (2018). Magnetic susceptibility of gadolinium calcium silicoborate glass. *Materials Today: Proceedings*, 5(7):14892-14895.