

Mingshi Chen, MSc

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Research Focus

AI for neuroimaging; radiomics + ML with MRI/fMRI; treatment-response prediction (MDD sertraline, ADHD MPH); brain age & expertise-driven neuroplasticity; reproducible pipelines.

Education

PhD, Biomedical Engineering & Physics — Amsterdam UMC (AMC), NL
10/2022–present

MClinMed (Imaging & Nuclear Medicine) — SYSU Cancer Center, China
08/2019–06/2022 · GPA 3.3/4
Thesis: [^{18}F]FDG PET in primary CNS lymphoma

BMed (Clinical Medicine, 5-yr) — Sun Yat-sen University (SYSU), China
09/2014–06/2019 · GPA 3.2/4

Publications — Selected

Journal articles

- **Chen, M.***; van der Pal, Z.; et al. (2025). *Predicting methylphenidate response in ADHD from T1/DTI radiomics*. **NeuroImage: Clinical**, **45**. <https://doi.org/10.1016/j.nicl.2024.103707>
- **Chen, M.***; Marquering, H. A.; et al. (2026). *On the Value of Radiomics in Addition to Clinical Measures in Emotional Conflict fMRI for Predicting Sertraline Response in Major Depressive Disorder*. **Scientific Reports**. <https://doi.org/10.1038/s41598-026-56688-y>.
- Tan, W.*; Mao, M.*; He, H.*; **Chen, M.***; et al. (2023). *Endonasopharyngeal US & MRI of recurrent retropharyngeal nodes*. **Radiotherapy & Oncology**, **183**. <https://doi.org/10.1016/j.radonc.2023.109579>
- Li, Y.*; Mo, Y.*; **Chen, M.**; et al. (2024). *Pontine-white matter score in PCNSL*. **Cancers**, **16(15):2708**. <https://doi.org/10.3390/cancers16152708>
- Mo, Y.*; Li, Y.*; **Chen, M.**; et al. (2024). *Intracranial metabolic score in PCNSL with PET/CT & PET/MR*. **Cancer Imaging**, **24:152**. <https://doi.org/10.1186/s40644-024-00798-1>

Book chapters

- Caan, M.W.A., & **Chen, M.** (2025). *What Is beyond the Image? Machine Learning for MR Image Analysis*. In **Advances in Magnetic Resonance Technology and Applications** (Vol. 13). Academic Press. <https://doi.org/10.1016/B978-0-443-14109-6.00014-6>

Under review / in prep

- **Chen, M.***; Korenar, M.; et al. (2026). *Association of bilingual language use with brain age: MRI evidence from bilinguals, translators, and interpreters*. **Neuroimage: Reports** — under review.
 - **Chen, M.***; Schrantee, A.; et al. (2026). *Dose-dependent longitudinal whole-brain structural change following XTC exposure: a PCA and mixed-effects modeling approach*. – in prep.
 - Zheng, P.*; **Chen, M.***; et al. (2025). *MRI radiomics to predict return-to-sport after hamstring injury*. **European Radiology** — submitting.
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Grants & Awards (selected)

- CSC PhD Scholarship (2022–2026), No. 202206380049
 - ECNP Research Internship Project 2025 – Meet Your Translational Match Session
 - Poster Award, ECNP 2024
 - Selected Project, 2025 Chunhui Cup Academic Innovation Achievement Award
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Talks & Posters — Selected

- **ISMRM 2026** (digital poster): Bilingual expertise impacts brain age: region-wise study in bilinguals, translators, and interpreters (#00484)
 - **MISP² 2026** (oral presentation): Language processing demands affect brain age: MRI evidence from bilinguals, translators, and interpreters
 - **ECNP 2025** (digital poster): *Radiomics in emotional-conflict fMRI for sertraline response in MDD* (EP06-0535).
 - **ECNP 2024** (poster award): *Predicting MPH response in ADHD using volume-based & radiomics T1/DTI* (P1040).
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Research Experience

PhD Researcher — Amsterdam UMC (AMC) · 10/2022–present

- Built ML models on **MRI/fMRI radiomics** for treatment response (MDD sertraline; ADHD MPH).
- Secondary analysis of **RCT** and large cohorts; robust pipelines with **fMRIPrep, FreeSurfer/FastSurfer**.
- Brain-age modelling across bilinguals, translators, interpreters; reproducible workflows.

Clinical Trial Design — ⁶⁸Ga-FAPI-04 PET/CT in Multiple Myeloma (07/2021) — protocol assistant.

Exploratory Study — Metformin protective effects in acute alcoholic liver injury (10–12/2016).

Teaching & Mentoring

- **TA:** MAM11 Practical (10/2024, 10/2025); *Practicum patiënt in beeld* (06/2024); **AI in Radiology** (06/2025).
 - **Supervision:** Laurens Krook (MSc AI) — Siamese GIN for MDD outcome
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Skills

Methods: Radiomics; MRI/fMRI preprocessing; diffusion (DTI); predictive modelling; ML; statistics.

Software: Python; R; SPSS; JASP; FSL; fMRIPrep; FastSurfer/FreeSurfer; 3D Slicer; ML toolkits; Adobe.

Languages: Mandarin & Cantonese (native); English (fluent; IELTS 6.5/9); Dutch (A2).

Service & Outreach (selected)

- Organizing committee member — Radiologie & Nucleaire Geneeskunde (RNG) Day (04/2025)
- Bass player & composer — **Indoor Concert for Children with Leukemia** (01/2021).
- Bass player — **Opening Ceremony, Chinese Conference on Oncology** (11/2020).