Stanford



# Mateus A. Esmeraldo

- Postdoc Res Affiliate, Rad/Pediatric Radiology
- Fellow in Radiology
- Curriculum Vitae available Online

## Bio

### BIO

Mateus A. Esmeraldo is a Postdoctoral Research Fellow in the Department of Radiology at Stanford University, currently working under the mentorship of Dr. Bruno P. Soares. His current research focuses on pediatric neuroradiology and the integration of artificial intelligence (AI) tools to enhance diagnostic and healthcare delivery in neuropediatric populations, with a particular emphasis on magnetic resonance imaging.

Originally from Brazil, Mateus earned his medical degree Magna cum Laude from the University of Ceará - Sobral. He completed his residency in Radiology at the University of São Paulo, where he was awarded the Guerbet-InRad Best Resident Award and received the CBR/ESOR Europe Scholarship for complementary training in Neuroradiology at Addenbrooke's Hospital, University of Cambridge, during his final year.

Following his residency, Mateus served as a Radiologist in the Ultrasound Section of the Institute of Radiology (InRad) at the University of São Paulo. In this role, he was engaged in clinical and research activities involving Doppler ultrasound and transcranial ultrasound in adult patients. His work was closely aligned with innovation-driven projects in neuroimaging and artificial intelligence, and he also participated in academic and teaching initiatives for medical students and residents.

### CLINICAL FOCUS

- Fellow

### HONORS AND AWARDS

- Bayer - CBR Award (2024), Bayer, Brazilian College of Radiology (CBR) and European School of Radiology (2024)
- Best Resident InRad - Guerbet Award, InRad (University of São Paulo) and Guerbet (2024)
- Magna Cum Laude, University of Ceará - School of Medicine (2021)

### INTERNET LINKS

- Published Articles: https://scholar.google.com/citations?user=QcB7v78AAAAJ&hl=en

## Publications

### PUBLICATIONS

- **A Comprehensive 2.5-Minute Brain MRI Protocol in the Pediatric Emergency Department: Diagnostic Evaluation of the Multicontrast NeuroMix Sequence.** *AJNR. American journal of neuroradiology*
  Esmeraldo, M. A., Soares, B. P., Reis, E. P., Dahmoush, H., Bhandari, A., Campion, A. W., Sprenger, T., Skare, S., Zaharchuk, G., Decker, J. H.
  2026

- **Pipeline evaluation of a state-of-the-art AI algorithm for detection of focal cortical dysplasia: insights into potential failure sources.** *Brain informatics*
  Esmeraldo, M. A., Chambers, S., Kravutske, Y., Reis, E. P., Kasprian, G., Geraldo, A. F., Gatidis, S., Soares, B. P.
  2026
- **Updates on Adult Transcranial Doppler, Gray-Scale, and Contrast-enhanced US Techniques.** *Radiographics : a review publication of the Radiological Society of North America, Inc*
  A Esmeraldo, M., de Melo, E. R., Fritzen, M., Braga, K., Brunetto, M. F., Ferreira, P. S., Chiovatto, E. D., Chiovatto, R. D., Freeman, C. W., Cavalanti Gomes, A., Chammas, M. C.
  2026; 46 (4): e250182
- **Microcephaly with Simplified Gyral Pattern in Children: Quantitative Morphometric Assessment on Brain MRI and Correlation with Clinical Outcome.** *AJNR. American journal of neuroradiology*
  Chambers, S., Esmeraldo, M. A., Kravutske, Y., Haider, L., Kasprian, G., Geraldo, A. F., Soares, B. P.
  2026
- **Explainable DSC Perfusion Radiomics for Post-Treatment Glioblastoma Assessment Using a Soft-Voting Machine-Learning Ensemble.** *Cancers*
  Christodoulou, R. C., Christofi, G., Vamvouras, G., Esmeraldo, M. A., Papageorgiou, P. S., Vassiliou, E., Solomou, E. E., Papageorgiou, S. G., Georgiou, M. F.
  2026; 18 (21)
- **Explainable MRI radiomics identifies a PTEN-associated imaging phenotype in adult gliomas.** *Frontiers in oncology*
  Christodoulou, R. C., Vamvouras, G., Esmeraldo, M. A., Papageorgiou, P. S., Vassiliou, E., Solomou, E. E., Papageorgiou, S. G., Georgiou, M. F.
  2026; 16: 1900609
- **Calibrated and explainable multiparametric MRI radiomics for differentiating tumor positive disease from treatment-related changes in glioblastoma** *FRONTIERS IN ONCOLOGY*
  Christodoulou, R. C., Vamvouras, G., Esmeraldo, M. A., Papageorgiou, P. S., Vassiliou, E., Solomou, E. E., Papageorgiou, S. G., Georgiou, M. F.
  2026; 16
- **Calibrated and explainable multiparametric MRI radiomics for differentiating tumor positive disease from treatment-related changes in glioblastoma.** *Frontiers in oncology*
  Christodoulou, R. C., Vamvouras, G., Esmeraldo, M. A., Papageorgiou, P. S., Vassiliou, E., Solomou, E. E., Papageorgiou, S. G., Georgiou, M. F.
  2026; 16: 1890956
- **Image quality evaluation of neonatal brain magnetic resonance imaging using a deep learning reconstruction algorithm: A quantitative and multireader study using variable denoising levels at 3 tesla.** *Journal of clinical imaging science*
  Alvi, Z., Reis, E. P., Esmeraldo, M. A., Shin, D., Banerjee, S., Dahmoush, H. M., Campion, A., Chambers, S., Kravutske, Y., Gatidis, S., Soares, B. P.
  2026; 16: 29
- **Longitudinal Neuroimaging in Pediatric Coccidioidomycosis: Full Spectrum of Brain, Spine and Head and Neck Findings.** *AJNR. American journal of neuroradiology*
  Chambers, S., Esmeraldo, M. A., Moeremans, M., Halverson, M., Soares, B. P., Dahmoush, H., Geraldo, A. F.
  2026
- **Knobloch Syndrome in Childhood: Neuroradiologic Findings and Clinical Correlation.** *Journal of child neurology*
  Kravutske, Y., Esmeraldo, M. A., Chambers, S., Dahmoush, H. M., Halverson, M. R., Geraldo, A. F., Soares, B. P.
  2026: 8830738261444228
- **Fetal Dural Sinus Malformation: Prenatal Diagnosis and Follow-up With Thrombus Resolution and Associated Developmental Venous Anomalies.** *Journal of child neurology*
  Esmeraldo, M. A., Chambers, S., Geraldo, A. F., Dahmoush, H. M., Soares, B. P.
  2026: 8830738261433220
- **Comprehensive segmentation of focal cortical dysplasia by combining surface-based and whole-brain MRI deep learning algorithms: a proof-of-concept study.** *Biomedical physics & engineering express*
  Kravutske, Y., A Esmeraldo, M., Chambers, S., Reis, E. P., Haider, L., Kasprian, G., Soares, B. P.
  2026
- **External Validation of an Artificial Intelligence Triaging System for Chest X-Rays: A Retrospective Independent Clinical Study** *DIAGNOSTICS*

Castilla, A., D'Amorim, I., Wanderley, M., Esmeraldo, M., Yoshida, A., Eigier, A., Sawamura, M.
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- **Prenatal Diagnosis of VLDLR-associated Cerebellar Hypoplasia via Fetal MRI.** *Neuropediatrics*
  Povlow, M. R., Esmeraldo, M. A., Dahmoush, H. M., Halverson, M. R., Barsh, G. R., Soares, B. P.
  2025
- **Intersection of Brain Complexity, Functional Connectivity, and Neuropsychology: A Systematic Review.** *Cureus*
  de Moura Targino, R., Esmeraldo, M. A., Cajazeiras Falcão, I., Macêdo Melo, K.
  2025; 17 (3): e80719
- **Mevalonic Aciduria in a Pediatric Patient: A Case Report and Literature Review of Neuroimaging Findings.** *Cureus*
  Esmeraldo, M. A., Prates, I. R., Lucato, L. T., Barbosa Junior, A. A.
  2024; 16 (7): e65209
- **Intracranial Chondrosarcoma Originating from the Sella Turcica** *JBNC - Jornal Brasileiro de Neurocirurgia*
  Carlos de Sousa Oliveira, S., Carolina Ferretti Wisenfad, A., Aragão Esmeraldo, M., Medina Guimarães, W., Hiromi Otani, M.
  2024
- **Complete C4-C5 Dislocation Secondary to Shallow Water Diving in a Child: A Case-Based Update** *BRAZILIAN NEUROSURGERY-ARQUIVOS BRASILEIROS DE NEUROCIRURGIA*
  Matos, L., Figueiredo, G., Monteiro, M., Esmeraldo, M., da Ponte, K., Cristino-Filho, G., Leal, P.
  2023
- **Eight-and-a-Half Syndrome Secondary to Neurotoxoplasmosis: A Rare Case Report.** *Neuro-ophthalmology (Aeolus Press)*
  Cavalcante-Neto, J. F., Dos Reis, G. C., Esmeraldo, M. A., Dos Santos, B. R., Leal, P. R., da Ponte, K. F., Cristino-Filho, G., Ribeiro, E. M.
  2022; 46 (5): 335-338
- **Late mesenteric ischemia after Sars-Cov-2 infection: case report** *JORNAL VASCULAR BRASILEIRO*
  Oliveira de Macedo, V., Moreira, G., Fiuza de Albuquerque, A., de Sousa Oliveira, S., Esmeraldo, M., Barroso Barbosa, F.
  2021; 20: e20200105
- **Macroscopic Hematuria as the Initial Presentation of Polycythemia Vera.** *Cureus*
  Oliveira, S. e., Santos, L. T., Esmeraldo, M. A., Neto, O. s., da Ponte, M. F.
  2020; 12 (10): e10800