Van Nhat Minh Vo, Ph.D

BRAIN CENTRE, Department of Neuroimaging, IoPPN
King's College London, London, England
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EDUCATION

University of Bonn – PhD student 2022 – 2025
Program in Experimental Medicine (Research field: MRI)
Supervisor: Univ-Prof. Dr. rer. nat. Verena Hörr

Tokyo Metropolitan University – Master Student 2019 – 2021
Radiological Sciences
Supervisor: Professor Shirakawa Takako

Hue University of Medicine and Pharmacy 2012 – 2014
Medical Technology

National Technical College of Medicine No.II 2007 – 2010
Medical Imaging Technician

RESEARCH INTEREST

My research integrates cardiovascular and neuroimaging, using advanced MRI techniques to investigate structural, functional, and metabolic changes in disease. I focus on developing quantitative biomarkers in preclinical models, particularly in cardiac function, cerebral perfusion, neurovascular coupling, and oxygen metabolism, with an emphasis on robust and reproducible imaging pipelines.

PROFESSIONAL EXPERIENCE

BRAIN CENTRE, Department of Neuroimaging, IoPPN, King's College London, London, England 2025- now

Imaging Scientist

PI: Reader (Associate Professor) Diana Cash, Ph.D

Line manager: Eugene Kim, Ph.D

- Scanner Operation and Maintenance: Assist in the operation and upkeep of the 9.4T Bruker scanner to ensure optimal performance.
- Imaging Data Acquisition: Support users and collaborators in acquiring imaging data.
- Data Management: Perform data conversion, quality control, and pre-processing to ensure the integrity and usability of imaging data.
- Technique Implementation: Implement, optimize, evaluate, and apply both routine and novel MRI image acquisition and analysis techniques for preclinical imaging and spectroscopy projects focused on central nervous system research.
- Pipeline Development: Assist in developing imaging and spectroscopy pipelines to evaluate cerebral ischemia and its structural and functional consequences (including blood flow, neurovascular coupling, oxygen metabolism, and morphological and diffusivity changes)
- Data Archiving and Analysis: Implement and maintain data archiving and analysis pipelines with support from your supervisor and departmental IT and analysis experts.

Medizinische Klinik und Poliklinik II/ Cardiovascular Imaging Research Group, University Hospital Bonn, Bonn, Germany 2022 – 2025

PhD Student Researcher

Advisor: Univ-Prof. Dr. rer. nat. Verena Hörr

- Collaborate with the research team to develop research objectives and experimental design for cardiovascular imaging studies.
- Collect and analyze cardiovascular imaging data, including image acquisition, image processing, and quantitative analysis.
- Develop algorithms or software tools for image analysis processes and enhance data analysis efficiency.

Philips Healthcare Company, Vietnam 2021 – 2022

MRI-Product Specialist
Manager: Hugo Luik

- Develop a comprehensive understanding of the features, functionality, and applications of our MRI systems and related products. Stay updated with the latest advancements in MRI technology and industry trends.
- Conduct product training sessions for customers to enhance their understanding of MRI system operation, imaging protocols, and post-processing techniques. Develop training materials, presentations, and user manuals as needed.

The Jikei University Hospital, Japan 2019 – 2021
Research Assistant

Advisor: Associate Professor Hiroki Ohta, M.D, Ph,D

- Conduct data collection activities, including performing DSA procedures, operating Ultrasound machines, and assisting in MRI examinations. Ensure accurate and timely data acquisition and recording. Collaborate with the research team in analyzing collected data and interpreting results.
- Assist in the planning, implementation, and execution of research projects related to DSA, Ultrasound, and MRI. Collaborate with the research team in designing study protocols, data collection methods, and analysis strategies.

Philips Healthcare Company, Vietnam 2017-2019
MRI Clinical Applications Specialist

Manager: Hugo Luik

- Conduct comprehensive training sessions for healthcare professionals, including radiologists, technologists, and physicians, to enhance their knowledge and skills in MRI clinical applications. Develop training materials, presentations, and user manuals as needed.
- Provide on-site and remote support to customers regarding MRI system operation, image acquisition, and post-processing techniques. Troubleshoot technical issues, optimize imaging protocols, and ensure proper utilization of MRI equipment.

Hue Central Hospital, Vietnam 2014-2017
Radiological Technologist

Manager: Van Loi Nguyen, RT

- Perform Diagnostic Imaging: Conduct a variety of radiographic examinations, including X-rays, CT scans, MRI scans, mammography, and fluoroscopy, as prescribed by physicians.
- Equipment Operation: Operate and maintain imaging equipment, including X-ray machines, CT scanners, MRI machines, and other radiographic devices. Ensure proper functioning, cleanliness, and adherence to safety protocols.

Hue University Hospital, Vietnam 2011-2012
Radiological Technologist

Manager: *Associate Professor* Minh Loi Hoang, M.D, Ph.D

- Perform Diagnostic Imaging: Conduct a variety of radiographic examinations, including X-rays, CT scans, MRI scans, mammography, and fluoroscopy, as prescribed by physicians.
- Equipment Operation: Operate and maintain imaging equipment, including X-ray machines, CT scanners, MRI machines, and other radiographic devices. Ensure proper functioning, cleanliness, and adherence to safety protocols.

SELECTED MANUSCRIPTS

* Equal contribution;

1. Hiroki Ohta*, **Nhat-Minh Van Vo***, Junichi Hata, Koshiro Terawaki , Takako Shirakawa, Hirotaka James Okano. "Utilizing Dynamic Phosphorous-31 Magnetic Resonance Spectroscopy for the Early Detection of Acute Compartment Syndrome: A Pilot Study on Rats". ***diagnostics***. doi: 10.21203/rs.3.rs-143667/v1 2020

CONFERENCES

1. **Minh Van Nhat Vo** , Hiroki Ohta , Junichi Hata, , Koshiro Terawaki,, Hirotaka James Okano , Takako Shirakawa. "Acute Compartment Syndrome Model in Rats : A n Early Evaluation with In Vivo Dynamic 31 P-MR Spectroscopy at 9.4 T". *ISMRM-JPC 2020.* 2020

2. Mahyasadat Ebrahimi, Ali Nahardani, Shibarjun Mandal1, Astrid Tannert1, Sara Moradi, **Van Nhat Minh Vo**, Ute Neugebauer, Rainer Heintzmann, Verena Hoerr. "A Multiparametric MRI Study of Sepsis-Induced Renal Injury in Comparison to Histology". *European Molecular Imaging Meeting 2023.* 2023

3. Mahyasadat Ebrahimi, Ali Nahardani, Sara Moradi, **Van Nhat Minh Vo**, Shibarjun Mandal, Astrid Tannert, Ute Neugebauer, Rainer Heintzmann, Verena Hoerr. "Analysis of Cardiac Function and Hemodynamics in Sepsis by MRI: A Preclinical Study at 9.4T". *European Molecular Imaging Meeting 2023.* 2023

4. **Van Nhat Minh Vo,** Ali Nahardani, Katja Grün, Andrea Schrepper, Mahyasadat Ebrahimi, Sara Moradi1, Marcus Franz, Verena Hoerr. "A Longitudinal MRI Study on Right Ventricular Function and Strain in Pulmonary Arterial Hypertension: A Preclinical Investigation at 11.7 T". *European Molecular Imaging Meeting 2023.* 2023

5. Ali Nahardani**, Van Nhat Minh Vo**, Sara Moradi, Stefan Reuter, Verena Hoerr. "23Na Magnetic Resonance Imaging in Sepsis-Induced Acute Kidney Injury". *Sepsis 11th Update 2023.* 2023

6. **Van Nhat Minh Vo**, Ali Nahardani, Sara Moradi, Chris Lippe, Verena Hoerr. "Evaluating Glucose Uptake in Brown Adipose Tissue by In-Vivo GlucoCEST MRI". *2024 ISMRM & ISMRT Annual Meeting & Exhibition.* 2024

7. Ali Nahardani, Sara Moradi , **Van Nhat Minh Vo**, Verena Hoerr. "^{23}Na Magnetic Resonance Imaging in Sepsis-Induced Acute Kidney Injury: A Preclinical Study". *2024 ISMRM & ISMRT Annual Meeting & Exhibition.* 2024

8. Charalampos Papaonisiforou, Eugene Kim, Dauda Abdullahi, Katarina Ilic, Michel Mesquita, Eilidh MacNicol, Gemma Deegan, Luiza-Simona Damon, **Minh Van Nhat Vo**, Marija Petrinovic, Per Svenningsson, Diana Cash. "Multimodal MRI as a translational assay of lesion and dopamine depletion in the unilateral 6-OHDA rat model". *European Molecular Imaging Meeting 2026.* 2026

9. Charalampos Papaonisiforou, Eugene Kim, Dauda Abdullahi, Katarina Ilic, Michel Mesquita, Eilidh MacNicol, Gemma Deegan, Luiza-Simona Damon, **Minh Van Nhat Vo**, Marija Petrinovic, Per Svenningsson, Diana Cash. "Multimodal MRI as a translational assay of lesion and dopamine depletion in the unilateral 6-OHDA rat model". *International Conference on Alzheimer's and Parkinson's Diseases and related neurological disorders 2026 (AP/PD 2026).* 2026

HONORS & AWARDS

"Asian Human Resource Development Project for Medical Professionals" – Master Program – Funded by Tokyo Metropolitan Government, Japan 2019

Japan Exchange Program - Funded by University Hospital, Kyoto Prefectural University of Medicine, Japan. 2016

PROFESSIONAL MEMBERSHIPS

Vietnam Association of Radiological Technologist (VART).

International Society for Magnetic Resonance in Medicine (ISMRM)

COMPUTER AND TECHNICAL SKILLS

Programming languages: Matlab, Python

Operating systems: Linux, MacOS, Windows.

Background knowledge: Medicine, medical technology

REFERENCES

1. **Associate Professor Diana Cash –** Neuroimaging Department, IOPPN, King's College London, London, England
   Email: diana.cash@kcl.ac.uk

2. **Dr. Eugene Kim -** Neuroimaging Department, IOPPN, King's College London, London, England
   Email: eugene.kim@kcl.ac.uk

3. **Univ-Prof. Dr. rer. nat. Verena Hörr** – Medizinische Klinik und Poliklinik II/ Cardiovascular Imaging Research Group,
   University Hospital Bonn, Bonn, Germany
   Email: vhoerr@uni-bonn.de

4. **Dr. Ali Nahardani** – Medizinische Klinik und Poliklinik II/ Cardiovascular Imaging Research Group, University Hospital Bonn, Bonn, Germany
   Email: ali.nahardani@ukbonn.de

5. **Professor Shirakawa Takako** – Radiological Sciences Department, Tokyo Metropolitan University, Tokyo, Japan
   Email:t-shirakawa@tmu.ac.jp