

Rakshit Dadarwal

PHD

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Profile

I am a postdoctoral research fellow with over six years of active involvement in magnetic resonance imaging (MRI) data collection and analyses. I am a skilled programmer in Python and Matlab, and I am well-versed in the workflows for MRI image processing, data visualization, and MRI physics.

Education

German Primate Center - Functional Imaging Lab

POSTDOCTORAL FELLOW

- *Supervisor:* Prof. Dr. Susann Boretius

Göttingen, Germany

Jan. 2022 - today

German Primate Center - Functional Imaging Lab

PHD

- *Multi-contrast Magnetic Resonance Imaging of Myelin and Iron in the Brain*
- *Supervisor:* Prof. Dr. Susann Boretius
- *Final grade:* Magna cum laude

Göttingen, Germany

Nov. 2016 - Dec. 2021

University of Rajasthan

MASTER OF TECHNOLOGY (COGNITIVE AND NEUROSCIENCE)

- *Thesis title:* Analysis of DCE MRI Data of Brain Tumor Patients
- *Supervisor:* Prof. Dr. Anup Singh
- *Institute:* Indian Institute of Technology Delhi, New Delhi, India

Jaipur, India

2014 - 2016

University of Rajasthan

BACHELOR OF TECHNOLOGY (COGNITIVE AND NEUROSCIENCE)

Jaipur, India

Jul. 2010 - May. 2014

Research Experience

Internships

EFFECT OF ERRORS IN AIF ESTIMATION ON DCE MRI DATA ANALYSIS

- *Supervisor:* Prof. Dr. Anup Singh
- *Institute:* Indian Institute of Technology Delhi

New Delhi, India

May 2015 - Jul. 2015

POST PROCESSING OF DTI IMAGES AND TBSS

- *Supervisor:* Dr. Poonam Rana
- *Institute:* Institute of Nuclear Medicine and Allied Sciences, DRDO

Oct. 2014 - Nov. 2014

Research Fellow

QUANTITATIVE SOFTWARE TOOLS FOR PROCESSING DCE PERFUSION MRI DATA OF PATIENTS WITH INTRACRANIAL MASS

LESIONS

- *Supervisor:* Prof. Dr. Anup Singh
- *Institute:* Indian Institute of Technology Delhi

New Delhi, India

May 2016 - Jul. 2016

Stipends & Awards

2021 **Educational Stipend**, Annual Meeting of the ISMRM

2019 **DPZ Photo Prize**, Science Category

2019 **Student Support Program**, 36th Annual Meeting of the ESMRMB

2019 **Educational Stipend**, 27th Annual Meeting of the ISMRM

2018 **Educational Stipend**, Joint Annual Meeting ISMRM-ESMRMB

2017 **Student Support Program**, 34th Annual Meeting of the ESMRMB

2015 **Fellowship**, National Network for Mathematical and Computational Biology, SERB

Virtual

Göttingen, Germany

Rotterdam,

Netherlands

Montreal, Canada

Paris, France

Barcelona, Spain

India

Certifications

NEUROMATCH ACADEMY (NMA)

- Interactive track and the course project of NMA-Deep Learning

COURSERA

- Deep Neural Network with PyTorch

Teaching Experience

Tutorials on *Introduction to MRI*

Göttingen, Germany

IMPRS FOR NEUROSCIENCES MSc PROGRAM

2017 - 2019

- Hands-on method courses on Diffusion MRI data acquisition and analysis
- Workload: approx. 3 half days per year for 2 years

Supervisor for Lab Rotations

Göttingen, Germany

MSc STUDENTS

2017 - 2019

- Quantitative Susceptibility Mapping (QSM) applied for myelin quantification
- Tracking the Cardiac Muscle Fiber orientation using Diffusion weighted Magnetic Resonance Imaging (DW-MRI) in Post-mortem Pig Hearts
- Aging Effects on Macaques' Brain: Volumetric Analysis
- Duration of each rotation: 8 weeks

Supervisor for Bachelor Theses

Göttingen, Germany

BSc STUDENTS

2021

- Age-related cerebral iron accumulation in the common marmoset (*Callithrix jacchus*)
 - A comparative MRI and histology study
- Duration: 10 weeks

Skills

MRI acquisition Working experience on **Bruker** (BioSpec - 9.4 T) and **Siemens** (MAGNETOM Prisma - 3T)

MRI analysis **FSL, Nipype, DIPY, ANTs, MRtrix3, AFNI**, Freesurfer, Connectome Workbench

Programming **Python, MATLAB**, git, Bash, R, C++, Java

Languages **Hindi, English**, German (A2)

Hobbies

Yoga Vinyasa, Hatha, Pranayama, Meditation

Sports Running (5K and 10K), Badminton, Cricket

Research Output

PEER-REVIEWED PUBLICATIONS

1. **Dadarwal, R., Ortiz-Rios, M. & Boretius, S.** Fusion of quantitative susceptibility maps and T1-weighted images improve brain tissue contrast in primates. bioRxiv preprint (under review in Neuroimage) [link to the article](#), 2021.10.05.462876 (Oct. 2021).

Other published research articles are available at [google scholar](#).