



Henrik zu Jeddelloh

Curriculum Vitae

Education

- 2022–2024 **M. Sc. Physics**, *University of Heidelberg*, Heidelberg, Germany
2018–2022 **B. Sc. Physics**, *University of Heidelberg*, Heidelberg, Germany
2012–2017 **Diploma**, *Emmaus High School*, Emmaus, PA, USA

Research Experience

Masters Thesis *Investigating the Source of Diffusion Coefficient Map Inhomogeneities in a Homogeneous Diffusion MRI Phantom*

German Cancer Research Center (DKFZ)
PD Dr. Tristan Kuder

Systematically performed various diffusion measurements on a clinical MRI scanner and compared data to physical models to determine source of unexpected variations in diffusion coefficient (ADC) maps. Also developed custom MRI sequences to measure gradient and eddy current characteristics.

Bachelors Thesis *Optimization and Verification of the Synthesis of Colloidal Cell Mimics as a Reference System for Diffusion MRI Experiments*

German Cancer Research Center (DKFZ)
Prof. Dr. Peter Bachert

Worked in the lab to optimize the chemical synthesis of microscopic spherical phantoms, which mimic the diffusive characteristics of biological cells. Methods were verified using electron microscopy and diffusion sequences on a pre-clinical MRI scanner and compared against diffusion simulations.

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Conference Contributions

H. zu Jeddelloh, T.A. Kuder, J. Rauch, F.B. Laun, M.E. Ladd, K. Klika, D. Ludwig, *Colloidal Cell Mimics as a Reference System for Diffusion MRI Experiments*, ISMRM Annual Meeting 2023, E-Poster

H. zu Jeddelloh, T.A. Kuder, J. Rauch, F.B. Laun, M.E. Ladd, K. Klika, D. Ludwig, *Kolloidale Zellimitate als Referenzsystem für Diffusions-MRT-Experimente*, 53. Jahrestagung der DGMP/ 24. Jahrestagung der Deutschen Sektion der ISMRM, Oral Presentation

Work Experience

2022–2023 **Student Research Assistant**, *German Cancer Research Center (DKFZ)*, Heidelberg, Germany

Continued the optimization of the synthesization of colloidal cell mimics in the lab group of PD Dr. Kuder

2020–2024 **Physics Lab Practical Tutor**, *University of Heidelberg*, Heidelberg, Germany

Learned communicating physical concepts and aiding students in lab practicals

2018 **Shadowing in General Surgery department**, *GRN Klinik*, Weinheim, Germany

Learned about hospital routine and observed the work of surgeons in the operation room

2017 **Emergency Medical Technician (EMT) Certification**, *Cetronia*, Emmaus, PA, USA

Acquired EMT certification and experienced work in rescue operations

2016–2017 **Head Lifeguard**, *Lower Macungie Township Pool*, Lower Macungie, PA, USA

Lead and organized a team of lifeguards

2015–2016 **Lifeguard**, *Lower Macungie Township Pool*, Lower Macungie, PA, USA

Learned to work with a team to keep pool guests safe

Skills and Competences

Software Python, C++, MATLAB, Rust, \LaTeX , Git, Linux, CAD

Hardware Soldering, Electronics, 3D-Printing

Languages German (native), English (native), French (basics)

Interests and Hobbies

- Triathlon
- Photography
- Programming

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