



# Tobias Marcel Wagner

## Publications

- H. Al-Hamdo, **Tobias Wagner** et al., Phys. Rev. Lett. **131**, 046701 (2023)
- S. Jenkins, **Tobias Wagner** et al., Phys. Rev. B **109**, 224431, (2024)
- M. Ślęzak, **Tobias Wagner** et al., arXiv:2403.05151 (2024)

## Competencies

- Python (7 years)
- Keras Tensorflow (0.5 years)
- Java (4 yrs.)
- Mathematica (7 years)
- Latex (9 years)
- C/C++ (1 year)
- Git (6 yrs.)
- Bash (5 y.)
- CAD PCB Design
- Signal analysis
- Blender 3D Design

## Certificates/Workshops

- HLRS Parallel Programming Workshop: Parallelization with MPI and OpenMP
- Agile Project Management
- Python (advanced)
- Good Scientific Practice
- Academic Writing
- Intercultural Communication
- Scientific Presentation
- Blender 3D Design
- Mental Health as a Scientist

## Professional experience

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- Aug. 2021 – present:** Doctoral candidate, research assistant to Prof. Dr. Sinova, Institute of Physics, Johannes Gutenberg University Mainz
- Interdisciplinary research
  - High-Performance Cluster Computer Simulations
  - Data analysis of experimental data in magnetic multilayer systems
  - Science communication
- Oct. 2022 – Nov. 2022:** Doctoral candidate, visiting scientist with Prof. Dr. Nowak, Institute of Physics, University of Konstanz
- Development of atomistic computer simulations
  - Establishment of a scientific collaboration
- April 2020 – Aug. 2021:** Research Assistant to Prof. Dr. Everschor-Sitte, Institute of Physics, Johannes Gutenberg University Mainz
- Analytical and numerical calculations of magnetic systems
  - Machine learning to analyze simulation data
- Oct. 2019 - April 2020:** Research Assistant to Prof. Dr. Denig, Institute of Nuclear Physics, Johannes Gutenberg University Mainz
- High-Performance Cluster Computer Simulations for the BESIII Experiment
- April 2018 – Sept. 2018:** Research Assistant to Prof. Dr. Berger, Inst. f. Nuclear Physics, Johannes Gutenberg University Mainz
- Electronics development for the detector of the Mu3e experiment
- Oct. 2016 - March 2018:** Student Operator of the Microtron Accelerator in Mainz, Institute of Nuclear Physics, Johannes Gutenberg University Mainz

## Teaching Experience

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- SS2023** Lecture Physics for Physicians
- WS2022** Lecture Physics for Physicians, Seminar on Micromagnetic and Atomistic Simulations
- SS2022** Instructor Nuclear and Particle Physics
- WS2021** Supervision of a bachelor thesis on atomistic simulations, laboratory exercise instructor physics for physicians
- SS2021** Senior Assistant Electrodynamics
- WS2020** Senior Assistant, Instructor of Classical Mechanics, Supervision of a Master Project on Atomistic Simulations
- SS2019** Instructor Mathematical Calculation Methods
- SS2018** Instructor Signal Processing

## Languages

German (Mother Tongue)  
English (fluent)  
French (Delf A2)

## Interests

- Photography, Travel
- Jogging, mountain biking, hiking
- Model making
- Cooking

## Training

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- Exp. 2024** Doctor in Physics, "Interface Effects in Antiferromagnetic-Ferromagnetic Hybrid Systems",  
Prof. Dr. Sinova, JGU Mainz
- Aug. 2021** Master of Science Physics, "Interface Effects in Chiral Magnetic Structures in Antiferromagnetic-Ferromagnetic Hybrid Systems", Thesis: A, GPA: A-  
Prof. Dr. Everschor-Sitte, JGU Mainz
- Feb. 2019** Bachelor of Science Physics, "Time Transfer for the Mu3e Experiment", Thesis: A, GPA: B+  
Prof. Dr. Berger, JGU Mainz
- Mar. 2016** High School Diploma, GPA: A-, Theresianum Mainz

## Presentations

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- April 2024** Dynamics in Magnetic Systems, Ostrov, Czech Republic
- Mar. 2024** Spring Meetings of the German Physical Society Berlin 2024, Dresden 2023, Regensburg 2022
- Sept. 2023** European School on Magnetism, Madrid, Spain
- Jul. 2023** Project B15, SFB/TRR 173 Spin+X Evaluation by the DFG
- Jan. 2023** 776th WE-Heraeus Seminar, Bad Honnef
- Oct. 2021** Joint School on Spin Physics 2021, Apolda, Member of the Organizing Committee, Moderation of the Conference and Scientific Presentation

## Social affairs

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- Sept. 2021** Elected Student Spokesperson of Supply Chain V, SFT/TRR 173 Spin+X
- Sept. 2021** Project JE! TZT, Youth Group of the Catholic Church Mainz
- June 2021** Youth leader, St. Birgid, catholic church Wiesbaden Bierstadt
- May 2020** Member of the American Physical Society
- Sept. 2016** Member of the German Physical Society
- Dec. 2015** Youth leader, St. Bernard, catholic church Mainz Bretzenheim
- Dec. 2013** Social internship at St. Josefs Hospital Wiesbaden