

# Tobias Marcel WAGNER



## PERSONAL DATA

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PLACE AND DATE OF BIRTH: Wiesbaden | June 9<sup>th</sup> 1997  
EMAIL: [twagner@students.uni-mainz.de](mailto:twagner@students.uni-mainz.de)

## EDUCATION

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| AUG 2021 | Master of Science in PHYSICS, Johannes Gutenberg - University, Mainz<br>Thesis: "Interface Effects in Chiral Magnetic Structures and Antiferromagnetic-Ferromagnetic Heterosystems"  <br>Advisor: Prof. Dr. EVERSCHOR-SITTE and Prof. Dr. GOMONAY<br>Analytical analysis and numerical simulation of magnetic heterosystems for spintronics<br>THESIS: 1.0, GPA: 1.3 |
| FEB 2019 | Bachelor of Science in PHYSICS, Johannes Gutenberg - University, Mainz<br>Thesis: "Clock Transmission for the Mu3e Experiment"   Advisor: Prof. Dr. BERGER<br>Design, development and testing of a multichannel, any frequency, any output, optical to electric clock transmission PCB<br>THESIS: 1.0, GPA: 1.7  |
| MAR 2016 | Abitur, Theresianum Gymnasium, Mainz<br>German highschool graduation exam and university entrance certificate   Private high school of the roman catholic diocese Mainz<br>GPA: 1.3, Honors: Physics, Mathematics, English   |

## RESEARCH EXPERIENCE

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APR 2020 - AUG 2021	Research assistant in the group of Dr. EVERSCHOR-SITTE TWIST at the Institute of Physics at the Johannes Gutenberg - University, Mainz Analytic analysis of spin current induced domain wall motion in antiferromagnets and magnetoelastic effects of thin antiferromagnetic layers on ferromagnetic substrates in hybrid systems together with Prof. Dr. GOMONAY
OCT 2019 - APR 2020	Research assistant in the group of Prof. Dr. DENIG at the Institute of Nuclear Physics at the Johannes Gutenberg - University, Mainz, Simulation of muonic field interactions for the BESIII experiment, Efficiency studies for Bhabha scattering at BESIII
APR 2018 - SEPT 2018	Research assistant in the group of Prof. Dr. BERGER at the Institute of Nuclear Physics Johannes Gutenberg - University, Mainz, Electronics development for the Mu3e experiment
OCT 2016 - MAR 2018	Operator of the Mainz Microtron Accelerator Operation of the 1.5 GeV microtron cascade during night- and weekend shifts
MAR 2015 - MAR 2016	“The physical principles of X-ray and NMR in medical applications”, Voluntary special learning and research high school term paper in physics In cooperation with Dr. BÜMLER, Institute of Physics at the Johannes Gutenberg - University, Mainz, Subsequent early study as high school student at the Johannes Gutenberg - University, Mainz (three semesters)

## RESEARCH INTERESTS

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Condensed Matter Theory  
Antiferromagnetic Spintronics  
AFM-FM Hybrid Systems  
Topological Excitations and Skyrmions  
Machine Learning

## TEACHING EXPERIENCE

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APR 2021	Lecture assistant for Electrodynamics
OCT 2020	Lecture assistant and tutor for Classical Mechanics
SEPT 2020	Supervision of Master Project “Simulation of Striped Magnetic Domains, Dzyaloshinskii-Moriya Interaction and Curie Temperature using VAMPIRE”
JUL 2019	Tutor for Mathematical methods for physics
MAR 2018	Tutor for Signal Analysis

## CONFERENCES

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OCT 2021	Member of the scientific organisation committee and presentation of scientific talk: “Lockdown: Pinning and Hysteresis Effects in Antiferromagnetic-Ferromagnetic Heterosystems”, Joint School on Spin Physics 2021 in Apolda Spin+X SFB/TRR 173 and Ultrafast Spin Dynamics CRC/TRR 227, Johannes Gutenberg - University, Mainz
SEPT 2021	Poster presentation at the Spin+X Retreat 2021 in Bad Dürkheim Spin+X SFB/TRR 173, Johannes Gutenberg - University, Mainz

## CERTIFICATES

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SEPT 2021	Teambuilding workshop Spin+X SFB/TRR 173, Johannes Gutenberg - University, Mainz
JUN 2021	Mental Health in everyday scientist life, online-workshop Spin+X SFB/TRR 173, Johannes Gutenberg - University, Mainz
NOV 2020	Python advanced, online-workshop Spin+X SFB/TRR 173, Johannes Gutenberg - University, Mainz
SEPT 2020	Introduction to Intercultural Communication, online-workshop Spin+X SFB/TRR 173, Johannes Gutenberg - University, Mainz
FEB 2018	Third place in the newcomer ranking at the 15. Carnival Dancing Tournament of the Johannes Gutenberg - University, Mainz
MAR 2016	High school graduation prize in physics from the German Physical Society (DPG)
JUL 2015	Participation at the mathematical modelling workshop for students and teachers. Topic: Bioacoustics. Organizer: Dr. Martin Bracke, TU Kaiserslautern
JUN 2013	Diplôme D'Études En Langue Française DELF A2, French Language certificate
MAR 2013	Rheinland-Palatinate mathematics tournament round 3
JUN 2012	Rheinland-Palatinate mathematics tournament round 2
JAN 2011	Third prize Rheinland-Palatinate mathematics tournament round 1

## LANGUAGES

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GERMAN:	Mothertongue
ENGLISH:	Fluent
FRENCH:	Basic Knowledge
LATIN:	Advanced Latinum

## COMPUTER SKILLS

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Languages	Python (5y), Java (4y), Wolfram Mathematica (5y), $\text{\LaTeX}$ (7y), C++ (1y), Fortran (1y)
Electronics	PCB Design, Signal Analysis
Operating Systems	LINUX (open Suse, Ubuntu, Scientific Linux, Fedora), Mac OS, MS Windows

## SOCIAL ACTIVITIES

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SEPT 2021	Spin+X SFB/TRR 173 Supply Chain V Student Speaker (elected)
SEPT 2021	Project JE!Tzt, Youth-church organization group, roman catholic diocese Mainz
JUN 2021	Youth-leading group, roman catholic parish St. Birgid, Wiesbaden-Bierstadt
DEC 2015	Youth-leading group, roman catholic parish St. Bernard, Mainz-Bretzenheim
DEC 2013	Internship at St. Josefs-Hospital Wiesbaden, Orthopedic ward

## LEISURE ACTIVITIES

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Sports: Mountainbiking, Dancing, Fitness Training, Jogging, Cycling, Hiking, Canoeing,  
Outdoor Climbing

Piano Playing

Photography

Travelling

Modelbuilding

Tobias Wagner

Mainz, 21<sup>st</sup> September, 2021