



PHYSICIST

PHILIPP RITZINGER



GET IN CONTACT

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EDUCATION HISTORY

Physics Master
Technische Universität Dresden
2017 – 2020
M.Sc., Final grade: 1.3

Physics Bachelor
Technische Universität Dresden
2013 – 2017
B.Sc., Final grade: 2.3

Gymnasium Dresden-Plauen
2005 – 2013
Abitur, Final grade: 1.9

80. Grundschule Dresden
2001 – 2005

WORK EXPERIENCE

Science (WHK, 2018)

- Experimental setup design using SolidWorks
- Troubleshooting and extension of a LabView script used in experimental setup

Education

- 2016 Maths Tutor for pupil
- 2019 WHK Tutor at "physikalisches Grundpraktikum"

Event branch

- 2015 – Service staff at various gastronomic events
- 2016, 2019 Technical staff at "Physik am Samstag"
- 2017 Technical staff at DPG spring meeting

RESEARCH EXPERIENCE

PHD POSITION

Institute of Physics of the Czech Academy of Sciences (FZU)

- Key words: Solid state theory, Magnetism, Transport modeling, Tight-binding model, Anisotropic Magnetoresistance, Antiferromagnets
- Supervisor: Karel Vyborny
- Since January 2021

RESEARCH EXCHANGE

Università degli studi di Salerno (UNISA)
Consiglio Nazionale delle Ricerche – SuPerconducting and other INnovative materials and devices institut (CNR – SPIN)

- Key words: Solid state theory, Magnetism, Transport modeling, Tight-binding model, Oxide interfaces
- Supervisor: Mario Cuoco
- February – July 2020

MASTER THESIS

Technische Universität Dresden (TUD)
Institut für Festkörper- und Materialphysik (IFMP)

- Topic: „Magneto-thermo-galvanic Measurements in Magnetic Thin-films“
- Key words: Data evaluation, Spintronic, Magnetotransport, Anisotropic Magnetoresistance, Anisotropic Magnetothermopower, Co₂MnGa, Magnetic thin-films
- Supervisor: Prof. Sebastian T. B. Gönnerwein, Dr. Helena Reichlova
- January 2019 – January 2020

BACHELOR THESIS

Technische Universität Dresden (TUD)
Institut für Angewandte Physik (IAP)

- Topic: "Untersuchungen zum Hc₁-Phasenübergang in Cu₂OSeO₃"
- Key words: Data evaluation, Solid state magnetism, Magnetic force microscopy, Kelvin-probe force microscopy, Cu₂OSeO₃, Hc₁ phase transition, Magnetic texture, Skyrmion host material
- Supervisor: Dr. Peter Milde
- April – August 2017

LANGUAGE SKILLS

- German: Mother tongue
- English: Fluent (C1), including experience in academic language
- Italian: Conversational
- Spanish: Beginner

COMPUTER SKILLS

Advanced:

- Python: imperative programming and basics of object oriented programming; libraries: numpy/scipy, pyplot, lmfit
- Latex

Basic skills:

- 3D CAD [SolidWorks]
- LabView
- SMP data visualization [Gwyddion]
- Photo editing [Photoshop, Camera Raw]

REFERENCES

Dr. Karel Vyborny

- [PhD supervisor]
- postdoc in solid state physics at FZU Prague
- mail: vybornyk@fzu.cz

Prof. Sebastian T. B. Gönnerwein

- [supervisor master thesis]
- professor of solid state physics at University of Konstanz
- mail: sebastian.goennerwein@uni-konstanz.de

PROFESSIONAL SKILLS

MAGNETOTRANSPORT

- Simulation of band structure, density of states, Fermi surface and transport coefficients based on tight-binding model using Python
- Data Evaluation based on phenomenological model of resistivity and Seebeck coefficient using Python
- AMR and AMTP measurements in LHe-cooled cryostat with vectormagnets

OTHERS

- Tutoring experience
- Service and technical support of events
- Adaptability towards new software, troubleshooting

SOFT SKILLS

- Time management and prioritization
- Creativity
- Teamwork and collaboration
- Ability to work under pressure
- Problem solving
- Analytical thinking

PUBLICATIONS

[1] Park, G.-H. et al., Thickness dependence of the anomalous Nernst effect, Physical Review B 101, 060406 (2020)

[2] Milde, P. et al., Field-induced reorientation of helimagnetic order in Cu₂OSeO₃ probed by magnetic force microscopy, Physical Review B 102, 024426 (2020)

[3] Ritzinger, P. et al., Anisotropic magneto-thermal transport in Co₂MnGa thin films, manuscript submitted to Physical Review B

[4] Ritzinger, P. & Wagenknecht, D. et al., manuscript in preparation

[5] Reichlova, H. et al., manuscript in preparation