



Scientific Career

- ▶ 09.2026 - today
Associate Professor
University of Rijeka, Croatia
Faculty of Physics
- ▶ 01.2021 - 08.2026
Postdoc
University of Bremen, Germany
Center of applied space technology and microgravity (ZARM)
- ▶ 09.2024-11.2024 / 03.2025 - 04.2025
Visiting Professor
Transilvanian University of Brasov, Romania
Faculty of Mathematics and Computer Science
- ▶ 01.2017 - 12.2020
Postdoc
University of Tartu, Estonia
Laboratory for theoretical Physics
- ▶ 07.2014 - 12.2016
Postdoc
University of Hannover, Germany
Institute for theoretical physics
- ▶ 03.2014 - 06.2014
Postdoc - Riemann Fellow
University of Hannover, Germany
Riemann Center for Geometry and Physics



Main Interests

- ▶ **Physics**
 - General relativity, Modified gravity, Gravity theories and observations
 - Gauge field theories, Classical and quantum premetric electrodynamics
 - Quantum gravity phenomenology, Deviations from local Lorentz invariance
- ▶ **Mathematics**
 - Geometry of spacetime, Geometry of Manifolds
 - Finsler and Hamilton geometry, Modified dispersion relations
 - Metric affine geometry, Teleparallel geometry, Geometry with non-metricity
 - Geometry of fibre bundles, Differential geometry



Achievements

▶ Research		▶ Grants	
Publications	89	Personal funding	465.250 €
Talks	> 120	Conference funding	108.000 €
Conferences and schools organised	20		
▶ Teaching			
Lectures/Exercise classes	9/7		
Supervision Ph.D./M.Sc/B.Sc	6/8/3		



Education

- ▶ 07.2010 - 11.2013
Ph.D. in theoretical Physics
University of Hamburg, Germany
II. Institute for theoretical physics
Grade: Magna cum laude (1.0)
Thesis: "The Finsler spacetime framework: backgrounds for physics beyond metric geometry".
Supervisors: Prof. Dr. K. Fredenhagen, Dr. M. Wohlfarth
- ▶ 09.2004 - 07.2010
Diploma (M. Sc) in physics
University of Hamburg, Germany
Grade: 1.0, with honours
Thesis: "From the Einstein—Hilbert action to an action principle for Finsler gravity"
Supervisors: Dr. M. Wohlfarth
- ▶ 07.2003
Highschool degree - Abitur
Gymnasium Rahlstedt, Hamburg, Germany
Grade: 1.4



Proficiencies

Author, Translator and Editor

- Publication of 89 scientific articles as author,
Detailed publication list:
https://arxiv.org/a/pfeifer_c_1.html,
<https://orcid.org/0000-0002-1712-6860>
- Organiser and Editor for SpringerNature (2023)
“Modified and Quantum Gravity - From Theory to Experimental Searches on All Scales”
- Translation German to English for DeGruyter (2017)
“Minkowski Space - The Spacetime of the Special Relativity Theory” von Joachim Schröter
- Special Issue Editor for Classical and Quantum Gravity (2023)
“Quantum Gravity Phenomenology in the Multi-Messenger Era: Challenges and Perspectives”
- Special Issue Editor for Universe (2021)
“Beyond Riemannian Geometry in Classical and Quantum Gravity”
- Special Issue Editor for IJGMMP (2021, 2018)
“Special Issue on TeleGrav 2020”, “Special Issue on GeomGrav 2017”

Speaker and Presenter (Selection)

- DPG Spring Meeting Erlangen, Germany (2026)
“Observables from quantum gravity phenomenology”
- Nijmegen Astrophysics Colloquium, Nijmegen, Netherlands (2024)
“Observables from quantum gravity phenomenology”
- Geometric foundations of gravity, Tartu, Estonia (2023)
“A cosmological unicorn solution to Finsler gravity”
- Workshop on astroparticles and gravity, Cairo, Egypt (2022)
“Black holes in teleparallel gravity”
- 4th ICUSS Summer School and Workshop on the SME, online (2021)
“Finsler geometry in Physics”
- 1st Dutch Mathematical Relativity Day, Neijmegen, Netherlands (2020)
“The gravitating kinetic gas - natural sources for a Finsler theory of gravity”
- Models of Gravity Autumn Workshop, Oldenburg, Germany (2019)
“Teleparallel Gravity: Formalism and Predictions”
- 15th Marcel Grossmann Meeting, Rome, Italy (2018)
“Observers' Measurements of Time and Length in Premetric Electrodynamics”
“Observables from Modified Dispersion Relations on Curved Spacetimes: Circular Orbits, Redshift and Lateshift”
- Conceptual and Technical Challenges for Quantum Gravity, Rome (2015)
“Hamilton Geometry - Phase space geometry from modified dispersion relations”

Grants and awards

- 6.000€ Visiting Professor Fellowship of the Transilvanian University of Brasov
- 36.000€ Bad Honnef Physics School - Searching quantum gravity in the sky, Heraeus foundation (2025)
- 205.600€ Personal research funding, German research foundation - DFG (2023)
- 36.000€ Heraeus-Seminar funding, Heraeus foundation (2023)
- 36.000€ Heraeus-Seminar funding, Heraeus foundation (2021)
- 187.400€ Personal research funding, German research foundation - DFG (2021)
- 60.250€ Start-Up-funding, Estonian science board - ETAG (2020)
- 6.000€ Riemann-Fellowship, Riemann Center University Hannover (2014)

► **Supervisor/
Committee
member**

- Ph.D advisory board member, University of Brasov (since 2024), L. Csillag
“Finslerian geometric models of gravity”
- Ph.D advisory board member, University of Brasov (since 2024), C. Bucataru
“Hamiltonian geometry with applications to extended gravity theories”
- Ph.D advisory board member, University of Brasov (since 2024), A.-M. Boldenau
“Conformal symmetries and isometries of Finsler spacetimes”
- Ph.D. defense jury, University of Eindhoven (defended 2024), S. Heefer
“Finsler Geometry, Spacetime & Gravity - From Metrizability of Berwald Spaces to Exact Vacuum Solutions in Finsler Gravity”
- Ph.D. defense jury, University of Naples (defended 2024), G. Fabiano
“Spacetime noncommutativity and cold atoms”
- Ph.D. defense jury, University of Mons (defended 2022), L. Ducobu
“Compact objects in modified theories of gravity”
- Master thesis, University of Bremen (since 2025), T. A. Raviola
“The Bondi-Sachs formalism and the BMS group in modified gravity”
- Master thesis, University of Bremen (since 2025), J. V. Munera
“Testing modified gravity in the ultra-relativistic regime - the gravitational field of ultra-relativistic particles”
- Master thesis, University of Bremen (since 2025), G. J. Dy
“Light propagation on Loop Quantum Gravity quantum spacetimes”
- Master thesis, University of Hannover (defended 2025), L. Zybur
“Local symmetries and Observer Transformation in Finsler Geometry”
- Master thesis, University of Bremen (defended 2025), Z. K. Juthy
“Geodesic equations from modified dispersion relations”
- Master thesis, University of Hannover (defended 2022), V. Kharchev
“Kerr-Schild tetrads in 1-parameter new general relativity”
- Master thesis, University of Tartu (defended 2021), H. Asukülla
“Quasinormal modes of Schwarzschild black holes in 1-parameter new general relativity”
- Master thesis, University of Bremen (defended 2017), C. Zimmermann
“Finsler Modifikationen des relativistischen Wasserstoffatoms”
- Bachelor thesis, University of Bremen (defended 2025), C. Tege
“Relativistic symmetries in Hamilton Mechanics - Special Relativity and Quantum Deformations”
- Bachelor thesis, University of Bremen (defended 2024), T. A. Raviola
“A survey of gravitational waves, the Bondi-Sachs formalism and the gravitational memory effect in general relativity and beyond”
- Bachelor thesis, University of Tartu (defended 2020), D. Läänemets
“Observational effects from modified dispersion relations in spherical symmetry”

Dr. CHRISTIAN PFEIFER

- ▶ **Lecturer and Tutor (Selection)**
 - Introduction to aspects of Special and General Relativity (2025)
University of Bremen
 - Relativistic quantum mechanics (2024)
University of Bremen
 - Advanced general relativity (2023)
University of Bremen
 - General relativity (2025, 2021, 2016, 2015, 2014, 2011-2009)
University of Hamburg, University of Bremen
 - Geometric methods in classical and quantum physics (2021)
University of Bremen
 - Electrodynamics (2019)
University of Tartu
 - Modified Gravity (2018, 2017)
University of Tartu
- ▶ **Networker**
 - Founding, management committee member and working group leader of the COST Action CA23130 “Bridging high and low energies in search of quantum gravity”- BridgeQG
 - Member of COST Action CA23115 “Relativistic Quantum Information” - RQI
 - Member of the International Society for Quantum Gravity - ISQG
 - Member of COST Action CA21136 “Addressing observational tensions in cosmology with systematics and fundamental physics” - CosmoVerse
 - Founding, management committee member and working group leader of the COST Action CA18108 “Quantum gravity phenomenology in the multimessenger approach”- QGMM
 - Member of COST Action CA15117 “Cosmology and astrophysics network for theoretical advances and training actions” - Cantata
 - Member of the Research Training Group “Models of gravity” - MoG
- ▶ **Conference and School Organiser**
 - Heraeus-Seminar in Bad Honnef (2027, 70 participants expected)
 - BridgeQG annual conference in Paris (2026-2025)
 - Searching for Quantum Gravity in the Sky, Bad Honnef Physics School (2025)
 - QGMM annual conferences and schools in Corfu, Belgrad, Naples, Pałac Wojanów, Rijeka (2023-2021, each 55 participants)
 - 781. Heraeus-Seminar in Bad Honnef (2023, 70 participants)
 - Geometric Foundations of Gravity in Tartu (2026-2017, each 80 participants)
 - 740. Heraeus-Seminar in Bad Honnef (2021, 70 participants)
- ▶ **Outreach**
 - Yearly Bremen University summer academy for school pupils (2022-2025)
“Through the world with Einstein/Mit Einstein durch die Welt” ([Pupils Video Presentation \(in German\)](#))
 - Public evening talk, “Gravity: The Final Frontier? The search for quantum gravity on largest and smallest scales”
Metric-Affine frameworks for Gravity in Tartu (2024)
 - Das goldene Plietsch
Innovative ideas for research and outreach competition, University of Bremen (2021)



Further Skills

► Personal Languages

Organisation ●●●●●●●●●●
Team Player ●●●●●●●●●●
Communication ●●●●●●●●●●
Learning ●●●●●●●●●○
Focus ●●●●●●●●○○

German ●●●●●●●●●●
English ●●●●●●●●●○
French ●●○○○○○○○○
Estonian ●○○○○○○○○○

► Software

MS Office ●●●●●●●●●●
LaTeX ●●●●●●●●●●
Mathematica ●●●●●●●●○○