

DFG-Heinz Maier-Leibnitz-Prize Online Conference 2024

Speaker information

Dr. Tobias Meng, Heinz Maier-Leibnitz-Prizewinner 2022, Group Leader, Emmy Noether Junior Research Group Quantum Design, Technische Universität Dresden



Tobias Meng works on topological phenomena in quantum materials – a topic that is currently one of the most important areas of research in solid state physics. He has written groundbreaking papers in this field; for example including his pioneering publications on Weyl superconductors or experimental signatures of the mixed axial-gravitational anomaly. To understand the complex behavior of quantum materials, Dr. Meng takes an exceptionally broad approach, both thematically and methodologically. His research interests range from superconductivity and strongly correlated systems to transport phenomena and quantum computing – using the entire spectrum from modelling nanoscopic systems to simulating three-dimensional bulk materials.

- [DFG, German Research Foundation - Dr. Tobias Meng - Heinz Maier-Leibnitz-Prizewinner 2022](#)
- [Dr. Tobias Meng — Chair of Theoretical Solid State Physics — TU Dresden \(tu-dresden.de\)](#)

Dr. Haruna Katayama, Assistant Professor, Graduate School of Advanced Science and Engineering, Hiroshima University



Haruna Katayama's research theme is to provide an experimental scheme for verifying the existence of Hawking radiation, which has peculiar quantum correlations emitted from black holes. She clarified the observability of Hawking radiation, which is extremely difficult to observe in an actual black hole, by utilizing an analogue black hole created in an electric circuit. When applied to quantum information science, her work is expected to contribute to the realization of next-generation information processing and communications. In 2023 she was selected as one of Asia's foremost researchers by Asian Scientist Magazine as part of the magazine's annual "Asian Scientist 100" list. Furthermore, Katayama was one of the recipients of the 2022 L'Oréal-UNESCO For Women in Science, Japan Fellowship Award.

- [HARUNA KATAYAMA \(Graduate School of Advanced Science and Engineering\) \(hiroshima-u.ac.jp\)](#)
- [Q&A with Assistant Professor Haruna Katayama, Graduate School of Advanced Science and Engineering | Hiroshima University \(hiroshima-u.ac.jp\)](#)