

Mini-workshop: Superconductivity and correlations in reduced dimensions (realized with the IMPULZ project IM-2021-26 Superspin)

:Time table:

| | Monday 03.10. | Tuesday 04.10. | Wednesday 05.10. |
|---------------|---|--|----------------------------------|
| 9:30 - 10:00 | registration/adminstrative duties | | |
| 09:50 - 10:40 | Michael Barth | Mayra Alejandra de Jesús Peralta Arcia | Stefan Hartl & Benedikt Kopyciok |
| 10:40 - 11:00 | Coffee | Coffee | Coffee |
| 11:00 - 11:50 | Tomáš Samuely | Paulo Eduardo Faria Junior | Martin Moško |
| 11:50 - 12:40 | Andreas Costa | Benedikt Scharf | Djeylan Aktas |
| 12:40 - 14:00 | Lunch/Coffee | | |
| 14:00 - 14:50 | František Herman | Yaroslav Zhumagulov | Andrej Gendiar |
| 14:50 - 15:40 | Pavol Neilinger | Viera Skákalová | Ján Brndiar |
| | networking/discussions/common/individual activities | | |
| 19:00 | Dinner in Flagship | Dinner somewhere in the city | Farewell |

Chair: Denis

Chair: Fero

Chair: Tomáš

Chair: Benni

Chair: Paulo

Chair: Paľo

:Speakers and talks' titles:

| | |
|--|---|
| Michael Barth (Uni Regensburg, DE) | Introduction to tight-binding simulations with the Python package Kwant |
| Tomáš Samuely (Slovak Academy of Sciences, SK) | Ising superconductivity in 3D compounds |
| Andreas Costa (Uni Regensburg, DE) | Spin-orbit coupling assisted transport phenomena in superconducting magnetic tunnel junctions |
| František Herman (Comenius University, SK) | The advanced approach of the superconducting gap function extraction from tunneling experiments |
| Pavol Neilinger (Comenius University, SK) | Superconducting resonant traveling wave parametric amplifiers |
| Mayra Alejandra de Jesús Peralta Arcia (TU Dresden, DE) | Proximity effects in graphene heterostructures |
| Paulo Eduardo Faria Junior (Uni Regensburg, DE) | g-factor physics in solids |
| Benedikt Scharf (Duagon GmbH, DE) | Topological Superconductivity in Phase-Controlled Josephson Junctions |
| Yaroslav Zhumagulov (Uni Regensburg, DE) | Robust polaritons in magnetic monolayers of CrI ₃ |
| Viera Skákalová (Universität Wien, AT) | Synthesis and exotic properties of 2D materials embedded in Graphene |
| Stefan Hartl & Benedikt Kopyciok (Uni Regensburg, DE) | Flux quantization effects in superconducting antidot lattices |

| | |
|--|--|
| Martin Moško (Slovak Academy of Sciences, SK) | Altshuler-Aronov effect in weakly disordered metals with weak electron-electron interaction: Beyond the low energy limit |
| Djeylan Aktas (Slovak Academy of Sciences, SK) | Fully meshed quantum networks |
| Andrej Gendiar (Slovak Academy of Sciences, SK) | Introduction to Tensor Networks: Theory and Applications |
| Ján Brndiar (Slovak Academy of Sciences, SK) | Polarons (and excitons) in polar crystal: Rutile case study |