

# Brazilian - German Quantum Symposium

**Thursday, 19<sup>th</sup> of May 2022**

## Address

Max-Planck-Institut für Astrophysik  
Karl-Schwarzschild-Str. 1  
85748 Garching, Germany

All guests are subject to the 3G rule and need to prove their compliance on entering the Max Planck Institute for Astrophysics (MPA) building.

Time	Agenda
<b>08:30 - 08:50</b>	<b>Registration</b>
<b>09:00</b>	<b>Welcome</b> Dr. Tatjana Wilk (MCQST / MQV) and Pedro Ivo Ferraz da Silva (Embassy of Brazil in Germany)
<b>Quantum Computing and Simulation</b>	
09:10 - 09:30	Prof. Dr. Stefan Filipp, Technische Universität München "Quantum Computing - Hardware and Applications" 15 min presentation + 5 min discussion
09:30 - 09:50	MSc PhDc Eng. João Marcelo Silva Souza, SENAI-CIMATEC/LAQCC "Quantum Computing at SENAI CIMATEC: Challenges and Perspectives for Industry Applications" 15 min presentation + 5 min discussion
09:50 - 10:10	Dr. Timon Hilker, Max Planck Institute of Quantum Optics "Quantum gas microscopy of doped antiferromagnets" 15 min presentation + 5 min discussion
<b>Quantum Communication</b>	
10:10 - 10:30	Prof. Dr. Rafael Chaves, Federal University of Rio Grande do Norte: "Quantum networks, communication and cryptography" 15 min presentation + 5 min discussion
10:30 - 10:50	Dr. Stephan Dürr, Max Planck Institute of Quantum Optics: "Optical qubits for quantum networks and quantum gates" 15 min presentation + 5 min discussion
10:50 - 11:20	<b>Break</b>

<b>Quantum Algorithms</b>	
11: 20 - 11: 40	Prof. Dr. Franklin de Lima Marquezino, Federal University of Rio de Janeiro "Quantum walks and algorithms: quantum walks, graph theory, search problems, optimization problems" 15 min presentation + 5 min discussion
11:40 - 12:00	Prof. Dr. Johannes Knolle, Technische Universität München "Simulating quantum dynamics on quantum computers" 15 min presentation + 5 min discussion
12:00 - 12:20	Prof. Celso Jorge Villas-Bôas, Federal University of São Carlos "NtropiQ initiative; QuinTec - São Paulo initiative; Quantum Algorithms; Optimization Algorithms" 15 min presentation + 5 min discussion
12:40 - 13:00	Maximilian Balthasar Mansky, Quantum Applications and Research Laboratory (QAR-Lab) "Optimization and Quantum Algorithm" 15 min presentation + 5 min discussion
<b>13:00</b>	<b>Lunch</b>
14:00	Academic Exchange between the participants and group Photo
15:00	<u>Lab tour at MPQ:</u> Cavity Experiment (Pau Farrera) Single Atoms Experiment (Johannes Zeiher)
16:45	<u>Lab tour at WMI</u>
<b>18:00</b>	<b>End of the visit</b>