

Agenda Site Visit MQV Q-DESSI

Thursday May 4th, LRZ, Meeting Room 1

8:45 Arrival / Coffee / Mingle

9:00 Welcome to LRZ and Introduction of Participants

Laura Schulz

Part 1: The high-level picture: strategy and context

9:15 K5 Mission Statement, Overview, Status

Martin Schulz

9:30 Context for consortium: Quantum Accelerated HPC

Martin Schulz

9:45 Strategic Alignments with BMBF and EU efforts

Laura Schulz

10:00 Access, User Management, User Support for MQV

Luigi Iapichino

10:15 Discussions

10:30 Coffee Break & Discussions

Part 2: Elements of the Quantum Workflow

11:00 The HPCQC workflow for experimental and HPC access

Martin Ruefenacht

11:15 The Bavarian Quantum Portal

Hai Ngyuen

11:30 Development of a Multi-Modality Quantum Backend

Nufail Farooqi

11:45 Quantum Virtual Machine and Operating System

Pramod Bhatotia

12:00 Quantum Control Processor for the MQV

Xiaorang Guo

12:15 Discussions

12:30 Lunch

Part 3: The MQV Quantum Compilation and Transpilation Environment

13:15 Technical Exchange Meetings for Requirement Gathering

Robert Wille (Zoom)

13:30 Vision for a Modular Programming Environment

Amr Elsharkawy

13:45 Quantum Circuit Verification

Lukas Burgholzer

14:00 Optimization Techniques for Quantum Circuits

Yannick Stade

14:15 Quantum Algorithms and
Quantum-Classical Embedding Frameworks

Christian Mendl

14:30 Machine Learning Tools for Quantum Architecture Search
and Optimization

Philipp Altmann

14:45 Holo: A C++ Quantum Programming Framework

Karl Furlinger

15:00 Coffee and Discussions

15:15 LRZ Cube and QIC Tours

LRZ QCT Team

16:15 Internal Discussion

MQV Office

16:45 Feedback and Wrapup

MQV Team

Attendees:

Philipp Altmann, LMU (CLP)
Arslan Ansari, TUM (MS)
Pramod Bhatotia, TUM (PB)
Rainer Blatt , MQV Office
Lukas Burgholzer, TUM (CM)
Marco de Pascale, LRZ
Daniel Diefenthaler, LMU (DK)
Amr Elsharkawy, TUM (MS)
Nufail Farooqi, LRZ
Martin Fink, TUM (PB)
Karl Förlinger, LMU (DK)
Manuel Geiger, TUM (CM)
Emmanouil Giortamis, TUM (PB)
Rudolf Gross, MQV Office
Xiaorang Guo, TUM (MS)
Petra Hirsch, LRZ
Luigi Iapichino, LRZ
Ecrüment Kaya, LRZ
Florian Krötz, LMU (DK)
Andrea Lenz , MQV Office
Sascha Mehlhase , MQV Office
Christian Mendl, TUM (CM)
Burak Mete, LRZ
Hai Ngyuen, LRZ
Martina Nibbi, TUM (CM)
Lorena Ossio, MQV Office
Tom Peham, TUM (CM)
Francisco Romão, TUM (PB)
Martin Ruefenacht, LRZ
Martin Schulz, TUM (MS)
Laura Schulz, LRZ
Helmut Seidl, TUM (HS)
Philipp Seitz, TUM (CM)
Tirtha Som , MQV Office
Yannik Stade, TUM (HS)
Leo Sünkel, LMU (CLP)
Nathaniel Tornow, TUM (PB)
Jonas Winkelmann, TUM (MS)