

## Schedule

### January 13, 2025, Monday

| Time 日期       | Name 报告人             | Title 报告题目                                                                                             |
|---------------|----------------------|--------------------------------------------------------------------------------------------------------|
| 7:30-8:30     | Breakfast            |                                                                                                        |
| 9:00 - 9:45   | Yasuyuki Kawahigashi | Modular invariance in conformal field theory                                                           |
| 9:50 - 10:35  | Yue Yang( 杨越 )       | Quantum computing of fluid dynamics via Hamiltonian simulation                                         |
| 10:40 - 11:10 | Tea Break            |                                                                                                        |
| 11:10 - 11:55 | Xiaoyu Dong( 董小玉 )   | Kiteav quantum double                                                                                  |
| 12:00 - 13:30 | Lunch                |                                                                                                        |
| 14:00 - 14:45 | Guoyi Zhu( 朱国毅 )     | Mixed state phase transitions: Ising, Nishimori and self-duality                                       |
| 14:50 - 15:35 | Xin Wang( 王鑫 )       | Reverse unknown quantum processes                                                                      |
| 15:40 - 16:10 | Tea Break            |                                                                                                        |
| 16:10 - 16:55 | Jinguo Liu( 刘金国 )    | Automated Discovery of Branching Rules with Optimal Complexity for the Maximum Independent Set Problem |
| 17:30-19:00   | Dinner               |                                                                                                        |

### January 14, 2025, Tuesday

| Time 日期       | Name 报告人            | Title 报告题目                                                                                                           |
|---------------|---------------------|----------------------------------------------------------------------------------------------------------------------|
| 7:30-8:30     | Breakfast           |                                                                                                                      |
| 9:00 - 9:45   | Robert James Joynt  | Adaptive quantum optimization algorithms                                                                             |
| 9:50 - 10:35  | Qiongyi He( 何琼毅 )   | Testing non-Gaussian entanglement and its applications                                                               |
| 10:40 - 11:10 | Tea Break           |                                                                                                                      |
| 11:10 - 11:55 | Chenfeng Cao( 曹晨风 ) | Barren Plateaus and Local Traps: Solutions via Many-Body Localization and Applications to Phase Transition Detection |
| 12:00 - 13:30 | Lunch               |                                                                                                                      |
| 14:00 - 14:45 | Keren Li( 李可仁 )     | Using quantum gradients to optimize parameterized quantum circuits                                                   |
| 14:50 - 15:35 | Chenjie Wang( 王晨杰 ) | A study of 1D lattice models with exact fusion category symmetry                                                     |
| 15:40 - 16:10 | Tea Break           |                                                                                                                      |
| 16:10 - 16:55 | Jie Wang( 王杰 )      | Noncommutative polynomial optimization and Bell inequalities                                                         |
| 17:30-19:00   | Dinner              |                                                                                                                      |

**January 15, 2025, Wednesday**

| Time 日期         | Name 报告人                | Title 报告题目                                                                                        |
|-----------------|-------------------------|---------------------------------------------------------------------------------------------------|
| 7:30-8:30       | Breakfast               |                                                                                                   |
| 9:00 - 9:45     | Shi Jin( 金石 )           | Dimension liftings for quantum Computation of partial differential equations and related problems |
| 9:50 - 10:35    | Masahito Hayashi( 林正人 ) | Generalized Quantum Stein's Lemma and Second Law of Quantum Resource Theories                     |
| 10:40 - 11:10   | Tea Break               |                                                                                                   |
| 11:10 - 11:55   | Huangjun Zhu( 朱黄俊 )     | Randomized quantum measurements in quantum information processing                                 |
| 12:00 - 13:30   | Lunch                   |                                                                                                   |
| Free discussion |                         |                                                                                                   |
| 17:30-19:00     | Dinner                  |                                                                                                   |

**January 16, 2025, Thursday**

| Time 日期       | Name 报告人                | Title 报告题目                                                                      |
|---------------|-------------------------|---------------------------------------------------------------------------------|
| 7:30-8:30     | Breakfast               |                                                                                 |
| 9:00 - 9:45   | Hsi-Sheng Goan( 管希聖 )   | Quantum algorithms and applications in the noisy intermediate-scale quantum era |
| 9:50 - 10:35  | Kwek Leong Chuan( 郭龙泉 ) | Mathematical Aspect of Boson Sampling                                           |
| 10:40 - 11:10 | Tea Break               |                                                                                 |
| 11:10 - 11:55 | Kun Fang( 方堃 )          | Generalized quantum asymptotic equipartition                                    |
| 12:00 - 13:30 | Lunch                   |                                                                                 |
| 14:00 - 14:45 | Junyu Liu( 刘峻宇 )        | On the boundary of quantum computing advantage                                  |
| 14:50 - 15:35 | Xiaozhen Fu( 付小真 )      | Error Correction in Dynamical Codes                                             |
| 15:40 - 16:10 | Tea Break               |                                                                                 |
| 16:10 - 16:55 | Iman Marvian Mashhad    | From symmetric quantum circuits to quantum Fisher information metrics           |
| 17:30-19:00   | Dinner                  |                                                                                 |

January 17, 2025, Friday

| Time 日期       | Name 报告人           | Title 报告题目                                                                                          |
|---------------|--------------------|-----------------------------------------------------------------------------------------------------|
| 7:30-8:30     | Breakfast          |                                                                                                     |
| 9:00 - 9:45   | Chaoyang Lu( 陆朝阳 ) | From Science-for-QC to QC-for-Science                                                               |
| 9:50 - 10:35  | Peng Ye( 叶鹏 )      | Three-dimensional fracton topological orders with boundary Toeplitz braiding                        |
| 10:40 - 11:10 | Tea Break          |                                                                                                     |
| 11:10 - 11:55 | Chendi Wang( 王晨笛 ) | Leveraging Harmonic Analysis and Discrete Mathematics to Strengthen the Privacy of U.S. Census Data |
| 12:00 - 13:30 | Lunch              |                                                                                                     |
| 14:00 - 14:45 | Shuo Yang( 杨硕 )    | Strong-to-weak spontaneous symmetry breaking meets average symmetry-protected topological order     |
| 14:50 - 15:35 | Yuguo Shao( 邵钰堃 )  | Pauli path integral for simulating noisy variational quantum algorithm                              |
| 15:40 - 16:10 | Tea Break          |                                                                                                     |
| 16:10 - 16:55 |                    |                                                                                                     |
| 17:30-19:00   | Dinner             |                                                                                                     |