TSVP Symposium Aspects of Generalized Symmetries June 16-20, 2025

| | | | | Day 1 (June 16th) | |
|--------------|------|------------------------------|------------------------------------|-------------------------------------------------------------------------------|-----------------------|
| 9:15 | 15 | Welcome Coffee +Registration | | | |
| OPEN | NIN | IG | | | |
| 9:30 | 5 | Jonas Fischer | OIST | Welcome to OIST | |
| 9:35 | 5 | Danny Bulmash | United States Naval Academy | Opening remarks | |
| Morn | ing | g Session - Lattice | e Aspects of Ge | neralized Symmetries | |
| 9:40 | 45 | Sheng-Jie Huang | University of Oxford | Magic state preparation with the aid of non-Abelian topological order | |
| 10:25 | 45 | Hiromi Ebisu | Kyoto University | Foliated field theory and modulated symmetry | Chair: Danny |
| 11:10 | 15 | 1 | | Break (Group Photo) | Bulmash |
| 11:25 | 45 | Sal Pace | міт | Lattice T-duality from non-invertible symmetries in quantum spin chains | |
| 12:10 | 80 | 1 | 3 | Lunch | |
| After | no | on Session - Ope | n Quantum Sys | stems | |
| 13:30 | 45 | Cenke Xu | UCSB | "Symmetry from Anomaly" in Condensed Matter related Models | Chair: |
| 14:15 | 45 | Zhu-Xi Luo | Georgia Institute of Technology | Tensor Network Representation of Intrinsically Mixed-State Topological phases | Abhinav Prem |
| 15:00 | 30 | | | Coffee Break | |
| 15:30 | 45 | Marvin Qi | University of Chicago | Equivalence of Gapless, Gapped, and Mixed SPTs From SymTFT | Chair: |
| | | | | Discussion | Abhinav Prem |
| 18:00 | 5 | Taxi leaves | | | |
| | | i | | Day 2 (June 17th) | |
| 0.45 | | | | Day 2 (June 17th) | |
| 9:15 Morn | ing | r Session - Annlic | ations to Magr | Morning Coffee netism and Materials | |
| | | | The University of | | |
| 9:30 | 45 | Han Yan | Tokyo | Designing Light in an Artificial Universe of QED | _ |
| 10:15 | 45 | Sungbin Lee | KAIST | Exotic quantum phases in quasiperiodic systems | Chair: Myles Scollon |
| 11:00 | 15 | 1 | | Break | |
| 11:15 | 45 | Haruki Watanabe | The University of Tokyo | General Properties of Frustration-Free Quantum Many-Body Systems | |
| 12:00 | | | | Lunch | |
| Poste | er S | ession | | | |
| 13:30 | | | | | |
| 15:00 | 30 | | | Coffee Break | |
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| 18:00 | 5 | Dinner at the atrium o | utside of the semina | r hall | |

| | Day 3 (June 18th) @L4E48 | | | | | |
|-----------|-----------------------------|---------------------------------|----------------------------|-----------------------------------------------------------------------------|----------|--|
| 9:15 | 9:15 Morning Coffee | | | | | |
| Morn | Morning Session - Dualities | | | | | |
| 9:30 | 45 | Luisa Eck | University of Oxford | Dualities between 2+1d fusion surface models from braided fusion categories | Chair: | |
| 10:15 | 45 | Masahito Yamazaki | The University of Tokyo | Dualities and Exact Quantum Many-Body Scars | Sal Pace | |
| 11:00 | 90 | - | | Lunch Break | | |
| Excursion | | | | | | |
| 12:30 | | Bus leaves from OIST Auditorium | | | | |
| 13:30 | | Churaumi Aquarium | | | | |
| 15:30 | | Helios-Shuzo Brewery Tour | | | | |
| 17:30 | | Banquet dinner @ Oriental Hotel | | | | |
| 20:00 | | Bus arrives at OIST Auditorium | | | | |

| | | | | Day 4 (June 19th) | |
|-------------------------------------------------|------|------------------|------------------------------------|---------------------------------------------------------------------------------------------|--------------------|
| 9:15 | 15 | | | Morning Coffee | |
| Morning Session - Unconventional Quantum Phases | | | | | |
| 9:30 | 45 | Pranay Gorantla | University of Chicago | p-string condensation as gauging a 1-form symmetry | |
| 10:15 | 45 | Kansei Inamura | University of Oxford | Generalized gauging on the lattice and gapped phases with non-invertible symmetries in 2+1d | Chair: Masahito |
| 11:00 | 15 | | · | Break | Yamazak |
| 11:15 | 45 | Ryohei Kobayashi | Institute for Advanced Study | Generalized symmetry in quantum codes: Logical gates in Z2 gauge theory | |
| 12:00 | 85 | * | · | Lunch | |
| After | no | on Session - Qua | ntum Dynamic | CS CS | |
| 13:30 | 45 | Pranay Patil | OIST | Anomalously slow equilibration under dipole moment conserving dynamics | Chair: |
| 14:15 | 45 | Chihiro Matsui | The University of Tokyo | Weak ergodicity breaking and embedded integrability | Marvin Q |
| 15:00 | 30 | | · | Coffee Break | |
| Publi | c Ta | alk @L4E48 | | | |
| 15:30 | 60 | Zhu-Xi Luo | Georgia Institute of Technology | Generalized Symmetries in Quantum Matter | |
| | | | | | |
| | | > | outside of the semina | | |

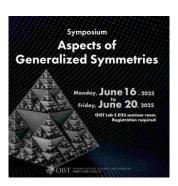
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18:00 5 Taxi leaves

| Day 5 (June 20th) | | | | | |
|---------------------------------------------------------|----|-----------------|----------------------------|-------------------------------------------------------------------|-------------------|
| 9:15 | 15 | | | Morning Coffee | |
| Morning Session - Modulated Symmetries and Other Topics | | | | | |
| 9:30 | 45 | Junghun Han | Sungkyunkwan University | Noninvertible Symmetry in 1D SPT Models with Modulated Symmetries | Chair: Han Yan |
| 10:15 | 45 | Masaki Oshikawa | The University of Tokyo | TBA | |
| Closing | | | | | |
| 11:00 | 5 | Closing remarks | | | |
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Event website (abstracts)



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Poster Presenters

| 1 | Haruki Yagi | The University of Tokyo | On universality classes of typical entanglement under symmetries |
|----|------------------|------------------------------------------------|------------------------------------------------------------------------------------------------------|
| 2 | Zhian Jia | National University of Singapore | Lattice model for non-invertible symmetry-protected topological phase |
| 3 | Stephan Haas | University of Southern California | Interactions and Disorder in Topological Quantum Systems |
| 4 | Takuma Saito | Kyoto University | Classifying formula for 1D abelian multipole SPT |
| 5 | Yoshiki Fukusumi | National center for theoretical sciences | Series of exotic (or new) coupled models and domain walls from extension of conformal field theories |
| 6 | Sumiran Pujari | Indian Institute of Technology Bombay | < <anticommuting>> Z2 quantum spin liquids</anticommuting> |
| 7 | Pochung Chen | National Tsing Hua University | Extracting conformal data via tensor network methods |
| 8 | Nagare Katayama | Kyoto University | 2d Cardy-Rabinovici model with Modified Villain lattice formulation |
| 9 | Jun Maeda | Kyoto University | Twisted Partition Functions as Order Parameters |
| 10 | Tsubasa Oishi | Kyoto University | N-ality symmetry and SPT phases in 1+1d |
| 11 | Shunta Takahashi | Kyoto University | Anyon Condensation in Quantum Gravitational TQFT |
| 12 | Yuki Furukawa | The University of Tokyo | Lattice models with subsystem/weak non-invertible symmetry- protected topological order |
| 13 | Michele Fossati | SISSA | Entanglement asymmetry for non-invertible symmetries |
| 14 | Saswato Sen | OIST | Critical phenomena in hyperbolic lattices |
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