



哈尔滨工业大学数学研究院  
Institute for Advanced Study in Mathematics of HIT

**TOPOLOGICAL QUANTUM GROUPS,  
QUANTUM SYMMETRIES AND  
RELATED TOPICS**

***Conference Handbook***



June 15 – 19, 2026  
Harbin, China

The workshop will bring together researchers from quantum groups, operator algebras, subfactor and planar-algebra theory, and mathematical physics to explore the rich interplay among three complementary directions: (1) the theory of topological quantum groups built on functional-analytic foundations, emphasizing analytic and probabilistic tools, representation theory, and operator-algebraic methods; (2) the study of quantum symmetries originating from subfactor and planar-algebra perspectives, highlighting von Neumann algebraic and tensor-categorical techniques and their connections to mathematical physics; and (3) applications and related topics that bridge these frameworks—such as quantum graphs, non-local games, and quantum information.

By highlighting recent advances and open problems, the event aims to foster deeper interaction among experts and early-career researchers and to spark new ideas and collaborations.

The workshop will invite Professors Zhengwei Liu and Mateusz Wasilewski to each deliver an introductory lecture series on selected topics from the perspectives outlined above. In addition, we plan to include a number of research presentations as well as problem sessions.

## Venue

Room 315, Gewu Building, Harbin Institute of Technology



# Timetable

## Monday, June 15

09:00-09:50	<b>Zhengwei Liu</b> Tsinghua University	Higher Operator Algebras and Quantum Information 1
09:50-10:20	<b>Break</b>	
10:20-11:10	<b>Sergey Neshveyev</b> University of Oslo	Cartan subproduct systems
11:10-11:40	<b>Hank Chen</b> BIMSA	Quantization of higher-homotopy Chern-Simons theory in 4d and derived invariant of 2-ribbons
11:40-14:00	<b>Break</b>	
14:00-14:50	<b>Miho Mukohara</b> Kyushu University	On $C^*$ -discrete inclusions of simple $C^*$ -algebras
14:50-15:20	<b>Biplab Pal</b> Indian Institute of Technology Kanpur	Weak quantum hypergroups from finite index $C^*$ -inclusions
15:20-15:50	<b>Break</b>	
15:50-16:40	<b>Mateusz Wasilewski</b> Institute of Mathematics, Polish Academy of Sciences	Quantum graphs and their symmetries 1

## Tuesday, June 16

09:00-09:50	<b>Zhengwei Liu</b> Tsinghua University	Higher Operator Algebras and Quantum Information 2
09:50-10:20	<b>Break</b>	
10:20-10:50	<b>Zishuo Zhao</b> Tsinghua University	Topological holography for frustration-free Hamiltonians with Reflection Positivity
10:50-11:40	<b>Amaury Freslon</b> University Paris-Saclay	Quantum symmetries of topological Markov chains
11:40-14:00	<b>Break</b>	
14:00-14:50	<b>Mateusz Wasilewski</b> Institute of Mathematics, Polish Academy of Sciences	Quantum graphs and their symmetries 2
14:50-15:40	<b>Jinsong Wu</b> BIMSA	KMS symmetric quantum Markov semigroups
15:40-16:10	<b>Break</b>	
16:10-17:00	<b>Joeri De Ro</b> Institute of Mathematics, Polish Academy of Sciences	Quantum hypergroups arising from ergodic coactions

## Wednesday, June 17

9:00-09:50	<b>Zhengwei Liu</b> Tsinghua University	Higher Operator Algebras and Quantum Information 3
09:50-10:20	<b>Break</b>	
10:20-11:10	<b>Linzhe Huang</b> BIMSA	Equivalence of states and bimodule quantum channels
11:10-12:00	<b>Mateusz Wasilewski</b> Institute of Mathematics, Polish Academy of Sciences	Quantum graphs and their symmetries 3

### Afternoon session: Poster Presentation and Discussions

Ting Lu, Malay Mandal, Futaba Sato, Kai Zeng, Yuxuan Zheng

## Thursday, June 18

09:00-09:50	<b>Sang-Gyun Youn</b> Seoul National University	Twisted Fourier transforms on non-Kac compact quantum groups
09:50-10:20	<b>Break</b>	
10:20-10:50	<b>Yigang Qiu</b> IMJ-PRG	Free Wreath Product of Classical Group
10:50-11:40	<b>Zhian Jia</b> Central South University	Generalized Tube Algebras for 2d Topological Order
11:40-14:00	<b>Break</b>	
14:00-14:50	<b>Lucas Hataishi</b> University of Oxford	Topological Quantum Field Theory from Complex Semi-Simple Quantum Groups
14:50-15:40	<b>Frank Taipe</b> Instituto de Matematica y Ciencias Afines	Diagrammatic quantum group actions
15:40-16:10	<b>Break</b>	
16:10-16:40	<b>Junfeng Li</b> Tsinghua University	Renormalization and Quantum Error Correction
16:40-17:30	<b>Problem Session</b>	

## Friday, June 19

09:00-09:50	<b>Sébastien Palcoux</b> BIMSA	Watatani's theorem for tensor categories
09:50-10:20	<b>Break</b>	
10:20-11:10	<b>Stephen Moore</b> Xi'an Jiaotong-Liverpool University	Representations of the Reflection Equation Algebra
11:10-11:40	<b>Heon Lee</b> Harbin Institute of Technology	Primitive Ideals and Hilbert Space Representations of Quantized Coordinate Algebras of $G_q$
11:40-14:00	<b>Break</b>	
14:00-14:50	<b>Sayan Das</b> East China Normal University	On the generalized Neshveyev-Stormer rigidity question
14:50-15:40	<b>Baptiste Cerclé</b> Sorbonne Université	Toda Conformal Field Theories: between probabilistic and algebraic approaches

**Monday, June 15**

## **Higher Operator Algebras and Quantum Information 1**

*Zhengwei Liu (Tsinghua University)*

09:00-09:50

In this lecture series, we will construct a framework to reveal the profound connections between operator algebras and quantum information in high-dimensional lattice models. We will interpret this unified framework from multiple perspectives, including analysis, algebra, topology, category theory, and information theory etc. Operator algebras and quantum information may be the most fundamental mathematical structures of our universe.

## **Cartan subproduct systems**

*Sergey Neshveyev (University of Oslo)*

10:20-11:10

Given a compact semisimple Lie group  $G$  and a dominant integral weight  $\lambda$ , the highest weight  $G_q$ -modules  $V_{n\lambda}$  form a subproduct system of finite dimensional Hilbert spaces. For the analysis of these systems, and as a substitute for the Jones-Wenzl formulas in the rank one case, we formulate a conjecture on asymptotic behavior of Clebsch-Gordan coefficients and verify it for  $G = SU(n)$  and regular weights. When the conjecture holds, we can identify the corresponding Cuntz-Pimsner algebras with quantized function algebras on homogeneous spaces of  $G$ . Simultaneously we identify certain higher rank analogues of boundaries defined by Vaes and Vergnioux with quantum flag manifolds. (Joint work with Olof Giselsson and Suvrajit Bhattacharjee.)

## **Quantization of higher-homotopy Chern-Simons theory in 4d and derived invariant of 2-ribbons**

*Hank Chen (BIMSA)*

11:10-11:40

2-Chern-Simons theory, or more commonly known as 4d BF-BB theory with gauged shift symmetry, is a natural generalization of Chern-Simons theory to 4-dimensional manifolds. It is part of the bestiary of higher AKSZ/homotopy Maurer-Cartan theories. In this talk, I will present a framework, inspired by the work of Aleskeev-Grosse-Schomerus three decades ago, towards the quantization of 2-Chern-Simons higher holonomies in a sheaf-theoretic framework, based on the so-called "measurable categories" introduced by Crane and Yetter. I will then construct a quantum (derived) invariant of 2-ribbons from the quantum higher algebra (a Hopf category) underlying 2-Chern-Simons theory in the 4-disc. This serves as a higher generalization of the Jones's polynomials, and is an explicit realization of the 2-tangle hypothesis of Baez-Langford.

## On $C^*$ -discrete inclusions of simple $C^*$ -algebras

*Miho Mukohara (Kyushu University)*

14:00-14:50

Discrete subfactors were introduced by Izumi–Longo–Popa, and the structure theory of discrete inclusions and their intermediate lattices has been extensively studied by Tomatsu, Jones, Penneys, and others. Discrete inclusions generalize both finite-index inclusions and crossed product constructions arising from discrete group actions. Recently, Nelson and Hernández Palomares introduced a  $C^*$ -algebraic analogue of discrete inclusions. In this talk, I will discuss the structure of intermediate lattices of  $C^*$ -discrete inclusions arising from actions of compact quantum groups of Kac type or with the central AP. This is joint work with Hernández Palomares.

## Weak quantum hypergroups from finite index $C^*$ -inclusions

*Biplab Pal (Indian Institute of Technology Kanpur)*

14:50-15:20

In this talk, we discuss a new symmetry object, the weak quantum hypergroup, which arises canonically from a finite index inclusion of simple unital  $C^*$ -algebras. For such an inclusion, we construct a canonical completely positive coproduct on the second relative commutant, thereby endowing it with a natural coalgebra structure. Motivated by this construction, we introduce the notion of a weak quantum hypergroup, generalizing the quantum hypergroups of Chapovsky and Vainerman. We show that every finite index inclusion gives rise to a weak quantum hypergroup with a Haar integral. In the irreducible case, this structure satisfies the axioms of a quantum hypergroup, while in the depth 2 setting our framework yields the associated weak Hopf algebra constructed by Nikshych and Vainerman. This is a joint work with K. C. Bakshi and D. Goswami.

## Quantum graphs and their symmetries 1

*Mateusz Wasilewski (Institute of Mathematics, Polish Academy of Sciences)*

15:50-16:40

The three lectures will be devoted to basics of quantum graphs with a particular focus on their (quantum) symmetries. In the first one I will provide some motivation for quantum graphs and introduce basic definitions. Then I will introduce (quantum) symmetry groups of quantum graphs and discuss their behaviour in the generic case – they are almost surely trivial. In the final lecture I will introduce an analogue of the Frucht’s theorem, showing that all finite quantum groups (and more) can be realised as quantum symmetry groups of quantum graphs.

## Tuesday, June 16

### Higher Operator Algebras and Quantum Information 2

*Zhengwei Liu (Tsinghua University)*

09:00-09:50

## **Topological holography for frustration-free Hamiltonians with Reflection Positivity**

*Zishuo Zhao (Tsinghua University)*

10:20-10:50

The study of topological orders has revealed a deep link between quantum spin systems subject to symmetries and a topological order in one higher dimension, known as topological holography/SymTO. In a joint work with Zhengwei Liu (arXiv:2510.20662), we introduce a framework based on reflection positivity for analyzing topologically ordered quantum spin systems and reconstructing their boundary theories. We show that the Osterwalder-Schrader reconstruction, originated from constructive quantum field theory, produces the boundary local net of operator algebras from the local ground states of a frustration-free Hamiltonian. Moreover, the local topological quantum order (LTQO) condition of ground states on a disk follows from the ground state non-degeneracy on the sphere. In particular, this approach does not assume a commuting projector parent Hamiltonian.

## **Quantum symmetries of topological Markov chains**

*Amaury Freslon (University Paris-Saclay)*

10:50-11:40

Subshifts of finite type form an elementary but very rich class of dynamical system. One nice aspect is that they have many different equivalent descriptions : as symbolic dynamics, as topological Markov chains, as groupoids or as so-called Cuntz-Krieger algebras. Based on work of Gerontogiannis, Goffeng and Mesland constructing a natural spectral triple on these Cuntz-Krieger algebras, I will describe the quantum isometry groups of these objects. As a byproduct, we get quantum symmetries on the Cantor spaces, with a sometimes surprising behaviour.

## **Quantum graphs and their symmetries 2**

*Mateusz Wasilewski (Institute of Mathematics, Polish Academy of Sciences)*

14:00-14:50

## **KMS symmetric quantum Markov semigroups**

*Jinsong Wu (BIMSA)*

14:50-15:40

Quantum Markov semigroups provide a powerful mathematical framework for studying open quantum systems. The semigroup satisfying the detailed balance condition has been thoroughly investigated due to the commutativity of its derivation space. In contrast, the derivation space of the KMS-symmetric semigroup is noncommutative, and results on such semigroups remain scarce. In this talk, we will systematically explore the structure of the KMS-symmetric quantum Markov semigroup, and establish its gradient flow equation, generalized logarithmic Sobolev inequalities, and related properties. Numbers of examples shall be discussed.

## Quantum hypergroups arising from ergodic coactions

*Joeri De Ro (Institute of Mathematics, Polish Academy of Sciences)*

16:10-17:00

To every ergodic action of a compact quantum group, we associate an algebraic compact quantum hypergroup in the sense of Delvaux-Van Daele. This algebraic compact quantum hypergroup can be completed to a  $C^*$ -algebraic compact quantum hypergroup in two (generally distinct) ways. We give characterizations of coamenability for these compact quantum hypergroups, making use of the theory of equivariant correspondences.

## Wednesday, June 17

### Higher Operator Algebras and Quantum Information 3

*Zhengwei Liu (Tsinghua University)*

09:00-09:50

### Equivalence of states and bimodule quantum channels

*Linzhe Huang (BIMSA)*

10:20-11:10

We study the action of quantum channels on states on a von Neumann algebra  $\mathcal{M}$  with conserved quantities  $\mathcal{N}$ . For a von Neumann algebra  $\mathcal{M}$  of observables and a subalgebra  $\mathcal{N}$  of conserved quantities, we consider a phase as an equivalence class of normal states on  $\mathcal{M}$  under the action of quantum channels preserving  $\mathcal{N}$ . When  $\mathcal{N} \subset \mathcal{M}$  is an irreducible subfactor of type  $II_1$  with finite Jones index, we find a new phenomenon that the cardinality of states in a phase is finite (and bounded by an index-dependent constant). Next, we give an equivalent description of the equivalent class of a state by relative quasi-entropies using the Petz recovery map. We characterize the symmetry of a state as an intermediate subfactor, generalizing group symmetries. We prove that equivalent states share equivalent symmetries, captured by shifts of biprojections in quantum Fourier analysis. Finally, we define the free energy for a normal state in subfactor symmetries in terms of modular Hamiltonian and prove that the derivative of the free energy at 1 is bounded by the logarithm of Jones index.

### Quantum graphs and their symmetries 3

*Mateusz Wasilewski (Institute of Mathematics, Polish Academy of Sciences)*

11:10-12:00

**Thursday, June 18**

## **Twisted Fourier transforms on non-Kac compact quantum groups**

*Sang-Gyun Youn (Seoul National University)*

09:00-09:50

Abstract harmonic analysis on non-abelian groups has a rich history, including a well-established theory of the Fourier transform. We introduce an analytic family of twisted Fourier transforms on non-Kac compact quantum groups. We derive a sharpened form of the Hausdorff-Young inequality and prove its optimality under a polynomial growth assumption. We further show that this inequality admits an even stronger version for a large class of non-Kac and non-coamenable free orthogonal quantum groups. Finally, we show that the twisted Fourier transform gives rise to a contractive but non-completely bounded representation of the convolution algebra of non-Kac free orthogonal quantum groups.

## **Free Wreath Product of Classical Group**

*Yigang Qiu (IMJ-PRG)*

10:20-10:50

The free wreath product was introduced by Bichon and has since been generalized in several directions. In this talk, I will focus on a class of generalized free wreath products arising from the recent construction of Fima, called free wreath products of classical groups. Based on joint work with Pierre Fima, <On Free Wreath Products of Classical Groups> (arXiv:2512.11477), I will present an explicit combinatorial formula for the Haar state and discuss its operator-algebraic consequences, including fullness of the associated von Neumann algebra in many cases, simplicity and uniqueness of trace for the reduced  $C^*$ -algebra. I will also discuss the representation-theoretic side, based on <Representation Category of Free Wreath Product of Classical Groups> (arXiv:2604.02571v3), where the representation categories are described by concrete rigid tensor categories built from bi-colored noncrossing partitions, leading to a Tannaka–Krein reconstruction of the corresponding compact quantum groups.

## **Generalized Tube Algebras for 2d Topological Order**

*Zhian Jia (Central South University)*

10:50-11:40

Two-dimensional non-chiral topological orders are algebraically characterized by unitary modular tensor categories, which can be viewed as representation categories of the quantum double of a weak Hopf algebra. In this talk, I will discuss how to reconstruct the underlying weak Hopf algebra of a given topological phase within the string-net lattice model framework. Bulk, domain wall, and boundary tube algebras are explicitly shown to be weak Hopf algebras, whose representations correspond to topological excitations in the bulk, on domain walls, and along boundaries, respectively. I will further introduce a generalization of the Drinfeld quantum double to quantum  $N$ -tuple algebras, constructed via the gluing operation of boundary tubes. Finally, I will demonstrate how domain wall and boundary defects can be systematically characterized by generalized tube algebras formulated as comodule algebras. The notions of Drinfeld doubles and  $N$ -tuple algebras are naturally extendable to this generalized setting as well.

## Topological Quantum Field Theory from Complex Semi-Simple Quantum Groups

*Lucas Hataishi (University of Oxford)*

14:00-14:50

A 2-dimensional Topological Quantum Field Theory (TQFT) is a representation of the cobordism category, in which objects are 1-manifolds and morphisms are surfaces having the source and target 1-manifolds as boundary components. In this talk, I will discuss the construction of 2-dimensional TQFT's from the unitary representation theory of complex semi-simple quantum groups, i.e., Drinfeld doubles of compact quantum groups, using a framework known as factorization homology and novel reconstruction theorems a la Tannaka-Krein duality.

## Diagrammatic quantum group actions

*Frank Taïpe (Instituto de Matematica y Ciencias Afines)*

14:50-15:40

This talk presents a framework for constructing ergodic actions of compact quantum groups on operator algebras from subfactor planar algebras. The construction relies on a Tannaka-Krein type reconstruction procedure that realizes planar algebras as diagrammatic models for weak unitary tensor functors on rigid  $C^*$ -tensor categories. The resulting framework reveals connections between subfactor planar algebras, categories of noncrossing partitions, and ergodic actions of compact quantum groups. Joint work with Simeng Wang.

## Renormalization and Quantum Error Correction

*Junfeng Li (Tsinghua University)*

16:10-16:40

In a quantum system, all physical observables generate an operator algebra, while conserved quantities form its subalgebra. Based on subfactor theory and quantum Fourier analysis, we implement the physical renormalization paradigm for conserved quantity systems with finite Jones index. Via the renormalization framework, we systematically extend finite-dimensional quantum error correction theory to the infinite-dimensional setting. This not only generalizes a number of core classical results substantially but also reveals novel emergent phenomena. In particular, we establish a renormalized version of the Knill-Laflamme condition, which has long been pursued by experts in the field. Furthermore, our methodology can be naturally extended to the asymptotic quantum error correction theory.

## Friday, June 19

### Watatani's theorem for tensor categories

*Sébastien Palcoux (BIMSA)*

09:00-09:50

Yasuo Watatani proved that every irreducible finite-index subfactor has a finite lattice of intermediate subfactors. Dave Penneys suggested the following categorical reformulation: every connected unitary Frobenius algebra in a unitary tensor category has a finite lattice of unitary Frobenius

subalgebras. In this talk, we will explain to what extent the tensor and unitary assumptions can be relaxed, based on joint work with Mainak Ghosh. Our approach relies on a generalization of the exchange relations and Landau's theorems to monoidal categories, combined with a formal angle. We will also discuss applications to  $C^*$ -algebra theory, via a strengthened version of the Ino-Watatani theorem, and to Hopf algebra theory. Finally, we will share some speculative directions.

## Representations of the Reflection Equation Algebra

*Stephen Moore (Xi'an Jiaotong-Liverpool University)*

10:20-11:10

The reflection equation algebra (REA) was originally introduced in relation to Cherednik's reflection equation in statistical mechanics. It has since found connections to a number of other areas, such as coideal subalgebras, and factorization homology. In the case of the type A REA, it naturally forms a comodule algebra over the quantum groups  $Oq(U_n)$  and  $Uq(\mathfrak{gl}_n)$ . This means that its representation category forms a module category over the respective quantum group tensor categories. In this talk we will give an overview of the classification of bounded  $*$ -representations of the type A REA. This is based on joint work with Kenny De Commer.

## Primitive Ideals and Hilbert Space Representations of Quantized Coordinate Algebras of Complex Semisimple Lie Groups

*Heon Lee (Harbin Institute of Technology)*

11:10-11:40

The primitive ideals of the coordinate algebra  $\mathcal{O}(G)$  of a complex semisimple Lie group  $G$  are in bijection with the points of  $G$ , via the correspondence assigning to each point of  $G$  the kernel of the associated evaluation homomorphism on  $\mathcal{O}(G)$ . This establishes a direct link between the algebraic structure of  $\mathcal{O}(G)$  and the geometry of  $G$ . In this talk, we investigate the quantum analogue of this classical relationship for the  $q$ -deformation  $G_q$ . Specifically, we establish a sharp dichotomy: primitive ideals in homogeneous Joseph strata arise as kernels of irreducible representations of  $\mathcal{O}(G_q)$  by bounded operators on Hilbert spaces, which provide a quantum analogue of evaluation homomorphisms at points of  $G$ , whereas those in inhomogeneous Joseph strata do not. This clarifies the extent to which the primitive spectrum of  $\mathcal{O}(G_q)$  can be accessed through operator-theoretic methods. We also analyze the semiclassical consequences of this result in light of the fact that the primitive ideals of  $\mathcal{O}(G_q)$  are parametrized by the symplectic leaves of the natural Poisson structure on  $G$ . This talk is based on joint work with Christian Voigt.

## On the generalized Neshveyev-Stormer rigidity question

*Sayan Das (East China Normal University)*

14:00-14:50

The study of group actions on probability measure spaces occupies a central role in modern mathematics. If a group  $G$  acts on a probability measure space  $(X, \mu)$ , one can associate a von Neumann algebra, namely the crossed product von Neumann algebra. This von Neumann algebra naturally contains a copy of the group von Neumann algebra, denoted by  $L(G)$ . A far reaching conjecture of Neshveyev and Stormer predicts that the inclusion of the group von Neumann algebra  $L(G)$  inside the group measure space construction "remembers" the group and the action. In my talk, I shall

show that the conjecture is true for a large class of actions of i.c.c. groups. This talk is based on a joint work with Prof. Ionut Chifan.

## **Toda Conformal Field Theories: between probabilistic and algebraic approaches**

***Baptiste Cercleé (Sorbonne Université)***

14:50-15:40

Toda Conformal Field Theories (CFTs) form a family of two-dimensional Quantum Field Theories that generalize the celebrated Liouville theory. They admit a mathematically rigorous construction using probability theory based on Gaussian Free Fields and their exponential: Gaussian Multiplicative Chaos. From an algebraic perspective, it is assumed in the physics literature that their symmetry algebra is described by a family of Vertex Operator Algebras (VOAs) called W-algebras, and that have been extensively studied both in the physics and mathematics community. In this talk I will explain how these two a priori distinct approaches can actually be conciliated, allowing to turn purely algebraic formal series into unbounded operators acting on an (infinite-dimensional) Hilbert space, showing that probability theory provides a natural bridge between VOA and functional analysis. Based on a series of work with Huang, Huguenin, Rhodes and Vargas.

# Participants

Alireza Akbari	BIMSA
Oleg Aristov	Harbin Institute of Technology
Baptiste Cerclé	Sorbonne Université
Sheng Chen	Harbin Institute of Technology
Hank Chen	BIMSA
Javier Coppola Rodriguez	Universidad de la Republica (Uruguay)
Sayan Das	East China Normal University
Joeri De Ro	Institute of Mathematics, Polish Academy of Sciences
Anar Dosi	Harbin Engineering University
Amaury Freslon	University Paris-Saclay
Indrajit Ghosh	Indian Institute of Technology Kanpur
Sayan Ghosh	Ramakrishna Mission Vidyamandira, Calcutta University, India
Lucas Hataishi	University of Oxford
Linzhe Huang	BIMSA
Zhian Jia	Central South University
Yushu Jia	Harbin Engineering University
Victor Krym	St. Petersburg State University
Heon Lee	Harbin Institute of Technology
Junfeng Li	Tsinghua University
Zhengwei Liu	Tsinghua University
Ting Lu	Harbin Institute of Technology
Xin Ma	Harbin Institute of Technology
Malay Mandal	IISER Bhopal
Najib Mazid Paula	Technion
Stephen Moore	Xi'an Jiaotong-Liverpool University
Miho Mukohara	Kyushu University
Sergey Neshveyev	University of Oslo

Biplab Pal	Indian Institute of Technology Kanpur
Sébastien Palcoux	BIMSA
Sang-Jun Park	Wuhan University
Patrick Poissel	Laboratoire de Mathématiques de Besançon
Yigang Qiu	IMJ-PRG
Futaba Sato	The University of Tokyo
Xu Si	Harbin Institute of Technology
Frank Taipe	Instituto de Matematica y Ciencias Afines
Sheng Tan	Capital Normal University
Yuren Wang	Tsinghua University
Hua Wang	Harbin Institute of Technology
Simeng Wang	Harbin Institute of Technology
Xumin Wang	Harbin Institute of Technology
Mateusz Wasilewski	Institute of Mathematics, Polish Academy of Sciences
Jinsong Wu	BIMSA
Xiao Xiong	Harbin Institute of Technology
Liaosha Xu	Harbin Institute of Technology
Zhendong Xu	Seoul National University
Sheng Yin	Harbin Institute of Technology
Sang-Gyun Youn	Seoul National University
Kai Zeng	Ghent University
Zishuo Zhao	Tsinghua University
Yuxuan Zheng	Nankai University

