

The 1st Quantum Intelligence Workshop

Program

M236 Institute of Physics, CAS

1 December 2025			
Time	Speaker	Affiliation	Title
Session I	Chair: Fan Heng		
9:20-9:30	Welcome Speech Xiang Tao		
9:30-10:00	邓东灵 Deng Dongling	Tsinghua University	Recent advances in quantum computing and quantum AI
10:00-10:30	刘金国 Liu Jinguo	The Hong Kong University of Science and Technology (Guangzhou)	Branch-and-Bound Tensor Network for Combinatorial Optimization
10:30-11:00	Coffee Break & Group Photo		
Session II	Chair: Liu Shang		
11:00-11:30	翟荟 Zhai Hui	Tsinghua University	AI-enabled rearrangement of large-scale atom array
11:30-12:00	吴亚东 Wu Yadong	Shanghai Jiao Tong University	Characterizing quantum states with neural networks
12:00-14:00	Lunch Break		
Session III	Chair: Sun Xiaoqi		
14:00-14:30	冉仕举 Ran Shiju	Capital Normal University	Quantum-Inspired Machine Learning Based on Tensor Networks
14:30-15:00	朱国毅 Zhu Guoyi	The Hong Kong University of Science and Technology (Guangzhou)	Learning transition of toric code and Ising model
15:00-15:30	宋昊 Song Hao	Institute of Theoretical Physics, CAS	Fractons, Anyons, and the Topological Structure of High-Efficiency Quantum Error-Correcting Codes
15:30-16:00	Coffee Break		
Session IV	Chair: Zhang Pan		
16:00-16:30	李彤阳 Li Tongyang	Peking University	QCCircuitBench: A Large-Scale Dataset for Benchmarking Quantum Algorithm Design
16:30-17:00	陈锟 Chen Kun	Institute of Theoretical Physics, CAS	A Complex Network Theory of Emergent System-2 Reasoning
17:30	Banquet		

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2 December 2025			
Time	Speaker	Affiliation	Title
Session I	Chair: Wu Yantao		
9:30-10:00	张士欣 Zhang Shixin	Institute of Physics, CAS	Quantum Machine Learning: A Paradigm for Robust and Adaptive AI
10:00-10:30	尚云 Shang Yun	Academy of Mathematics and Systems Science, CAS	Taming Barren Plateaus: An Observable-Aware Initialization Strategy for VQAs
10:30-11:00	Coffee Break		
Session II	Chair: Chen Cheng		
11:00-11:30	尤力 You Li	Tsinghua University	Progress, Challenges, and Potential AI Assistance in Rydberg-Atom-Array Quantum Computing
11:30-12:00	李晓鹏 Li Xiaopeng	Fudan University	Quantum reservoir computing and its potential applications
12:00-14:00	Lunch Break		
Session III	Chair: Zhang Yuxiang		
14:00-14:30	袁骁 Yuan Xiao	Peking University	Quantum algorithms and quantum advantage
14:30-15:00	孙晓明 Sun Xiaoming	Institute of Computing Technology, CAS	Efficient Quantum Circuits for Machine Learning Activation Functions
15:00-15:30	Coffee Break		
Session IV	Chair: Zhang Shixin		
15:30-16:00	吕定顺 Lv Dingshun	ByteDance	ByteQC: Towards Fast, Large-Scale and Accurate Quantum Chemistry Simulation
16:00-16:30	程嵩 Cheng Song	Beijing Institute of Mathematical Sciences and Applications	Clifford Perturbation Approximation for Quantum Error Mitigation
16:30-16:40	Closing Remarks		