



**The 20<sup>th</sup> International Conference  
on QCD in Extreme Conditions**

***CONFERENCE  
BROCHURE***

*Chinese Academy of Sciences, Lanzhou, China*

*July 17 - 19, 2024*



## Scientific Program

Wednesday, July 17, 2024		
<b>Session 1</b>	<b>Chair : J. Pawlowski</b>	
09:00-09:45	Mixing, moats and modulations in dense QCD matter	Fabian Rennecke
09:45-10:10	Perturbatively Confined Phase of QCD under Imaginary Rotation	Kenji Fukushima
10:10-10:35	Microscopic Encoding of Macroscopic Universality: Scaling properties of Dirac Eigenspectra near QCD Chiral Phase Transition	Wei-Ping Huang
10:35-11:05	<i>Coffee Break</i>	
<b>Session 2</b>	<b>Chair: V. Skokov</b>	
11:05-11:30	Finite temperature QCD phase transition with 3 flavors of Mobius domain wall fermions	Yu Zhang
11:30-11:55	Exploration of the Phase Diagram of (2+1)-Flavor QCD through the Study of Fluctuations of Conserved Charges with Domain Wall fermions	Jishnu Goswami
11:55-12:20	Critical dynamics of phase transition in the QCD phase diagram within the real-time fRG approach	Yong-Rui Chen
12:20-14:00	<i>Lunch Break</i>	
<b>Session 3</b>	<b>Chair: N. Xu</b>	
14:00-14:45	Experimental Study of QCD Phase Structure at RHIC Beam Energy Scan	Xiao-Feng Luo
14:45-15:10	The shear viscosity of parton matter under two-body scatterings	Zi-Wei Lin
15:10-15:35	Carving out the landscape of relativistic transport	Michal P. Heller
15:35-16:05	<i>Coffee Break</i>	
<b>Session 4</b>	<b>Chair: H.T. Ding</b>	
16:05-16:30	Polarization and Spin Alignment in Heavy-Ion Collisions	Shinichi Esumi
16:30-16:55	QCD topology with extreme electromagnetic fields	José Javier Hernández Hernández
16:55-17:20	Baryon electric charge correlation as a magnetometer of QCD	Jin-Biao Gu
17:30-18:00	<i>IAC Meeting</i>	
18:00-20:00	<i>Reception and Poster Session</i>	

## Scientific Program

Thursday, July 18, 2024		
<b>Session 1</b>	<b>Chair: F. Karsch</b>	
09:00-09:45	Yang-Lee Edge singularity and the analytical structure of QCD phase diagram	Vladimir Skokov
09:45-10:10	Charm degrees of freedom in the vicinity of $T_{pc}$ from lattice QCD	Sipaz Sharma
10:10-10:35	Quantum critical point from competition between Dirac Kondo effect and chiral symmetry breaking	Koichi Hattori
10:35-11:05	<i>Coffee Break</i>	
<b>Session 2</b>	<b>Chair: T. Kojo</b>	
11:05-11:30	Exploring Dense QCD through Hamiltonian Lattice Simulations in (1+1) Dimensions	Kentaro Nishimura
11:30-11:55	Baryonic Vortex and Magnetic Field Generation	Ze-Bin Qiu
11:55-12:20	Thermalization of the Wigner function — a real time, non-perturbative quantum simulation based on the Schwinger Model	Shi-Le Chen
12:20-14:00	<i>Lunch Break</i>	
<b>Session 3</b>	<b>Chair: K. Fukushima</b>	
14:00-14:45	Probing dense QCD matter with neutron stars	Sophia Han
14:45-15:10	A quarkyonic matter model	Toru Kojo
15:10-15:35	Pressure and speed of sound in two-flavor color-superconducting quark matter at next-to-leading order	Andreas Geissel
15:35-16:05	<i>Coffee Break</i>	
16:05-17:35	<i>Discussion</i>	
17:35-20:00	<i>Conference Dinner</i>	

## Scientific Program

Friday, July 19, 2024		
<b>Session 1</b>	<b>Chair: S. Han</b>	
09:00-09:45	Chiral Effects and Astrophysics	Naoki Yamamoto
09:45-10:10	Chiral Kinetic Theory in Curved Space Revisited and Radiative Corrections	Shu Lin
10:10-10:35	A novel quark pairing in sQGP induced by the non-Abelian feature of the interaction	Fei Gao
10:35-11:05	<i>Coffee Break</i>	
<b>Session 2</b>	<b>Chair: N. Yamamoto</b>	
11:05-11:30	Mass spectra of neutral mesons ( $K_0$ , $\pi_0$ , $\eta$ , $\eta'$ ) and the related QCD phase transitions under strong magnetic fields	Shi-Jun Mao
11:30-11:55	Gauge invariance and thermodynamic stability of rotating magnetized systems	Kazuya Mameda
11:55-12:20	Towards a "bottom-up" construction of quantum kinetic theory with spin	Zong-Lin Mo
12:20-14:00	<i>Lunch Break</i>	
<b>Session 3</b>	<b>Chair: L. Yan</b>	
14:00-14:45	Recent results on the far -from-equilibrium phase of quark-gluon matter	Kirill Boguslavski
14:45-15:10	The interplay of hydrodynamics and fluctuations	Xin An
15:10-15:35	Real-time dynamics of pseudo-Goldstone and critical mode in QCD	Yang-Yang Tan
15:35-16:05	<i>Coffee Break</i>	
<b>Session 4</b>	<b>Chair: S. Pu</b>	
16:05-16:30	Spin alignment of $K^*$ induced by strange-baryonic inhomogeneity	Feng Li
16:30-16:55	Spin Alignment Induced by Curvature of Freezeout Hypersurface	Zhong-Hua Zhang
16:55-17:15	<i>Closing Remark</i>	

## Important Phone Number

- Emergency(medical):120
- Police:110
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