

Session Program

26-30 Jul 2021



**The 38th International Symposium on Lattice
Field Theory**

QCD at nonzero Temperature and Density

Monday 26 July

13:00

QCD at nonzero Temperature and Density

Session | Convener: Biagio Lucini

13:00–13:15 **The 't Hooft-Veneziano limit of the Polyakov loop models**

Speaker
Oleg Borisenko

13:15–13:30

Dual Polyakov loop model at finite density: phase diagram and screening masses

Speaker
Volodymyr Chelnokov

13:30–13:45

Coarse Graining in Effective Theories of Lattice QCD in Low Dimensions

Speaker
Christoph Konrad

13:45–14:00 **Hamiltonian Lattice QCD from Strong Coupling Expansion**

Speaker
Wolfgang Unger

14:00–14:15 **Heavy-dense QCD at fixed baryon number without a sign problem**

Speaker
Urs Wenger

14:15–14:30 **Thimble regularisation of YM fields: crunching a hard problem.**

Speaker
Francesco Di Renzo

14:30–14:45

Localisation of Dirac modes in finite-temperature \mathbb{Z}_2 gauge theory on the lattice

Speaker
György Baranka

14:45–15:00 **Symmetries of temporal correlators and the nature of hot QCD.**

Speaker
Leonid Glozman

15:00

21:00

QCD at nonzero Temperature and Density

Session | Convener: Alexei Bazavov

21:00–21:15 **Lee-Yang singularities, series expansions and the critical point**

Speaker
Prof. Gokce Basar

21:15–21:30 **Chromo-electric screening length in 2+1 flavor QCD**

Speaker
Peter Petreczky

21:30–21:45 **Static potential at non-zero temperature from fine lattices**

Speaker
Daniel Hoying

21:45–22:00 **Bottomonia screening masses in 2+1 flavor QCD**

Speaker
Sayantan Sharma

22:00–22:15

Critical endpoints in (2+1)- and 4-flavor QCD with Wilson-Clover fermions

Speaker
Dr Hiroshi Ohno

22:15–22:30

Inhomogeneous phases in the chiral Gross-Neveu model on the lattice

Speaker
Chiho Nonaka

22:30–22:45

QCD viscosity by combining the gradient flow and sparse modeling methods

Speaker
Etsuko Itou

23:00

Tuesday 27 July

05:00

QCD at nonzero Temperature and Density

Session | **Conveners:** Jana N. Guenther, Claudia Ratti

05:00–05:15 **A Fresh Look at the Chemical Potential on the lattice**

Speaker

Prof. Rajiv V Gavai

05:15–05:30 **With complex Langevin towards the QCD phase diagram**

Speaker

Benjamin Jaeger

05:30–05:45

New approach to lattice QCD at finite density: reweighting without an overlap problem

Speaker

Attila Pasztor

05:45–06:00

Radius of convergence at finite chemical potential with rooted staggered fermions

Speaker

Sandor Katz

06:00–06:15

Effect of stout smearing on the phase diagram from multiparameter reweighting in lattice QCD

Speaker

Kornél Kapás

06:15–06:30

Taylor expansions and Padé approximations for Lefschetz thimbles and beyond

Speaker

Kevin Zambello

06:30–06:45

Lee-Yang edge singularities in lattice QCD : A systematic study of singularities in the complex μB plane using rational approximations.

Speaker

Ms Simran Singh

06:45–07:00

Lee-Yang edge singularities in 2+1 flavor QCD with imaginary chemical potential.

Speaker

Guido Nicotra

07:00–07:15

Lattice QCD equation of state at finite chemical potential from an alternative expansion scheme

Speaker

Paolo Parotto

07:15–07:30

Lattice QCD Equation of State for $\mu_B \neq 0$ by resumming the Taylor expansion**Speaker**

Dr Prasad Hegde

07:30–07:45

Corrections to the hadron resonance gas from lattice QCD and their effect on fluctuation-ratios at finite density**Speaker**

David Pesznyak

07:45–08:00

Continuous temperature sampling in a single Monte-Carlo simulation**Speaker**

Parikshit Junnarkar

08:00

13:00

QCD at nonzero Temperature and Density

Session | Convener: Victor Braguta

13:00–13:15

Quark Density in Lattice QCD at Imaginary and Real Chemical Potential**Speaker**

Roman Rogalev

13:15–13:30

Thermal QCD phase transition and its scaling window from Wilson twisted mass fermions**Speaker**

Andrey Kotov

13:30–13:45

The QCD Deconfinement Critical Point for $N_f=2$ Flavors of Staggered Fermions**Speaker**

Reinhold Kaiser

13:45–14:00

Lattice QCD at imaginary chemical potential in the chiral limit.**Speaker**

Jishnu Goswami

14:00–14:15

The light Roberge-Weiss tricritical endpoint at imaginary isospin chemical potential**Speaker**

Christopher Winterowd

14:15–14:30

QCD thermodynamics at nonzero isospin asymmetry**Speaker**

Bastian Brandt

14:30–14:45

Searching for the BCS phase at nonzero isospin asymmetry

15:00

Speaker
Francesca Cuteri

14:45–15:00 **Thermal QCD with external imaginary electric fields on the lattice**

Speaker
Gergely Endrodi

21:00

QCD at nonzero Temperature and Density

Session | Convener: Kazuyuki Kanaya

21:00–21:15 **Funny business from the large N_c finite temperature crossover**

Speaker
Thomas DeGrand

21:15–21:30

Semiclassical ensembles of instanton-dyons describe the deconfinement and chiral phase transitions, in the usual and deformed QCD

Speaker
Prof. Edward Shuryak

21:30–21:45 **The sign problem, \mathcal{PT} symmetry, and exotic phases**

Speaker
Michael Ogilvie

21:45–22:00 **\mathcal{PT} symmetry and patterns in finite-density QCD**

Speaker
Stella Schindler

22:00–22:15 **Conjecture about the QCD Phase Diagram**

Speaker
Wolfgang Bietenholz

22:15–22:30

Single static-quark system above T_c investigated by energy-momentum tensor in $SU(3)$ Yang-Mills theory

Speaker
Masakiyo Kitazawa

22:30–22:45

Particle density probability distribution function and center symmetry breaking in finite density lattice gauge theories

Speaker
Shinji Ejiri

22:45–23:00

Worldvolume tempered Lefschetz thimble method and its error estimation

Speaker
Nobuyuki Matsumoto

23:00

Wednesday 28 July

05:00

QCD at nonzero Temperature and Density

Session | **Conveners:** Sayantan Sharma, Claudio Bonati

05:00–05:15

Finite temperature QCD with physical $(u/d, s, c)$ domain-wall quarks

Speaker

Prof. Ting-Wai Chiu

05:15–05:30

2+1 flavor fine lattice simulation at finite temperature with domain wall fermions

Speaker

Yasumichi Aoki

05:30–05:45

Axial $U(1)$ symmetry at high temperatures in $N_f=2+1$ lattice QCD with chiral fermions

Speaker

Kei Suzuki

05:45–06:00

Correlated Dirac Eigenvalues and Axial Anomaly in Chiral Symmetric QCD

Speaker

Yu Zhang

06:00–06:15

Correlated Dirac eigenvalues around the transition temperature on $N_{\tau}=8$ lattices

Speaker

Wei-Ping Huang

06:30–06:45

Topology in high-T QCD via staggered spectral projectors

Speaker

Claudio Bonanno

06:45–07:00

Localised Dirac eigenmodes and Goldstone's theorem at finite temperature

Speaker

Matteo Giordano

07:00–07:15

Localization at the quenched $SU(3)$ phase transition

Speaker

Prof. G. Tamas Kovacs

07:15–07:30

Effective Dimensions of Dirac Modes in IR Phase of QCD

Speaker

Ivan Horvath

07:30–07:45

Meson spectroscopy at increasing temperatures using anisotropic ensembles**Speaker**

Sergio Chaves

07:45–08:00

Computation of QCD meson screening masses at high temperature**Speaker**

Davide Laudicina

08:00

13:00

QCD at nonzero Temperature and Density

Session | Convener: Gergely Endrodi

13:00–13:15

Lattice study of the confinement/deconfinement transition in rotating gluodynamics**Speaker**

Artem Roenko

13:15–13:30

Study of the EoS of dense QCD in an external magnetic field**Speaker**

Natalia Kolomojets

13:30–13:45

Lattice QCD in strong magnetic background**Speaker**

Lorenzo Maio

13:45–14:00

Lattice QCD with an inhomogeneous magnetic field background**Speaker**

Adeilton Dean Marques Valois

14:00

21:00

QCD at nonzero Temperature and Density

Session | Convener: Akio TOMIYA

21:00–21:15

Normalizing flows for the real-time sign problem**Speaker**

Yukari Yamauchi

21:15–21:30

Flavor number dependence of QCD at finite density by the complex Langevin method**Speaker**

Yusuke Namekawa

21:30–21:45

Perturbative predictions for color superconductivity on the lattice**Speaker**

Takeru Yokota

21:45–22:00

Color superconductivity in a small box: a complex Langevin study**Speaker**

Shoichiro Tsutsui

22:00-22:15

Chiral properties of (2+1)-flavor QCD in background magnetic fields at zero temperature

Speaker

Xiaodan Wang

22:15-22:30

Fluctuations and correlations of net baryon number, electric charge and strangeness in a background magnetic field

Speaker

Dr Shengtai Li

22:30-22:45

Persistent homology analysis for QCD effective models

Speaker

Kouji Kashiwa

22:45-23:00

Confinement-Deconfinement transition and Z_2 symmetry in Z_2 +Higgs theory

Speaker

Sabiar Shaikh

23:00

Thursday 29 July

05:00

QCD at nonzero Temperature and Density

Session | **Conveners:** Heng-Tong Ding, Hiroshi Ohno

05:00–05:15

Nonperturbative excitations in overoccupied gluon plasmas

Speaker

Kirill Boguslavski

05:15–05:30

Transverse momentum broadening in real-time lattice simulations of the glasma

Speaker

Daniel Schuh

05:30–05:45

Charting the scaling region of the Ising universality class in finite temperature QCD

Speaker

Marianna Sorba

05:45–06:00

Imprint of chiral symmetry restoration on the Polyakov loop and the heavy quark free energy

Speaker

Dr David Anthony Clarke

06:00–06:15

Critical behavior towards the chiral limit at vanishing and non-vanishing chemical potentials

Speaker

Dr Mugdha Sarkar

06:15–06:30

Roberge-Weiss transitions at imaginary isospin chemical potential

Speaker

Amine Chabane

06:30–06:45

The upper right corner of the Columbia plot with staggered fermions

Speaker

Ruben Kara

06:45–07:00

Deconfinement critical point of a heavy quark effective lattice theory

Speaker

Mr Anh Quang Pham

07:00–07:15

Chiral phase transition temperature in 3-flavor QCD.

Speaker

Ms Sipaz Sharma

07:15–07:30

The QCD chiral phase transition for different numbers of quark flavours

Speaker

Owe Philipsen

07:30–07:45

Inhomogeneous phases in 1+1 dimensional Gross-Neveu models at finite number of flavors on the lattice

Speaker

Michael Mandl

07:45–08:00

Absence of inhomogeneous phases in the $2+1$ -dim. Gross-Neveu model with chiral imbalance

Speaker

Marc Winstel

08:00

Friday 30 July

05:00

QCD at nonzero Temperature and Density

Session | **Conveners:** Maria Paola Lombardo, Alexander Rothkopf

05:00–05:15 **Estimation of the photon emission rate of the quark-gluon plasma**

Speaker

Csaba Török

05:15–05:30

Deep inelastic scattering off quark-gluon plasma and its photon emissivity

Speaker

Harvey Meyer

05:30–05:45

Electromagnetic conductivity of quark-gluon plasma at non-zero baryon density

Speaker

Anton Trunin

05:45–06:00

An exploration of sphaleron rate in lattice QCD

Speaker

Dr Hai-Tao Shu

06:00–06:15

Heavy quark diffusion in an overoccupied gluon plasma

Speaker

Jarkko Peuron

06:15–06:30

Chromo-electric and chromo-magnetic correlators at high temperature from gradient flow

Speaker

Julian Mayer-Steutde

06:30–06:45

Heavy quark momentum diffusion from the lattice using gradient flow

Speaker

Luis Altenkort

06:45–07:00

In-medium static quark potential from spectral functions on realistic HISQ ensembles

Speaker

Gaurang Parkar

07:00–07:15

The complex potential from 2+1 flavor QCD from HTL inspired approach

Speaker

Dibyendu Bala

07:15-07:30

Thermal interquark potentials for bottomonium using NRQCD from the HAL QCD method

Speaker

Thomas Spriggs

07:30-07:45

Spectral Reconstruction in NRQCD using the Backus-Gilbert Method

Speaker

Ben Page

07:45-08:00

Reconstruction of bottomonium spectral functions in thermal QCD using Kernel Ridge Regression

Speaker

Mr Samuel Offler

08:00