

# Schedule of the workshop

## 09.11 Monday

11:00 - 15:10 - **Strong-interacting matter at finite temperature**

*Discussion leaders: Frithjof Karsch*

11:00 - 11:30 **Maria Lombardo**, “Universal (?) scaling of QCD from Wilson fermions”  
[pdf](#)

11:30 - 12:00 **Anirban Lahiri**, “Universal scaling close to chiral limit of QCD” [pdf](#)

12:00 - 12:30 **Christian Fischer**, “Fluctuations and the QCD phase diagram from functional methods” [pdf](#)

12:30 - 13:00 **Angel Gomez Nicola**, “Advances on the QCD phase diagram from Ward Identities and Effective Theories” [pdf](#)

13:00 - 13:30 **Yu Zhang**, “Correlated Dirac eigenvalues and axial anomaly in chiral symmetric QCD” [pdf](#)

13:30 - 14:00 **Alexi Kurkela**, “How can one tell if there is quark matter in neutron stars?” [pdf](#)

14:10-15:10 - Discussion session

19:00-23:10 - **QCD phase diagram under strong external magnetic field**

*Discussion leader: Igor Shovkovy*

*Chairperson: Alejandro Ayala*

19:00 - 19:30 **Luis Hernandez**, “Magnetized QCD phase diagram from the point of view of chiral symmetry restoration” [pdf](#)

19:30 - 20:00 **Ricardo Farias**, “Neutral meson properties in hot and magnetized quark matter” [pdf](#)

20:00 - 20:30 **Efrain Ferrer**, “Axion Polariton in Magnetized Dense Quark Matter”  
[pdf](#)

20:30 - 21:00 **Gergely Endrődi**, “Magnetic susceptibility of QCD matter” [pdf](#)

21:00 - 21:30 **Gergely Markó**, “Magnetic field dependence of the NJL coupling from lattice QCD” [pdf](#)

21:30 - 22:00 **Massimo D'Elia**, “Confinement and deconfinement in a magnetic background field” [pdf](#)

22:10-23:10 - *Discussion session*

## 10.11 Tuesday

11:00 - 15:10 - **QCD phase diagram in astrophysics**

*Discussion leaders: David Blaschke*

11:00 - 11:30 **Alexi Vuorinen**, “Model-independent approach to the neutron-star-matter equation of state” [pdf](#)

11:30 - 12:00 **Matthias Hanauske**, “Gravitational-Wave Signatures of the Hadron-Quark Phase Transition in Binary Compact Star Mergers” [pdf](#)

12:00 - 12:30 **Andreas Bauswein**, “The hadron-quark phase transition and neutron star mergers” [pdf](#)

12:30 - 13:00 **Konstantin Maslov**, “Pasta phase in hybrid hadron-quark stars” [pdf](#)

13:00 - 13:30 **Oleksii Ivanitskyi**, “Second look to the Polyakov Loop Nambu-Jona-Lasinio model at finite baryonic density” [pdf](#)

13:30 - 14:00 **David Alvarez-Castillo**, “Future Compact star observations that could confirm the existence of a Critical End Point in the QCD phase diagram” [pdf](#)

14:10-15:10 - *Discussion session*

16:00-20:40 - **Anomalous transport phenomena and related issues  
(celebrating the 80th Birthday of Valentin Zakharov)**

*Discussion leaders: Oleg Teryaev*

16:00 - 16:30 **Oleg Teryaev**, “Spin and Anomaly” [pdf](#)

16:30 - 17:00 **Andrey Kotov**, “Chiral magnetic effect and conductivity of quark-gluon plasma in external magnetic field” [pdf](#)

17:00 - 17:30 **Andrey Sadofyev**, “Zilch Vortical Effect, Berry Phase, and Kinetic Theory” [pdf](#)

17:30 - 18:00 **Marco Ruggieri**, “Topological charge and chiral density production in the early stage of high energy nuclear collisions” [pdf](#)

18:00 - 18:30 **Maxim Chernodub**, “Fermion helicity vs. chirality: transport, thermodynamic, and spin-polarization effects” [pdf](#)

18:30 - 19:00 **Valentin Zakharov**, “Heavy-ion physics: Interplay of statistical and field- theoretic approaches” [pdf](#)

19:00 - 19:30 **Arkady Vainshtein**, “Massive gravity” [pdf](#)

19:40-20:40 - Discussion session

## 11.11 Wednesday

11:00 - 14:40 - **Inhomogeneous phases in strongly interacting matter**

*Discussion leader: Michael Buballa*

11:00 - 11:30 **Stefano Carignano**, “Crystalline chiral condensates in dense quark matter” [pdf](#)

11:30 - 12:00 **Martin Steil**, “Inhomogeneous chiral condensates within the Functional Renormalisation Group” [pdf](#)

12:00 - 12:30 **Andreas Wipf**, “Inhomogeneous phases of the Gross-Neveu model with a finite number of flavors” [pdf](#)

12:30 - 13:00 **Marc Wagner and Lennart Kurth**, “Exploring the existence of inhomogeneous phases in the 2+1-dimensional Gross-Neveu model in the limit of infinitely many flavors” Part I, Part II [pdf I](#), [pdf II](#)

13:00 - 13:30 **Tomas Brauner**, “Anomaly-induced inhomogeneous phase in QCD-like theories” [pdf](#)

13:40-14:40 - Discussion session

16:00-20:40 - **QCD phase structure at non-zero baryon density**

*Discussion leader: Gert Aarts*

16:00 - 16:30 **Jan Pawłowski**, “On the phase structure of QCD” [pdf](#)

16:30 - 17:00 **Jan Steinheimer**, “The high density QCD phase diagram: of heavy ion collisions and neutron star mergers” [pdf](#)

17:00 - 17:30 **Veronica Dexheimer**, “QCD Phase Diagrams with Charge and Isospin Axes under Heavy-Ion Collision and Stellar Conditions” [pdf](#)

17:30 - 18:00 **Jishnu Goswami**, “QCD phase diagram at non-zero real and imaginary chemical potential from lattice QCD” [pdf](#)

18:00 - 18:30 **Jana Guenther**, “QCD crossover line at finite chemical potential from the Lattice” [pdf](#)

18:30 - 19:00 **Vladimir Skokov**, “Universality driven analytic structure of QCD crossover” [pdf](#)

19:00 - 19:30 **Maksim Ulybyshev**, “Structure of the Lefschetz thimbles decomposition of lattice fermion models” [pdf](#)

19:40-20:40 - Discussion session

## 12.11 Thursday

10:00 - 13:40 - **Effects of rotation in QCD phase diagram**

*Discussion leaders: Xu-Guang Huang*

10:00 - 10:30 **Kenji Fukushima**, “Rotating Relativistic Matter and Angular Momenta” [pdf](#)

10:30 - 11:00 **Mei Huang**, “Chiral dynamics and gluodynamics under rotation” [pdf](#)

11:00 - 11:30 **Kazuya Mameda**, “Rotational effect versus finite-size effect on chiral phase transition” [pdf](#)

11:30 - 12:00 **Arata Yamamoto**, “Rotation on lattices” [pdf](#)

12:00 - 12:30 **Victor Braguta**, “Lattice study of rotating gluodynamics” [pdf](#)

12:40-13:40 - Discussion session

14:30-18:10 - **Non-zero isospin density and meson condensation**

*Discussion leaders: Jens O. Andersen*

*Chairperson: Bastian Brandt*

14:30 - 15:00 **Jens O. Andersen**, “Chiral perturbation theory and pion condensation at finite isospin” [pdf](#)

15:00 - 15:30 **Massimo Mannarelli**, “Meson condensation in chiral perturbation theory” [pdf](#)

15:30 - 16:00 **Bastian Brandt**, “QCD thermodynamics at nonzero isospin asymmetry” [pdf](#)

16:00 - 16:30 **Prabal Adhikari**, “Finite Isospin Chiral Perturbation in a Uniform Magnetic Field” [pdf](#)

16:30 - 17:00 **Abdul Tawfik**, “QCD phase structure in Polyakov linear-sigma model with non-zero isospin density” [pdf](#)

17:10-18:10 - Discussion session

18:30-22:40 - **Phase diagram in the context of heavy-ion collisions**

*Discussion leader: Elena Bratkovskaya*

18:30 - 19:00 **Olga Soloveva**, “Transport properties of the hot and dense QGP” [pdf](#)

19:00 - 19:30 **Volodymyr Vovchenko**, “Probing the QCD equation of state with fluctuations of conserved charges” [pdf](#)

19:30 - 20:00 **Dmitry Peresunko**, “Direct photon production in pp, pA and AA collisions” [pdf](#)

20:00 - 20:30 **Chihiro Sasaki**, “Probing chiral symmetry restoration with dileptons” [pdf](#)

20:30 - 21:00 **Evgeny Zabrodin**, “Transport model approach to  $\Lambda$  and  $\Lambda^-$  polarization in heavy-ion collisions” [pdf](#)

21:10-22:10 - Discussion session

## 13.11 Friday

10:00 - 13:10 - **Theoretical ideas and experimental searches of the critical point**

*Discussion leader: Kyrill Bugaev*

10:00 - 10:30 **Xiaofeng Luo**, “Search for the QCD Critical Point in Heavy-ion Collisions at RHIC” [pdf](#)

10:30 - 11:00 **Juan Torres-Rincon**, “Pre-clustering near the QCD critical point: nuclear correlations and light-nuclei production” [pdf](#)

11:00 - 11:30 **Anatoly Sidorin**, “Status of the NICA project” [pdf](#)

11:30 - 12:00 **Oleg Rogachevsky**, “Experimental study of QCD phase diagram at NICA energy range” [pdf](#)

12:00 - 12:30 **Kyrill Bugaev**, “Phase diagram of strongly interacting matter and how should we study it in heavy ion collisions” [pdf](#)

12:40-13:40 - Discussion session

14:00-23:40 --- **Heavy quarks**

*Discussion leader: Carlos Lourenco*

*Discussion leader: Alexey Luchinsky*

*Chairpersons: Carlos Lourenco, Anatoly Likhoded, Alexey Luchinsky*

14:00 - 14:30 **Zalak Shah**, "Properties of doubly heavy baryons" [pdf](#)

14:30 - 15:00 **Kazem Azizi**, "The doubly heavy particles: baryons, tetraquarks and pentaquarks" [pdf](#)

15:00 - 15:30 **Mariana Araujo**, "Towards the understanding of quarkonium production through global-fit analyses of LHC data" [pdf](#)

15:30 - 16:00 **Pietro Faccioli**, "The fate of quarkonia in heavy-ion collisions at LHC energies: a unified description of the sequential suppression patterns" [pdf](#)

16:00 - 16:30 **He Sok Chung**, "Heavy Quarkonium Production in pNRQCD" [pdf](#)

16:30 - 17:00 **Wei Chen**, "Fully-heavy tetraquark states and their strong decays into di-charmonia" [pdf](#)

60 min break

18:00 - 18:30 **Hai-Tao Shu**, "Transport and spectral properties of heavy quarks from lattice QCD" [pdf](#)

18:30 - 19:00 **Vladimir Galkin**, "Heavy tetraquarks in the relativistic quark model" [pdf](#)

19:00 - 19:30 **Nizami Abdulov**, "Bottomonia production and polarization in the NRQCD with kt-factorization" [pdf](#)

30 min break

20:00 - 20:30 **Christian Fischer**, "Exotic hadrons from functional methods" [pdf](#)

20:30 - 21:00 **Eric Braaten**, "Production of X(3872) at High Multiplicity" [pdf](#)

21:30 - 22:00 **Michael Strickland**, "Bottomonium suppression and elliptic flow from real-time quantum evolution" [pdf](#)

22:00 - 22:30 **Peter Petreczky**, "Bottomonium properties at high temperatures from lattice NRQCD" [pdf](#)

22:00 - 22:30 **Alexey Luchinsky**, "Doubly Heavy Baryons: Lifetimes and Branching fractions of the Weak Decays" [pdf](#)

22:40-23:40 - Discussion session

