

– Programme – Renormalization Group Approach from Ultra Cold Atoms to the Hot QGP

First Week – from 22.8 to 26.8

Mon 22.8.

No seminar is scheduled. A discussion space (K102) is available all the day.

Tue 23.8.

No seminar is scheduled. A discussion space (K102) is available all the day.

Wed 24.8.

No seminar is scheduled. A discussion space (K102) is available all the day.

Interested participants are welcome to attend the joint session with another workshop:

Thermal Quantum Field Theory (22.8 – 24.8)

Speakers include: J. Berges, J.-P. Blaizot,, V. Skokov

The joint session is scheduled at 15:00—16:00 at Panasonic Auditorium

Thu 25.8.

Seminars from 10:00 at Y206 by E. Itou, H. Terao and whoever wishes to talk

E. Itou : Infrared fixed point for many flavor $SU(N)$ gauge theory

H. Terao : Non-perturbative beta functions and scaling laws in QCD
with many quark flavors

A discussion space (Y206) is available all the day.

Fri 26.8.

Seminars from 10:00 at Y206 by B. Klein, M. Scherer and whoever...

B. Klein : Chiral symmetry breaking and finite-volume effects

M. Scherer : Finite-size and particle-number effects in an ultracold Fermi
gas at unitarity

A discussion space (Y206) is available all the day.

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Second Week – from 29.8 to 2.9 (at Panasonic Auditorium)

Mon 29.8.

9:25	Opening Address
9:30 J. Berges	Universality far from equilibrium
10:30 – 11:00	Coffee Break
11:00 B. Nowak	Nonthermal fixed points in turbulent Bose gases
12:00-15:00	Lunch break
15:00 N. Xu	High-energy nuclear collisions and the QCD phase structure
16:00 B.-J. Schaefer	With the FRG towards the QCD phase diagram
17:00 K.-I. Kondo	Understanding the entanglement between confinement and chiral-symmetry-breaking from QCD

Tue 30.8.

9:30 S. Flörchinger	Turbulent fluctuations in heavy ion collisions
10:30 – 11:00	Coffee Break
11:00 T. Kunihiro	RG derivation of relativistic hydrodynamic equations as the infrared dynamics of Boltzmann equation
12:00-14:30	Lunch break
14:30 S. Jochim	Few-body physics with ultracold fermions
15:30 – 16:00	Coffee Break
16:00 P. Kopietz	Non-equilibrium time evolution of bosons from the functional renormalization group
17:00 M. Tezuka	One-dimensional Fermi gases: Density-matrix renormalization group study of ground state properties and dynamics

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Wed 31.8.

9:30	T. Mukaiyama	Universal thermodynamics of a unitary Fermi gas
10:30 – 11:00		Coffee Break
11:00	R. Schmidt	Renormalization group flow of spectral functions for ultracold quantum gases
12:00-14:30		Lunch break
14:30	K. Harada	A Wilsonian view on the nuclear effective field theory
15:30 – 16:00		Coffee Break
16:00	K. Hebeler	New Applications of Renormalization Group Methods in Nuclear Physics
17:00	A. Andronic	Hadron production at chemical freeze-out and the QCD phase diagram

Thu 1.9.

9:30	B. Delamotte	Non-perturbative renormalization analysis of the Kardar-Parisi-Zhang equation
10:30 – 11:00		Coffee Break
11:00	H. Sonoda	Universality of ERG formalism, revisited
12:00-14:30		Lunch break
14:30	Y. Igarashi	Realization of symmetries and reduction of the Polchinski equations in the ERG
15:30 – 16:00		Coffee Break
16:00	A. Ipp	Scalar theory pressure beyond the local potential approximation
17:00	G. Tarjus	Nonperturbative functional RG for disordered systems: the case of the random-field Ising model

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Fri 2.9.

9:30	F. Saueressig	Asymptotically safe gravity – From Euclidean to Lorentzian signature
10:30 – 11:00		Coffee Break
11:00	M. Pietroni	Coarse-graining and resummation of cosmological Perturbations
12:00	D. Litim	TBA
13:00-13:05		Closing remarks

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Third Week – from 5.9 to 9.9

Mon 5.9.

Seminars from 10:00 at Y206 by K. Itoh, V. Skokov and whoever...

K. Itoh : Anomalies in the ERG Approach

V. Skokov : QCD phase diagram with fluctuations of conserved charges

A discussion space (Y206) is available all the day.

Tue 6.9.

Seminars from 10:00 at Y206 by M. Mitter, M. Grahl and whoever...

M. Mitter : Aspects of two- and three-flavor chiral phase transitions

**M. Grahl : Study of the two-flavor linear sigma model in presence of
the axial anomaly with the Functional Renormalization Group**

A discussion space (Y206) is available all the day.

Wed 7.9.

Seminars from 10:00 at Y206 by A. Ohnishi, K. Fukushima, J. Pawłowski

A. Ohnishi : TBA

K. Fukushima : TBA

J. Pawłowski : TBA

A discussion space (Y206) is available all the day.

Thu 8.9.

Seminars from 10:00 at Y206 by whoever wishes to talk

A discussion space (Y206) is available all the day.

Fri 9.9.

Seminars from 10:00 at Y206 by whoever wishes to talk

A discussion space (Y206) is available all the day.