



# Lattice 2024

## Monday, 29 July 2024

### Theoretical developments: TR4 (11:15 - 13:15)

-Conveners: Richard Brower

time	[id] title	presenter
11:15	[294] Effective mass-improvement of heavy valence Wilson quarks	FRITZSCH, Patrick
11:35	[30] Exact space-time symmetry conservation and automatic mesh refinement for classical lattice field theory	ROTHKOPF, Alexander
11:55	[354] The constraint potential for fermionic order parameters	MARKO, Gergely
12:15	[183] The constraint potential in the chiral Gross-Neveu model	PANNULLO, Laurin
12:35	[64] Symplectic quantization: a new deterministic approach to the dynamics of quantum fields inspired by statistical mechanics	GIACHELLO, Martina
12:55	[9] Weyl Fermions on a Finite Lattice	SEN, Srimoyee

### Theoretical developments: TR4 (14:15 - 15:35)

-Conveners: Srimoyee Sen

time	[id] title	presenter
14:15	[156] Testing nucleation calculations for strong phase transitions	WEIR, David
14:35	[11] Exact lattice chiral symmetry in 2d gauge theory	CHERMAN, Aleksey
14:55	[329] Generalized BKT Transitions and Persistent Order on the Lattice	BERKOWITZ, Evan
15:15	[34] Scaling results for charged sectors of near conformal QCD	D'ALISE, Alessandra

# Tuesday, 30 July 2024

## Theoretical developments: TR4 (11:15 - 12:35)

-Conveners: Simon Catterall

time	[id] title	presenter
11:15	[221] Generalized Ginsparg-Wilson relations: Fermionic anomalies and topological phases on the lattice	SINGH, Hersh
11:35	[161] $\eta$ invariant of massive Wilson Dirac operator and the index	FUKAYA, Hidenori
11:55	[52] Axion QED as a Lattice Gauge Theory and Non-Invertible Symmetry	HONDA, Yamato
12:15	[250] Discrete symmetry and 't Hooft anomalies for 3450 model	ONOGI, Tetsuya

## Theoretical developments: TR4 (13:45 - 15:25)

-Conveners: Hidenori Fukaya

time	[id] title	presenter
13:45	[88] The perturbative computation of the gradient flow coupling for the twisted Eguchi-Kawai model with the numerical stochastic perturbation theory	TAKEI, Hironori
14:05	[168] Smoothing Properties of the Wilson Flow and Topological Charge	JAEGER, Benjamin
14:25	[212] Energy-momentum tensor in the 2D Ising CFT in full modular space	MATSUMOTO, Nobuyuki
14:45	[331] Lattice Field Theory On Curved Manifolds -- The Affine Conjecture	BROWER, Richard
15:05	[8] Lattice study of RG fixed point based on gradient flow in $SO(N)$ sigma model	Dr MORIKAWA, Okuto

## Theoretical developments: TR4 (16:15 - 17:15)

-Conveners: Evan Berkowitz

time	[id] title	presenter
16:15	[245] Tensor renormalization group study of (1+1)-dimensional $O(3)$ nonlinear sigma model w/ and w/o finite chemical potential	KURAMASHI, Yoshinobu
16:35	[167] Grassmann Tensor Renormalization Group for two-flavor massive Schwinger model with a theta term	KANNO, Hayato
16:55	[182] Phase structure analysis of 2d CP(1) model with $\theta$ term by tensor network renormalization	AIZAWA, Hayato

# Wednesday, 31 July 2024

## Theoretical developments: TR4 (11:15 - 12:55)

-Conveners: Stephan Durr

time	[id] title	presenter
11:15	[315] SymEFT for local tastes of staggered lattice QCD	HUSUNG, Nikolai
11:35	[170] Locality and symmetry properties of staggered fermions with taste splitting mass term	CHREIM, Nuha
11:55	[51] Chiral Lagrangian for Karsten-Wilczek Minimally Doubled Fermion	SHUKRE, Kunal
12:15	[42] Eigenspectra of Minimally Doubled Fermions	KISHORE, Abhijeet
12:35	[158] Formulation of SU(N) Lattice Gauge Theories with Schwinger Fermions	LIU, Hanqing

# Thursday, 1 August 2024

## Theoretical developments: TR4 (11:30 - 12:30)

-Conveners: Aleksey Cherman

time	[id] title	presenter
11:30	[196] Scattering Amplitudes from Euclidean Correlators	Prof. PATELLA, Agostino
11:50	[273] Numerical simulation of fractional topological charge in SU(N) gauge theory coupled with $\mathbb{Z}_N$ 2-form gauge fields	ABE, Motokazu
12:10	[428] U(1)-gauged 2-flavor spin system in 3-D	GATTRINGER, Christof

# Friday, 2 August 2024

## **Theoretical developments: TR4 (11:15 - 12:55)**

-Conveners: David Tong

time	[id] title	presenter
11:15	[102] Novel Lattice Formulation of 2D Chiral Gauge Theory via Bosonization	ONODA, Soma
11:35	[306] Lattice Weyl Fermion on a single spherical domain-wall 1	AOKI, Shoto
11:55	[255] Lattice Weyl Fermion on a single spherical domain-wall 2	KAN, Naoto
12:15	[348] Loop-string-hadron approach to the SU(3) gauge invariant Hilbert space	STRYKER, Jesse
12:35	[241] Quantum thermodynamics, lattice gauge theories, and quantum simulation	DAVOUDI, Zohreh

## **Theoretical developments: TR4 (14:15 - 16:15)**

-Conveners: George Fleming

time	[id] title	presenter
14:15	[111] Grassmann bond-weighted tensor renormalization group approach to 1+1D two-color QCD with staggered fermions at finite density	KWOK, Ho Pai
14:35	[68] Entanglement entropy by tensor renormalization group approach	TANAKA, Gota
14:55	[72] Tensor renormalization group study of (1+1)-dimensional U(1) gauge-Higgs model at $\theta=\pi$ with Lüscher's admissibility condition	AKIYAMA, Shinichiro
15:15	[46] Spectroscopy by Tensor Renormalization Group Method	Mrs ZAHRA, Fathiyya Izzatun AZ
15:35	[21] Tensor-network Toolbox for probing dynamics of non-Abelian Gauge Theories	MATHEW, Emil
15:55	[457] Entropy in the gravitational collapse of a scalar field	VARNHORST, Lukas