

International Workshop on the Sign Problem in QCD and Beyond

SIGN'18

September 10-14, Bielefeld, Germany

PROGRAM

Monday, September 10

<i>Time</i>	<i>Speaker</i>	<i>Title</i>
9:00 - 9:30		Welcome
9:30 - 10:00		E. Laermann Memorial Talk
10:00 - 10:30	<i>Coffee</i>	
10:30 - 11:30	D. Sexty	Using the Complex Langevin equation to map out the phase diagram of QCD
11:30 - 12:00	M. Scherzer	The QCD phase diagram from Complex Langevin simulations
12:00 - 14:00	<i>Lunch</i>	
14:00 - 14:30	A. Lahiri	The Taylor expansion approach to the QCD phase diagram
14:30 - 15:00	B. Jäger	Taylor expansion and the Cauchy Residue Theorem for finite-density QCD
15:00 - 15:30	A. Kotov	Lattice study of the deconfined quark matter at high densities
15:30 - 16:00	<i>Coffee</i>	
16:00 - 16:30	G. Endrödi	Reliability of Taylor-expansions in QCD
16:30 - 17:00	U. Wenger	Solution of the sign problem in the Potts model at fixed baryon number
17:30 - 18:00	V. Filinov	Reducing the sign problem in the path integral Monte Carlo calculations

Tuesday, September 11

<i>Time</i>	<i>Speaker</i>	<i>Title</i>
9:00 - 10:00	M. Wagman	Phase Unwrapping and One-Dimensional Sign Problems
10:00 - 10:30	<i>Coffee</i>	
10:30 - 11:30	A. Alexandru	Complex manifolds beyond Lefschetz thimbles
11:30 - 12:00	F. Attanasio	Dynamically stabilising SU(3) Yang-Mills at real theta
12:00 - 14:00	<i>Lunch</i>	
14:00 - 14:30	J. Bloch	A strong residual sign problem on the thimbles
14:30 - 15:00	F. Ziesché	Thimbles and Lattice Gauge Theories
15:00 - 15:30	F. Ziegler	Reweighting Lefschetz Thimbles
15:30 - 16:00	<i>Coffee</i>	
16:00 - 16:30	N. Stamatescu	Complex Langevin and boundary terms
16:30 - 17:00	A. Wyrzykowski	Positivity in moment matching approach to Complex Langevin

Wednesday, September 12

<i>Time</i>	<i>Speaker</i>	<i>Title</i>
9:00 - 10:00	J. Liu	Self-learning Monte Carlo methods
10:00 - 10:30	<i>Coffee</i>	
10:30 - 11:30	A. Ohnishi	Path Optimization Using Neural Network in Field Theories
11:30 - 12:00	Y. Mori	Path optimization in low dimensional QCD at finite density
12:00 - 14:00	<i>Lunch</i>	
14:00 - 14:30	S. Lawrence	Manifolds of Glory: Complex Contours for Ameliorating the Sign Problem
14:30 - 15:00	K. Zhou	Perspectives of deep learning techniques in the context of quantum field theories
15:00 - 15:30	M. Kroyter	Optimisation of complex integration contours
15:30 - 16:00	<i>Coffee</i>	
16:00 - 17:00	<i>Poster - Session</i>	

Thursday, September 13

<i>Time</i>	<i>Speaker</i>	<i>Title</i>
9:00 - 10:00	K. Langfeld	The density of states method
10:00 - 10:30	<i>Coffee</i>	
10:30 - 11:30	O. Borisenko	Dual formulations of Polyakov loop models and pure gauge LGT
11:30 - 12:00	G. Gagliardi	Towards a Dual Representation of Lattice QCD
12:00 - 14:00	<i>Lunch</i>	
14:00 - 14:30	D. Göschl	The critical endpoint in the 2-d U(1) gauge-Higgs model at topological angle $\theta = \pi$
14:30 - 15:00	O. Orasch	Low temperature condensation and scattering data
15:00 - 15:30	F. Bruckmann	O(3) model at nonzero μ through dual variables and matrix product states
15:30 - 16:00	<i>Coffee</i>	
16:00 - 16:30	A. Wipf	Four-Fermi Lattice-Theories in three dimensions
16:30 - 17:00	E. Huffman	Fermion Bag Algorithms and Sign-Problem-Free Models
17:00 - 18:00	<i>Panel - Discussion</i>	
19:00 - 21:00	<i>Conference Dinner</i>	

Friday, September 14

<i>Time</i>	<i>Speaker</i>	<i>Title</i>
9:00 - 10:00	N. Schuch	Symmetries and topological order in strongly correlated quantum systems - a Tensor Network perspective
10:00 - 10:30	<i>Coffee</i>	
10:30 - 11:30	F. Assaad	Sign problem free models in the solid state
11:30 - 12:00	M. Ulybyshev	Mean-field and non-mean-field complex saddle points in the Hubbard model at finite chemical potential
12:00 - 12:30	<i>Adjourn</i>	