



## Lattice2019.ccnu.edu.cn



## **The 37th international Symposium On Lattice Field Theory**

Wuhan China

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# 16 - 22 JUNE 2019





## Sponsors







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## Welcome

The 37th International Symposium on Lattice Field Theory Local Organizing Committee warmly welcomes you to this year's conference at Wuhan--the city of rivers & lakes, and wishes you a fruitful and enjoyable stay.

#### Local Organizing Committee

- Heng-Tong Ding (Chair, CCNU)
- Ying Chen (IHEP, CAS)
- Xu Feng (Peking U.)
- Ziwen Fu (Sichuan U.)
- Ming Gong (IHEP, CAS)
- Longcheng Gui (Hunan Normal U.)
- Olaf Kaczmarek (Bielefeld U. /CCNU)
- Ning Li (Xi'an Technological U.)
- David Lin (NCTU, Hsinchu)
- Chuan Liu (Peking U.)
- Liuming Liu (IMP, CAS)
- Yubin Liu (Nankai U.)
- Zhaofeng Liu (IHEP, CAS)
- Jian-Ping Ma (ITP, CAS)
- Swagato Mukherjee (BNL/Tsinghua U.)
- Yi-Bo Yang (ITP, CAS)
- Liangkai Wu (Jiangsu U.)
- Jianbo Zhang (Zhejiang U.)



## **Local Information**

#### Wuhan

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Wuhan is the 5th largest city in mainland China and the biggest city in the central part of China. It is also a major transportation hub in central China. Wuhan is the capital city of Hubei province and has a population of 10 Million. The city of Wuhan has over 3500-year-long history and is the birth place of the Chu culture. Wuhan has also played a very important role in the modern history of China as Wuhan people did the first uprising to end the Qing dynasty before the Republic of China.

Wuhan is aside by Yangtze River, and it is often called "city of rivers & lakes". It is divided by Yangtze river and Han river into three main districts: Hanyang(汉阳), Hankou(汉口) and Wuchang(武昌). Hanyang is mainly famous for industry, Hankou is the commercial center and Wuchang is full of universities. It is worthy to mention that Wuhan as a city has greatest number of college students in China.

Wuhan is in fast development, and the slogan of Wuhan is "Wuhan, different everyday", which is proposed by one of professors from Central China Normal University.

See more from: https://en.wikipedia.org/wiki/Wuhan & https://youtu.be/RirxVLDMIA

#### Weather

The average high/low temperature in Wuhan during conference week is expected to be 32/24°C (89.6/75.2°F). The humidity may be high. We recommend mostly summer clothes with a couple of light jackets or sweaters for possible cold indoor temperatures. Thunderstorms may occur in the afternoon on hot summer days, and carrying umbrella with you may not be needed as one umbrella in each room is available for free usage in Tieqiao Jianguo and Hilton hotel.

#### Local Dining Guide

A list of local restaurants sorted by distance, can be found in "Practical information" in the homepage of Lattice 2019: <a href="http://lattice2019.ccnu.edu.cn/?cid=12">http://lattice2019.ccnu.edu.cn/?cid=12</a>





## **Travel Tips**

#### ∩ 1 Airport

#### Wi-Fi

In the airport you can connect to Wuhan public Wi-Fi "iwuhan-free". After registration with your mobile phone number, you can enjoy the high-quality wireless Internet.

#### Money Exchange

You can find money exchange counter on F2 and F4:

- On arrival: F2
- On departure: F4



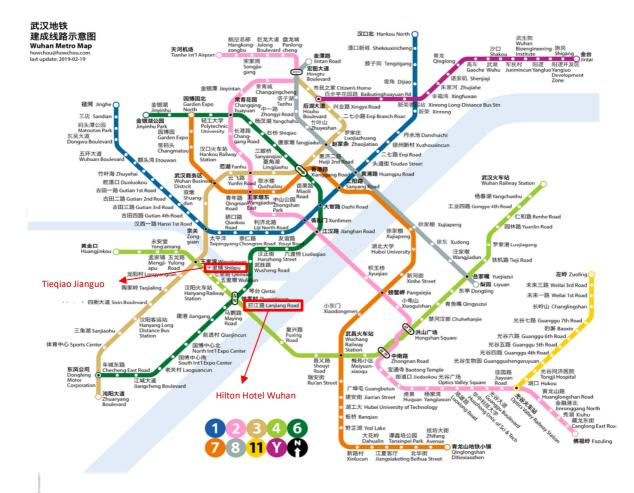
¥

#### Metro

You can buy the tickets with cash, Alipay, Wechat Pay or Wuhan Transportation Card. Credit card is not available.

You can use 1 yuan coins, or 5, 10 or 20 yuan notes for the ticket vending machines. The ticket is a round plastic coin. Use it when you go in and go out of the stations.

#### See Wuhan Metro map below:



#### 😲 Power Plugs / Sockets in China

There are three types of plugs used in China: three-pronged angled pins, two flat pins (the most common) or two narrow round pins. Electricity is 220 volts, 50 cycles AC.

The plugs available are as shown in the table:

	Plugs that match this socket are commonly used in US, Mexico, Canada, Japan, Philippines, Colombia, Thailand, Vietnam, Panama etc. But the two-blade plug with one end larger than the other. They can't be used in China without an adaptor.
	Countries like Australia, New Zealand, Argentina, and Fiji use electronic devices of this plug shape. Sometimes, the blade at the top is lost but it can still function safely in Mainland China.
A Contraction of the second se	This kind of socket is widely seen in most European countries, like Russia, Germany, Denmark, Poland, Finland, France, Sweden, Spain, as well as South Korea.

#### **Emergency Numbers**

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Police (Calling)	110
Police (Text message)	12110
First-aid Ambulance	120
Fire	119
Traffic Accidents	122
SOS in Water	12395

## Accommodations

### Hilton Hotel Wuhan Riverside

Hilton Hotel Wuhan Riverside is also the conference venue. Sitting on the banks of the Yangtze River, the hotel is moment from shopping, dining and entertainment at the Zhongjiacun Commercial Complex.

It takes only 20 minutes to Wuchang Railway Station and 40 minutes to Wuhan Tianhe International





#### Airport.

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Address	No.190 Binjiang Avenue Hanyang District Wuhan China, 620m from Metro Station: Lanjiang Road(Line 4)
TEL	+86-27-59558888



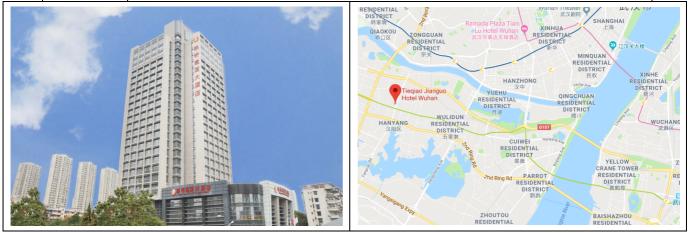
#### Tieqiao Jianguo Hotel (Wuhan Bridge Foundation Hotel)

Tieqiao Jianguo Hotel is just a short distance from Wangjiawan Commercial Area (1 kilometer). Wuchang Railway Station is just 12 kilometers away and Tianhe International Airport only 32 kilometers away. Shilipu Metro Station in Line 4 is within walking distance.

**Shuttle buses** from Tieqiao JianGuo Hotel to the venue Hilton Hotel Wuhan Riverside will be arranged in the morning from Monday to Saturday.

**Metro to Hilton Hotel:** walk around 200 meters to take line 4 at the shilipu (十里铺) station, and get off at Lanjianglu (拦江路) station. Get out from Exit B and walk about 500 meters straightly to the Hilton Hotel.

Address	No.648 Hanyang Avenue Hanyang District Wuhan China, Shilipu(Line 4)	570m from Metro Station:
TEL	+86-27-84889988	

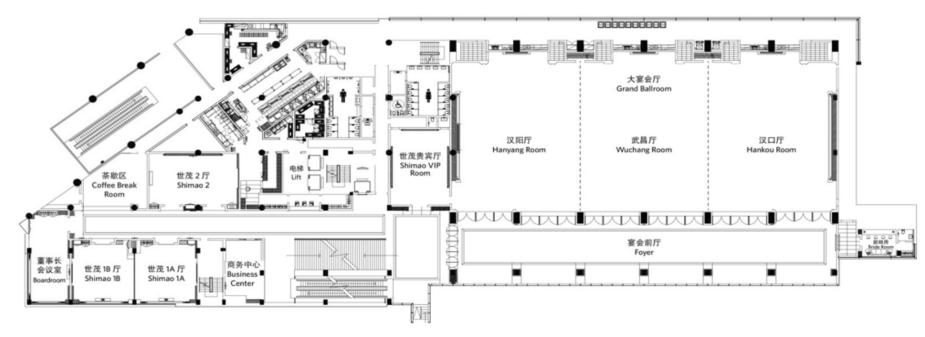




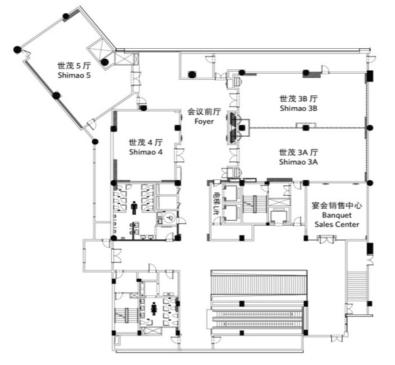
## Maps

All plenary sessions will be in Wuchang+Hankou Room on the 2nd floor, while parallel sessions are distributed on the 2nd (Wuchang, Hankou and Shimao 1A+1B) and 3rd floor (Shimao 3A, Shimao 3B, and Shimao 5). Poster session will be in the Foyer on the 2nd floor.

### 二楼裙楼会议室平面图及容量表 MEETING ROOM FLOOR PLAN & CAPACITY CHART ON LEVEL 2

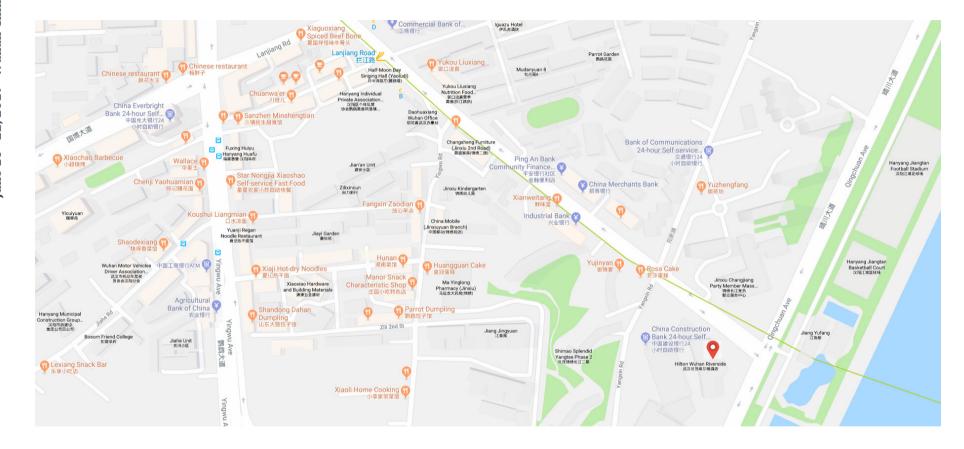


三楼裙楼会议室平面图及容量表 MEETING ROOM FLOOR PLAN & CAPACITY CHART ON LEVEL 3









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## **Excursions**

Following excursions are arranged for the Lattice 2019 participants.

#### (1) Hubei Provincial Museum + East Lake (TingTao area)

Hubei Provincial Museum is the only provincial comprehensive museum in the province. It collects, protects, and exhibits the cultural relics discovered in the province. Since 1953, it has collected over 200,000 cultural relics, 812 are listed as first-class relics of China, and 16 are considered national treasures.



Pickup time & location: 13:30 Wednesday at the Hilton Hotel Duration: about 3 and half hours

#### (2) Yellow Crane Tower + Museum of Wuchang Uprising

Yellow Crane Tower, enjoying the fame of 'The First Scenery under Heaven', is one of the most renowned towers south of the Yangtze River. Its cultural significance led to its being made the symbol of Wuhan City.





Pickup time & location: 13:30 Wednesday at the Hilton Hotel Duration: about 3 and half hours

#### (3) Guiyuan Temple + Qingchuan Pavilion

Covering an area of about 46,900 square meters (approx. 55,812 square yards), Guiyuan Buddhist Temple is situated in the west section of Hanyang district in Wuhan City. Being one of the four best



temples in Wuhan, the temple, which was originally established in 1658 in the Qing Dynasty (1644-1911), was initially built on the site of Wuzhangpu Kuiyuan in the Ming Dynasty (1368-1644).

Though it is a construction of a Buddhist temple, it is also in a garden style. The distribution is compact, and the design is delicate. The temple is even interspersed by kiosks and parterres.



Pickup time & location: 13:30 Wednesday at the Hilton Hotel Duration: about 3 hours

See more info: http://www.travelchinaguide.com/attraction/hubei/wuhan .

## **Conference Information**

#### **Reception & registration**

The welcome reception will be held from 17:00 to 20:30 on Sunday June 16 in the Hilton Hotel Wuhan Riverside. Free beer & wine as well as buffet will be provided.

For those who stay at TieQiao JianGuo hotel, one can go to the Hilton Hotel either by subway, taxi or a shuttle bus. A few limited shuttle buses arranged by LOC will leave from TieQiao JianGuo hotel to the Hiton Hotel at 16:30, 17:30 and 18:30.

Registration will be open in the Hilton Hotel from 17:00 to 20:30 during the welcome reception. During the rest of the week, the registration will only be available in the Hilton Hotel, and open hours are 08:30–11:00 (Mon,Tue), 08:30–09:00 (Wed, Thu, Fri) and during morning/afternoon coffee breaks.

#### Wireless Network Access (WIFI)

WIFI is available at the conference rooms

- SSID: Hilton Honors
- Promotional Code: LATTICE2019



#### Lunch at the Conference venue

Lunch will be served in the BRASSERIE Hui-Restaurant on the 3rd floor of the Hilton Hotel.

#### Scientific program

The conference scientific program will start at 9:00am Monday, June 17, and end at 12:30pm on Saturday, June 22. All talks will take place inside Hilton Hotel Wuhan Riverside. The timetable of the program is available at https://indico.cern.ch/event/764552/timetable/

#### Information for presenters

#### For plenary and parallel speakers

Plenary speakers have been advised of the time reserved for their talk upon invitation. Parallel session talks are 15 minutes, plus 5 minutes for discussion. The talks are synchronized across all the parallel sessions and it is therefore essential for the success of the parallel program that speakers keep within the allocated time.

For plenary speakers please prepare the slides in the widescreen format (16:9) for better displays in a LED screen. Video records are planned to taken for plenary talks and distribute them online upon the speakers' approval for those who cannot attend Lattice 2019.

Conference laptops with projectors will be used in most sessions. Please prepare your presentation in Adobe Portable Document Format (.pdf) or Microsoft PowerPoint Format (.ppt, .pptx). No other formats can be supported. You are required to upload your presentation via the Indico system at least 2 hours prior to the start of your session. There is "My contributions" in the menu after logging-in. Please select it and click the "View" link.

Then you can find "Edit files" and upload your presentation.

We strongly suggest that your presentation file should be uploaded before leaving for the conference to avoid wireless network trouble on the conference site.

#### Information for poster presenters

Posters should be in A0 portrait format (841 mm wide, 1189 mm high) or smaller. You must print out your poster before leaving for the conference and bring it with you. Please note that there are no printing facilities in the conference venue.

Each poster will be assigned a number and you are expected to tack your poster to the board with the corresponding number. To confirm your poster number, please log-in the Indico system and select "My contributions" in the menu. Pins/tapes will be provided. Posters can be displayed for the entire duration of the conference since Tuesday.

Poster presenters are also requested to upload their presentation via the Indico system before the beginning of the conference. The upload procedure is the same as that for oral presenters.





## Programme

## **Schedule Overview**

Time	Sun 16/06	Mon 17/06	Tue 18/06	Wed 19/06	Thu 20/06	Fri 21/06	Sat 22/06
9:00 9:30 10:00		Opening remarks 9:00-9:15 Plenary 9:15-11:00	Plenary 9:00-10:45	Parallel sessions 9:00-10:40	Plenary 9:00-10:15	Plenary 9:00-10:45	Plenary 9:00-10:45
10:30					KWA session 10:15-10:45		
11:00		Coffee/Tea break 11:00-11:30	Coffee/Tea break 10:45-11:15	Coffee/Tea break 10:40-11:10	Coffee/Tea break 10:45-11:15	Coffee/Tea break 10:45-11:15	Coffee/Tea break 10:45-11:15
11:30 12:00 12:30		Plenary 11:30-12:45	Plenary 11:15-12:45	Parallel sessions 11:10-12:30	Plenary 11:15-12:30	Plenary 11:15-12:15	Plenary 11:15-11:45 Closing remarks - Future Conferences Announcement 11:45 - 12:30
13:00		Lunch break	Lunch break/ Women in	Lunch break 12:30-13:30	Lunch break 12:30-14:00	Lunch break/IAC meeting 12:15-14:00	
13:30 14:00		12:45-14:20	Lattice 12:45-14:20				
14:30 15:00 15:30		Parallel sessions 14:20-16:00	Parallel sessions 14:20-16:00	Excursion 13:30 - 17:30	Parallel sessions 14:00-15:40	Parallel sessions 14:00-15:40	
16:00		Coffee/Tea break 16:00-16:30	Coffee/Tea break 16:00-16:30		Coffee/Tea break 15:40-16:10	Coffee/Tea break 15:40-16:10	
16:30 17:00		Parallel sessions 16:30-17:50	Parallel sessions 16:30-17:50		Parallel sessions 16:10-17:30	Parallel sessions 16:10-17:50	
17:30 18:00	W7 1						
18:30	Welcome Reception & Registration 17:00-20:30		Poster 17:50-20:10		Banquet		
19:30 20:00		Public lecture 19:30-20:30			17:45-20:45		
20:30							

In case any change or error of printing of the timbale please refer to the indico webpage: https://indico.cern.ch/event/764552/timetable/ The 37th International Symposium on Lattice Field Theory (Lattice 2019) / Programme

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### Monday 17 June 2019

Opening remarks - Wuchang+Hankou (09:00-09:15)

Plenary - Wuchang + Hankou (09:15-11:00)

#### -Conveners: David Richards

time [id] title

presenter

09:15 [276] Hadron Spectroscopy from Lattice QCD	EDWARDS, Robert
10:00 [298] Recent results from BESIII experiment	YUAN, Changzheng
10:30 [289] Recent developments in LQCD studies on tetraquarks	FRANCIS, Anthony Sebastian

#### Coffee/Tea break (11:00-11:30)

#### Plenary - Wuchang + Hankou Room (11:30-12:45)

#### -Conveners: Chris Sachrajda

time [id] title	presenter
11:30 [301] Lattice QCD Impact on Determination of CKM Matrix: Status and Prospects	GOTTLIEB, Steven
12:15 [56] Hadronic Tensor and Neutrino-Nucleon Scattering	LIANG, Jian

#### Lunch break (12:45-14:20)

#### <u>Theoretical Developments</u> - Shimao 1A+1B (14:20-16:00)

#### -Conveners: Daniel Nogradi

time [id] title	presenter
14:20 [107] Non-perturbative determination of anomalous dimensions of bound states in QCD and beyond	HASENFRATZ, Anna
14:40 [206] Logarithmic Corrections to \$a^2\$ scaling in lattice Yang Mills the	eory HUSUNG, Nikolai
15:00 [217] Gradient flow equation in SQCD	KADOH, Daisuke
15:20 [237] The twisted gradient flow running coupling in SU(3): a non-pertu determination	rbative BRIBIAN, Eduardo I.
15:40 [313] Stochastic RG and Gradient Flow in Scalar Field Theory	CAROSSO, Andrea

#### Standard model parameters and renormalization - Shimao 3B (14:20-16:00)

#### -Conveners: Shoji Hashimoto

time [id] title

presenter

presenter

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	[105] Towards the determination of the charm quark mass on \$N_\mathrm{f}=2+1\$ CLS ensembles	KUBERSKI, Simon
14:40	[114] Strong coupling constant and heavy quark masses in (2+1)-flavor QCD	WEBER, Johannes Heinrich
	[199] Quark masses and decay constants in Nf=2+1+1 isoQCD with Wilson clover twisted mass fermions	MARCO, Garofalo

15:20 [228] Non-perturbative renormalization by decoupling	RAMOS MARTINEZ, Alberto
15:40 [287] Yang Mills short distance potential and perturbation theory	SOMMER, Rainer

#### Weak Decays and Matrix Elements - Shimao 5 (14:20-16:00)

#### -Conveners: Stefan Meinel

time [id] title

14:20	[216] New approaches to semileptonic decays	MARTINELLI, Guido
	[60] The \$B \to D^\ast\ell\nu\$ semileptonic decay at nonzero recoil and its implications for \$ V_cb \$ and \$R(D^\ast)\$	VAQUERO AVILÉS-CASCO, Alejandro
	[154] \$B \to D^{(*)}\ell\nu\$ form factors from lattice QCD with relativistic heavy quarks	KANEKO, Takashi
15:20	[116] \$B_c \rightarrow B_{s(d)}\$ form factors with NRQCD and HISQ	COOPER, Laurence
15:40	[186] An exploratory study of heavy-light semileptonics using distillation	ERBEN, Felix

#### Hadron Spectroscopy and Interactions - Shimao 3A (14:20-16:00)

#### -Conveners: Sinya Aoki

time [id] title	presenter
14:20 [21] Zb tetraquark channel and \$B\bar B^*\$ interaction	PRELOVSEK, Sasa
14:40 [45] Are dynamical charm quarks necessary?	KORZEC, Tomasz
15:00 [47] Heavy four-quark and six-quark states from lattice QCD	MATHUR, Nilmani
15:20 [190] Spectroscopy of mesons with bottom quarks	RYAN, Sinead
15:40 [279] Exploration of a singly-bottom tetraquark on 2+1 flavour lattices	COLQUHOUN, Brian

#### Hadron structure - Wuchang (14:20-16:00)

#### -Conveners: Thomas Blum

time [id] title	presenter
14:20 [16] Status of the muon g-2 hadronic vacuum polarization calculation by RBC/UKQCD	LEHNER, Christoph

### **The 37th International Symposium on Lattice Field Theory** June 16 - 22, 2019 Wuhan China

14:40 [82] Update from FNAL/HPQCD/MILC on the hadronic vacuum polarization contribution to \$(g-2)_\mu\$"	DETAR, Carleton
15:00 [18] The hadronic contribution to the running of the electroweak mixing angle	CÈ, Marco
15:20 [30] The hadronic contribution to the running of the electromagnetic coupling	SAN JOSÉ PÉREZ, Miguel Teseo
15:40 [271] Taming statistical and systematic uncertainties in the hadronic vacuum polarization contribution of light quarks to the muon \$(g-2)\$	LELLOUCH, Laurent

#### Nonzero Temperature and Density - Hankou (14:20-16:00)

#### -Conveners: Owe Philipsen

#### time [id] title

### presenter

14:20	[171] The chiral phase transition temperature in (2+1)-flavor QCD	SCHMIDT, Christian
	[274] Dirac Eigenvalue spectrum of N f =2+1 QCD toward the chiral limit using HISQ fermions	ZHANG, Yu
15:00	[212] Polyakov loop susceptibility and correlators in the chiral limit	CLARKE, David

15:20 [100] Conserved charge fluctuations with smaller-than-physical quark masses	SARKAR, Mugdha
15:40 [83] Determination of the endpoint of the first order deconfiniement phase transition in the heavy quark region of QCD	EJIRI, Shinji

#### Coffee/Tea break (16:00-16:30)

#### Nonzero Temperature and Density - Hankou (16:30-17:50)

#### -Conveners: Kazuyuki Kanaya

time	e [id] title	presenter
16:30	[239] Euclidean correlation functions of the topological charge density	MAZUR, Lukas
16:50	[84] QCD Topology to High Temperatures via Improved Reweighting	JAHN, P. Thomas
17:10	[196] Axial U(1) symmetry and mesonic correlators at high temperature in \$N_f=2\$ lattice QCD	SUZUKI, Kei
17:30	[247] Symmetries of the light hadron spectrum in high temperature QCD	ROHRHOFER, Christian

#### Hadron Spectroscopy and Interactions - Shimao 3A (16:30-17:50)

#### -Conveners: Chuan Liu

time [id] title	presenter
16:30 [49] I=3/2 nucleon-pion scattering and the Delta(1232) resonance on 2+1 flavor CLS ensembles using the stochastic LapH method	ANDERSEN, Christian Walther
16:50 [59] Details of a staggered fermion data analysis	AMMER, Maximilian

#### Standard model parameters and renormalization - Shimao 3B (16:30-17:50)

#### -Conveners: Zhaofeng Liu

time	[id] title	presenter
-	25] Vector current renormalisation in momentum subtraction schemes using he HISO action	HATTON, Daniel
	150] Renormalization of bilinear and four-fermion operators through emporal moments	ISHIKAWA, Tsutomu
-	191] Non-perturbative matching of three/four-flavor Wilson coefficients with a position-space procedure	TOMII, Masaaki

#### Hadron structure - Wuchang (16:30-17:50)

#### -Conveners: Luchang Jin

time [id] title	presenter
16:30 [115] Hadronic vacuum polarization in finite volume using NNLO ChPT	AUBIN. Christopher
16:50 [27] Electromagnetic finite-size effects to the hadronic vacuum polarisation	HERMANSSON
17:10 [117] Lepton anomalous magnetic moments in Lattice QCD+QED	GIUSTI, Davide
17:30 [261] Exclusive Channel Study of the Muon HVP	MEYER, Aaron

#### Weak Decays and Matrix Elements - Shimao 5 (16:30-17:50)

#### -Conveners: Takashi Kaneko

	time [id] title		presenter
1	16:30 [158] \$B \to \pi\ell\ fermions	\nu\$ form factors and \$ V_{ub} \$ with Möbius domain v	vall KOPONEN, Jonna
1	16:50 [202] Semileptoni	c B decays with RHQ b quarks	HILL, Ryan
1	17:10 [257] B-meson se	mileptonic form factors on (2+1+1)-flavor HISQ ensem	bles GELZER, Zechariah
1		I \nu\$ and \$B \to \pi \ell \ell\$ decay form factors from lence quarks on the \$N_f = 2+1\$ asqtad ensembles	BOUCHARD, Chris

#### Public lecture - Science Hall, Central China Normal University (19:30-20:30)

time [id] title	presenter
19:30 [319] 100 Years of Proton	JI, xiangdong



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## Tuesday 18 June 2019

#### Plenary - Wuchang + Hankou (09:00-10:45)

#### -Conveners: Frithjof Karsch

time [id] title	presenter
09:00 [299] Constraining the phase diagram of QCD at finite temperature and	PHILIPSEN, Owe
09:45 [193] Recent progress on in-medium heavy flavor physics from lattice QCD	OHNO, Hiroshi
10:15 [248] \$B \to D^*\$ form factors, \$R(D^*)\$, and \$ V_{cb} \$	LYTLE, Andrew

#### Coffee/Tea break (10:45-11:15)

#### Plenary - Wuchang + Hankou (11:15-12:45)

#### -Conveners: William Detmold

time [id] title	presenter
11:15 [292] Theoretical Developments of the LaMET Approach to Parton Physics	ZHAO, Yong
11:45 [303] Developments in lattice computation of parton distributions	KARTHIK, Nikhil
12:15 [278] Physics Program and the Status of EicC	LIANG, Yutie

#### Women in Lattice - Shimao VIP (12:45-14:20)

#### -Conveners: Liuming Liu

#### Lunch break (12:45-14:20)

#### <u>Theoretical Developments</u> - Shimao 1A+1B (14:20-16:00)

#### -Conveners: Karl Jansen

time [i	id] title	presenter
-	B] Critical behavior of 4-dimensional Ising model with higher-order tensor ormalization group	AKIYAMA, Shinichiro
-	7] Tensor network study of two dimensional complex \$\phi^{4}\$ theory at e density	SAKAI, Ryo
15:00 [43]	Tensor network approach to real-time path integral	TAKEDA, SHINJI
	Phase structure and real-time dynamics of the massive Thirring model +1 dimensions using the tensor-network method	LIN, CJ. David
15:40 [38]	Entanglement suppression and emergent symmetry	KAPLAN, David

#### Algorithms and Machines - Shimao 3B (14:20-16:00)

#### -Conveners: Kate Clark

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time [id] title	presenter
14:20 [224] QCD on the Modular Supercomputer	GREGORY, Eric Brittain
14:40 [311] Lattice QCD codes on Taihu-Light Supercomputer	GONG, Ming
15:00 [312] GPU inverters on ROCm	BI, Yujiang
15:20 [111] Leadership-Class Multi-Grid Algorithms for HISQ Fermions on GPUs	WEINBERG, Evan
15:40 [188] Breaking the latency barrier: Strong scaling LQCD on GPUs	WAGNER, Mathias

#### Hadron structure - Wuchang (14:20-16:00)

#### -Conveners:CARLETONDETAR

time	e [id] title	presenter
	[74] Leading isospin breaking effects in the hadronic vacuum polarisation with open boundaries	RISCH, Andreas WITTIG,
	[123] The leading hadronic vacuum polarization contribution to \$(g-2)_{\mu}\$ using \$N_f=2+1\$ O(\$a\$) improved Wilson quarks	GÉRARDIN, Antoine
	[213] Developments in the position-space approach to the HLbL contribution to the muon \$g-2\$ on the lattice.	ASMUSSEN, Nils

#### Nonzero Temperature and Density - Hankou (14:20-16:00)

#### -Conveners: Christian Schmidt

time	e [id] title	presenter
14:20	[103] Tempered Lefschetz thimble method and its application to the Hubbard model away from half-filling	FUKUMA, Masafumi
14:40	[118] One-thimble regularisation of lattice field theories: is it only a dream?	DI RENZO, Francesco
15:00	[231] On the Lefschetz thimbles structure of the Thirring model	ZAMBELLO, Kevin
15:20	[243] Simulating gauge theories on Lefschetz Thimbles	ANDREAS ZIESCHÉ, Felix
15:40	[275] The sign problem and the Lefschetz thimbles in two dimensional Hubbard model	VALGUSHEV, Semeon

#### Hadron Spectroscopy and Interactions - Shimao 3A (14:20-16:00)

#### -Conveners: Sinead Ryan

time [id] title	presenter
14:20 [13] Meson interactions at Large Nc from Lattice QCD	ROMERO-LÓPEZ, Fernando
14:40 [176] The S-wave \$K\pi\$ amplitude and the \$K^{\star}_{0}(700)\$ resonance in \$2+1\$ flavor QCD	RENDON, Gumaro



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15:00	[236] Resonances in coupled-channel meson-meson scattering from lattice QCD	WILSON, David
15:20	[254] Pion-Pion Scattering with Elongated Boxes	CULVER, Chris
15:40	[293] Periodic Pion-Pion Scattering at the Physical Point: Update	HOYING, Daniel

#### Weak Decays and Matrix Elements - Shimao 5 (14:20-16:00)

#### -Conveners: Chris Bouchard

time	e [id] title	presenter
14:20	[161] Extraction of CKM matrix elements from lattice QCD results using dispersion relations	YAO, De-Liang
	[163] Study of intermediate states in the inclusive semi-leptonic B -> X_c l \nu decay structure functions	BAILAS, Gabriela
15:00	[73] Charmonium contribution to \$B \to K I^+I^-\$: testing the factorization approximation on the lattice	NAKAYAMA, Katsumasa
15:20	[149] Radiative leptonic decays on the lattice	MEINEL, Stefan
15:40	[177] Neutral meson mixing and related observables in the D(s) and B(s) meson systems	TSANG, J Tobias

#### Coffee/Tea break (16:00-16:30)

#### Hadron structure - Wuchang (16:30-17:50)

#### -Conveners: Vera Guelpers

time [id] title	presenter
16:30 [28] Hadronic Light-by-Light contribution to g-2 update	BLUM, Thomas
16:50 [285] Hadronic Tau deay and muon g-2	IZUBUCHI, Taku
17:10 [78] QED corrections to hadronic observables	TOTH, Balint

#### Nonzero Temperature and Density - Hankou (16:30-17:50)

#### -Conveners: Gert Aarts

time	[id] title	presenter
16:30 [2	01] The path optimization for the sign problem of low dimensional QCD	MORI, Yuto
	67] Exploring the QCD phase diagram at finite density by the complex angevim method on a 16^3 x 32 lattice	TSUTSUI, Shoichiro
17:10 [2	67] Applying Complex Langevin to Lattice QCD at finite mu.	SINCLAIR, Donald
17:30 [3	20] Meson Screening Masses in 2+1-Flavor QCD	HEGDE, Prasad

#### Hadron Spectroscopy and Interactions - Shimao 3A (16:30-17:50)

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#### -Conveners: Akaki Rusetski

time	e [id] title	presenter
16:30	[35] Scale setting for QCD with \$N_f=3+1\$ dynamical quarks	HÖLLWIESER, Roman
	[9] The Development of Hamiltonian Finite Volume Method of Two Body System within Partial Wave Mixing in Rest System	LI, Yan
17:10	[17] The general formalism of momentum transformation in the moving finite volume	WU, Jiajun
17:30	[79] The Rho Resonance Properties from N_f=2+1+1 Lattice QCD	UEDING, Martin

#### <u>Theoretical Developments</u> - Shimao 1A+1B (16:30-17:50)

#### -Conveners: Michele Pepe

time	e [id] title	presenter
16:30	[315] Cluster-size scaling in O(N) non-linear sigma models	BIETENHOLZ, Wolfgang
	[314] Merons as the Relevant Topological Charge Carriers in the 2-d O(3) Model	PINTO BARROS, Joao C.
	[23] Resurgence and fractional instanton of the SU(3) gauge theory in weak coupling regime	ITOU, Etsuko
17:30	[24] Lattice study on the twisted CP^{N-1} models on R x S^1	MISUMI, TATSUHIRO

#### Weak Decays and Matrix Elements - Shimao 5 (16:30-17:50)

#### -Conveners: Antonin Portelli

time	[id] title	presente
16:30	288] Semileptonic \$D \rightarrow K\$ decay from full lattice QCD with HISQ	CHAKRABORTY, Bipasha
	204] \$K_{l3}\$ form factors in \$N_f = 2+1\$ QCD at physical point on large /olume	KAKAZU, Junpei
	[143] Lattice QCD calculation of the two-photon contributions to K_L to mu+ mu- and pi0 to e+ e- decays	CHRIST, Norman
	[110] Calculating the two-photon contribution to the real part of the \$\pi^0 rightarrow e^+ e^-\$ decay amplitude	ZHAO, Yidi

#### Standard model parameters and renormalization - Shimao 3B (16:30-17:50)

#### -Conveners: Rainer Paul Sommer

time [id] title	presenter
16:30 [209] Calculation of PCAC mass with Wils	on fermion using gradient flow BABA, Atsushi
16:50 [198] Non-perturbative renormalization of flow	Kaon B parameter using gradient TANIGUCHI, Yusuke

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17:10	[232] Non-perturbative renormalization of \$\mathrm{O}(a)\$ improved tensor currents	JOSWIG, Fabian
17:30	[214] Non-perturbative renormalization in QCD+QED and its applications to weak decays	DI CARLO, Matteo

#### Poster-Foyer (17:50-20:10)

[id] title presenter	
[255] Heavy semileptonics with a fully relativistic mixed action	FRISON, Julien
[241] QED effects on the decay of charged pions and kaons	RAKOW, Paul
[156] Proton decay matrix elements with physical quark masses	AOKI, Yasumichi
[108] SU(3) gauge system with twelve fundamental flavors	HASENFRATZ, Anna
[284] Two-photon decay of the neutral pion from a coordinate-space	FENG, Xu
[283] Neutrinoless Double Beta Decay Amplitude of pi> pi+ e e from Infinite-volume Reconstruction Method.	TUO, Xin-yu
[39] 2019 update of \$\varepsilon_K\$ with lattice QCD inputs	LEE, Weonjong
[220] \$\chi\$SF near the electroweak scale	LYTLE, Andrew
[132] Semileptonic form factors for exclusive Bs -> K I nu and Bs -> Ds I nu decays	WITZEL, Oliver
[67] Semileptonic decays $B_{(s)} \to D_{(s)}^{(ast)} \in N_{s} $ using the OK action	JWA, Seungyeob
[61] Leptonic decays of \$B_{(s)}\$ and \$D_{(s)}\$ using the OK action	CHOI, Benjamin Jaedon
[26] Lattice QCD on a modern vector processor	WETTIG, Tilo
[170] Status of Riemann Manifold Hybrid Monte Carlo	JUNG, Chulwoo
[85] Thermal Quarkonium Mass Shift from Euclidean Correlators	ELLER, Alexander Maximilian
[113] Mistaken Identity: The Multi-State Labeling Problem	CUSHMAN, Kimmy
[172] QUDA 1.0	CLARK, Kate
[152] Structure functions from the Compton amplitude	PERLT, Holger
[122] Static force from lattice	LEINO, Viljami
[81] Thermal phase structure of a supersymmetric matrix model	SCHAICH, David
[92] A Calculation of Higher Order Taylor Expansion Coefficients	DINI, Lorenzo
[54] SO(4) invariant Higgs-Yukawa model with reduced staggered fermions	CATTERALL, simon
[14] Recent progress on (implementing) the relativistic three-particle quantization condition	ROMERO-LÓPEZ, Fernando
[229] Quarkonium suppression in non-equilibrium quark-gluon plasma	MOLDABEKOV, Zhandos
[120] Gluonic Structure of Mesons	PEFKOU, Dimitra
[215] Full \$\mathcal{O}(a)\$ improvement in EQCD	SCHLUSSER, Niels

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[139] Laplace Operator On Discretized 3 Sphere's	BERKOWITZ, Daniel
[295] Parton distribution functions of Delta^+ on the lattice	XIA, Shicheng
[41] Chiral Ward identities for Dirac eigenmodes with staggered fermions	JEONG, Hwancheol
[55] Lattice study of meson properties at fine temperature using the	WADA, Hiroaki
[306] Lattice QCD results on bottomonia at high temperatures	LARSEN, Rasmus
[187] Flux tube with dynamical fermions from high temperature SU(3) lattice	CHAGDAA, Sodbileg
[127] Staggered Fermions using Grid	STEINBRECHER, Patrick



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### Wednesday 19 June 2019

#### Physics Beyond the Standard Model - Shimao 3B (09:00-10:40)

#### -Conveners: Yasumichi Aoki

time [id] title

presenter

09:00	[36] Towards a holographic description of cosmology (I): Phase diagram of 3d SU(N) matrix field theory	JUETTNER, Andreas
	[37] Towards a holographic description of cosmology (II): Renormalisation of the 3D SU(N) scalar energy-momentum tensor	LEE, Joseph
09:40	[52] Toward the spectrum of the SU(2) adjoint Higgs model	AFFERRANTE, Vincenzo
10:00	[80] Stealth dark matter and gravitational waves	SCHAICH, David

#### Nonzero Temperature and Density - Hankou (09:00-10:40)

#### -Conveners: Alexander Rothkopf

time [id] title

#### presenter

09:00	[20] Analytic continuation of Thermal Correlators	GUPTA, Sourendu
09:20	[226] Thermal modifications of quarkonia and heavy quark diffusion from a comparison of continuum-extrapolated lattice results to perturbative QCD	KRUSE, Anna-Lena
09:40	[87] Spectral quantities in thermal QCD: a progress report from the FASTSUM collaboration	AARTS, Gert
10:00	[89] Mesonic correlators at non-zero baryon chemical potential	NIKOLAEV, Aleksandr
10:20	[88] News from bottomonium spectral functions in thermal QCD	OFFLER, Samuel

#### Hadron structure - Wuchang (09:00-10:40)

#### -Conveners: yibo yang

time	[id]	title
	L	

#### presenter

09:00	[11] Matching Quasi Generalized Parton Distributions in the RI/MOM scheme	LIU, Yu-Sheng
	[119] Accessing flavor-singlet quark and gluon parton distributions from lattice QCD	ZHANG, Jianhui
09:40	[46] Quasi-PDFs with twisted mass fermions	CICHY, Krzysztof
	[134] Parton Distribution Functions from Euclidean-Space Correlation Functions in loffe Time	RICHARDS, David
	[133] Lattice "Cross-Sections" - Pion PDFs from Pseudo-PDFs and Pseudo- Structure Functions	EGERER, Colin

#### Algorithms and Machines - Shimao 5 (09:00-10:40)

Wednesday 19 June 2019

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#### -Conveners: Patrick Steinbrecher

time [id] title	presenter
09:00 [99] Hadrons: a Grid-powered workflow management system for lattice QC measurements	CD PORTELLI, Antonin
09:20 [40] Towards higher order numerical stochastic perturbation computation applied to the twisted Eguchi-Kawai model	ISHIKAWA, Ken-Ichi
09:40 [125] Formulating Lattice Field Theory for a Quantum Computer	BROWER, Richard

#### Nonzero Temperature and Density - Shimao 1A+1B (09:00-10:40)

#### -Conveners: Francesco Di Renzo

time	e [id] title	presenter
	[233] Evading the model sign problem in the PNJL model with repulsive vector-type interaction via path optimization	OHNISHI, Akira
09:20	[180] Continuous Time Simulations of Strong Coupling LQCD at Finite Baryon Density	KLEGREWE, Marc
09:40	[230] Gauge Corrections to Strong Coupling LQCD on Anisotropic Lattices	UNGER, Wolfgang
10:00	[296] Canonical partition functions in lattice QCD at high temperature	NAKAMURA, Atsushi
10:20	[218] Computing general observables in lattice models with complex actions	FRANCESCONI, Olmo

#### Theoretical Developments - Shimao 3A (09:00-10:40)

#### -Conveners: SHINJI TAKEDA

time	e [id] title	presenter
	[140] \$(1+1)\$-d \$U(1)\$ Quantum Link Models from Effective Hamiltonians of Dipolar Molecules	SHEN, Jiayu
09:20	[159] Tailoring Non-Abelian Gauge Theory for Digital Quantum Simulation	STRYKER, Jesse
09:40	[53] Tensor network formulation of quantum gravity	CATTERALL, simon
10:00	[246] A qubit realization of O(N) sigma models	SINGH, Hersh
10:20	[272] The Hubbard model in the canonical formulation	WENGER, Urs

#### Coffee/Tea break (10:40-11:10)

#### Hadron Spectroscopy and Interactions - Shimao 3A (11:10-12:30)

#### -Conveners: Gunnar Bali

time [id] title	presenter
11:10 [29] Theoretical and practical progresses in the HAL QCD mehod	AOKI, Sinya
lattice2019.ccnu.edu.cn	

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	[42] Two-pion scattering amplitude from Bethe-Salpeter wave function at the interaction boundary	YAMAZAKI, Takeshi
	[69] Study of the pion-pion scatterings with a combination of all-to-all propagators and the HAL QCD method	AKAHOSHI, Yutaro
12:10	[70] Baryon interactions from lattice QCD at m_pi = 0.27 GeV	DOI, Takumi

#### Physics Beyond the Standard Model - Shimao 3B (11:10-12:30)

#### -Conveners: Issaku Kanamori

time [id] title	presenter
11:10 [48] Investigation of N=1 supersymmetric Yang-Mills theory	SCIOR, Philipp
11:30 [192] Continuum limit of SU(3) N=1 supersymmetric Yang-Mills theory and supersymmetric gauge theories on the lattice	BERGNER, Georg
11:50 [219] \$\mathcal{N}=1\$ Supersymmetric SU(3) Gauge Theory with a Twist	STEINHAUSER, Marc

#### Weak Decays and Matrix Elements - Shimao 5 (11:10-12:30)

#### -Conveners: Christopher Kell

time	[id] title	presenter
11:10 [ (	282] Electromagnetic corrections to leptonic pion decay from lattice QCD using infinite-volume reconstruction method	FENG, Xu
11:30 [	179] Radiative Corrections to Semileptonic Decay Rates	SACHRAJDA, Christopher
	203] A strategy for the calculation of disconnected contributions to QED and strong isospin-breaking effects.	RICHINGS, James
12:10 [	98] Electromagnetic corrections to leptonic decays	PORTELLI, Antonin

#### Hadron structure - Wuchang (11:10-12:30)

#### -Conveners: Jianhui Zhang

time [id] title	presenter
11:10 [294] Pion Valence Quark from quasi-PDF and pseudo-PDF	SHUGERT, Charles
11:30 [50] Two-current correlation functions for the nucleon on the lattice	ZIMMERMANN, Christian
11:50 [304] Scaling and higher twist in the nucleon Compton amplitude	YOUNG, Ross

#### Nonzero Temperature and Density - Shimao 1A+1B (11:10-12:30)

#### -Conveners: Wolfgang Unger

time [id] title

presenter

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11:10	[75] Lattice investigation of the phase diagram of the 1+1 dimensional Gross- Neveu model at finite number of fermion flavors	PANNULLO, Laurin
11:30	[76] \$\beta\$ dependence of the nuclear transition end points at finite quark masses	KIM, Jangho
11:50	[131] Baryon bag simulation of QCD in the strong coupling limit	ORASCH, Oliver
12:10	[225] Large \$N_c\$ behaviour of an effective lattice theory for heavy dense QCD	SCHEUNERT, Jonas Benedict

#### Nonzero Temperature and Density - Hankou (11:10-12:30)

#### -Conveners: Olaf Kaczmarek

tim	e [id] title	presenter
11:10	[86] Real-Time-Evolution of Heavy-Quarkonium Bound States	LEHMANN, Alexander
11:30	[222] Euclidean correlation functions for transport coefficients under gradient flow	SHU, Hai-Tao
11:50	[121] Heavy quark diffusion coefficient from lattice	LEINO, Viljami
12:10	[245] Lattice QCD estimate of the quark-gluon plasma photon emission rate	TONIATO, Arianna

#### Lunch break: Lunch boxes (12:30-13:30)

Excursion (13:30-17:30)



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### Thursday 20 June 2019

#### Plenary - Wuchang + Hankou (09:00-10:15)

#### -Conveners: Weonjong Lee

time [id] title	presenter
09:00 [269] Review of results of recent nucleon structure & matrix element calculations	BHATTACHARYA, Tanmoy
09:45 [316] Computing Nucleon Electric Dipole Moment from lattice QCD	OHKI, Hiroshi

#### KWA session (10:15-10:45)

-Conveners: Julius Kuti

Coffee/Tea break (10:45-11:15)

#### Plenary - Wuchang + Hankou (11:15-12:30)

#### -Conveners: Tilo Wettig

time [id] title	presenter
11:15 [182] GPUs for Lattice Field Theory	CLARK, Kate
12:00 [318] China's effort on Supercomputing: progress and applications	MENG, Xiangfei

#### Lunch break (12:30-14:00)

#### Theoretical Developments - Shimao 1A+1B (14:00-15:40)

#### -Conveners: George Fleming

#### time [id] title

	[94] New developments for worldline and worldsheet representations of lattice field theories	GATTRINGER, Christof
	[93] Worldsheet formulation and topological terms in abelian lattice gauge theories	ANOSOVA, Maria
14:40	[184] Accessing 3D CFTs in Radial Quantization on the Lattice	GASBARRO, Andrew David
15:00	[162] The Anomaly Inflow of the domain-wall fermion in odd dimension	MATSUKI, Yoshiyuki
15:20	[211] Stabilised Wilson fermions for QCD on very large lattices	FRITZSCH, Patrick

#### Hadron structure - Wuchang (14:00-15:40)

#### -Conveners: Tanmoy Bhattacharya

time [id] title

presenter

presenter

Thursday 20 June 2019

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14:00 [62] Nucleon isovector charges from physical mass domain-wall QCD	OHTA, Shigemi
14:20 [112] Hyperon couplings from \$N_f = 2 + 1\$ lattice QCD	WEISHÄUPL, Simon
14:40 [280] CalLat elastic nucleon structure, 1	WALKER-LOUD, André
15:00 [286] Updates on CalLat elastic nucleon form factors, II	CHANG, Chia Cheng
15:20 [147] Nucleon isovector couplings from 2+1 flavor lattice QCD at the physical point	TSUKAMOTO, NATSUKI

#### Physics Beyond the Standard Model - Shimao 3B (14:00-15:40)

#### -Conveners: Oliver Witzel

time [	[id]	title
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presenter

	44] chiral condensate and suscptiblity of SU(2) \$n_f=8\$ naive staggered system	KANAMORI, Issaku
14:20 [	268] Walking, the dilaton, and complex CFT (I)	KUTI, Julius
14:40 [	178] Walking, the dilaton, and complex CFT (II)	WONG, chik him
15:00 [	135] Case studies of near-conformal and conformal beta-functions	HOLLAND, Kieran
15:20 [	258] The flavor dependence of \$m_\varrho / f_\pi\$	NOGRADI, Daniel

#### Nonzero Temperature and Density - Hankou (14:00-15:40)

#### -Conveners: Tamas G. Kovacs

time [id] title		presenter
14:00 [310] Topolog	ical component of Yang-Mills fields: from lattice to collider	LIAO, Jinfeng
14:20 [290] The ordem agnetic field	er of phase transition in three flavor QCD with background I in crossover regime	TOMIYA, Akio
14:40 [273] Meson r	masses in external magnetic fields with HISQ fermions	WANG, Xiaodan
15:00 [309] Chiral m	agnetic effect in a lattice model	HOU, Defu
15:20 [34] Conductiv	vity of quark-gluon matter in the external magnetic field	ASTRAKHANTSEV, Nikita

#### Hadron Spectroscopy and Interactions - Shimao 3A (14:00-15:40)

#### -Conveners: Sasa Prelovsek

time [id] title	presenter
14:00 [68] Nucleon Mass and Omega Mass with All-HISQ Fermions at the Pl Point	nysical LIN, Yin
14:20 [109] The light baryon spectrum in the continuum limit	BALI, Gunnar
14:40 [148] First study of \$N_f=2+1+1\$ lattice QCD with physical domain-wa	II CHIU, Ting-Wai

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15:00 [155] Study of finite size effect on hadron masses and de with (5.4fm)^4 and (10.8 fm)^4 lattices at the physical po	•
15:20 [305] Towards the spectrum of flavour-diagonal pseudos QCD+QED	calar mesons in ZANOTTI, James

#### Algorithms and Machines - Shimao 5 (14:00-15:40)

#### -Conveners: Ming Gong

time	e [id] title	presenter
	[262] 2+1 Flavor Domain Wall Fermion QCD Lattices: Ensemble Production and (some) Properties	MAWHINNEY, Robert
	[185] Distance between configurations in MCMC simulations and the geometrical optimization of the tempering algorithms	MATSUMOTO, Nobuyuki
14:40	[252] Improved algorithms for generalized thimble method	ALEXANDRU, Andrei
15:00	[168] Flow-based generative models for MCMC in lattice field theory	KANWAR, Gurtej
15:20	[128] Accelerating topological transitions in the 2D Schwinger Model.	HOWARTH, Dean

#### Nonzero Temperature and Density - Hankou (16:10-17:30)

#### -Conveners: Rajiv Gavai

time	[id] title	presenter
16:10 [	32] Phase diagram of QCD in \$(B,T,\mu)\$ space from analytical continuation	KOTOV, Andrey
	207] Exploring the QCD phase diagram via reweighting from isospin chemical potential	SCHMALZBAUER, Sebastian
16:50 [	210] Caloron gas, quark localization and chiral symmetry in high-T QCD	KOVACS, Tamas G.
17:10 [	205] The Phases of Thermal QCD	HORVATH, Ivan

#### Hadron structure - Wuchang (16:10-17:30)

#### -Conveners: Ross Young

time [id] title	presenter
16:10 [3] Trace anomaly under lattice regularization	YANG, Yi-Bo
16:30 [240] Determining the glue component of the nucleon	HORSLEY, Roger
16:50 [221] Nucleon scalar charge with overlap fermions	LIU, Liuming
17:10 [234] Nucleon Sigma Terms	VARNHORST, Lukas

#### Hadron Spectroscopy and Interactions - Shimao 3A (16:10-17:30)

#### -Conveners: Nilmani Mathur

time [id] title

presenter

Thursday 20 June 2019

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16:10 [15] Bethe-Salpeter wavefunctions of hybrid charmonia	MA, Yunheng
16:30 [166] High precision determination of \$w_0\$	GUENTHER, Jana N.
16:50 [22] Interglueball potential in SU(N) lattice gauge theory	YAMANAKA, Nodoka
17:10 [7] Resonance information from lattice energy levels using chiral EFT	GUO, Zhi-Hui

### Physics Beyond the Standard Model - Shimao 3B (16:10-17:30)

#### -Conveners: LIN DAVID

time	e [id] title	presenter
	[129] Constructing a composite Higgs model with built-in large separation of scales	WITZEL, Oliver
16:30	[141] Constraining EFTs in a Theory with Light Composite Scalars	FLEMING, George
16:50	[145] Fits of SU(3) N_f=8 data to dilaton-pion effective field theory	GOLTERMAN, Maarten
	[256] A study of thermal SU(3) supersymmetric Yang-Mills theory and near- conformal theories from the gradient flow	LOPEZ, Camilo

#### <u>Theoretical Developments</u> - Shimao 1A+1B (16:10-17:10)

#### -Conveners: Tetsuya Onogi

time [id] title	presenter
16:10 [72] Domain-wall fermion and Atiyah-Patodi-Singer index	FUKAYA, Hidenori
16:30 [164] Atiyah-Patodi-Singer index theorem on a lattice	KAWAI, Naoki
16:50 [277] The nature of spontaneous and dynamical gauge symmetry breaking	GREENSITE, Jeff

Banquet (17:30-20:30)



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## Friday 21 June 2019

#### Plenary - Wuchang + Hankou (09:00-10:45)

#### -Conveners: Laurent Lellouch

time	[id] title
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presenter

09:00 [244] Recent Developments of Muon g-2 from Lattice QCD	GUELPERS, Vera
09:45 [281] The Muon g-2 experiment at Fermilab and the First Physics Run	LI, Dikai
10:15 [300] Recent developments in LQCD studies of hadron interactions	WAGMAN, Michael

#### Coffee/Tea break (10:45-11:15)

#### Plenary - Wuchang+Hankou (11:15-12:15)

#### -Conveners: Takeshi Yamazaki

time [id] title	presenter
11:15 [308] Recent progress of two-baryon problem and $\Omega\Omega$ interaction on the lattice	GONGYO, Shinya
11:45 [307] Three particles on the lattice	RUSETSKY, Akaki

#### IAC meeting - Shimao VIP (12:15-14:00)

Lunch break (12:15-14:00)

#### Nonzero Temperature and Density - Hankou (14:00-15:40)

#### -Conveners: Masakiyo Kitazawa

time	e [id] title	presenter
14:00	[208] Schwinger-Keldysh formalism for Lattice Gauge Theories	HOSHINA, Hiroki
	[12] Stress distribution in quark—anti-quark and single quark systems at nonzero temperature	YANAGIHARA, Ryosuke
	[181] Non-perturbative study of heavy quark anti-quark potential at finite temperature	BALA, Dibyendu
15:00	[51] The energy-momentum tensor in lattice QCD and the Equation of State	PEPE, Michele
15:20	[64] Critical endpoint in the continuum limit and critical endline at \$N_t=6\$ of the finite temperature phase transition of QCD with clover fermions	NAKAMURA, Yoshifumi

#### Hadron structure - Wuchang (14:00-15:40)

#### -Conveners: Shigemi Ohta

time [id] title

presenter

Friday 21 June 2019

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	[238] Quark momentum and angular momentum fractions at physical pion mass	WANG, Gen
14:20	[151] Nucleon Charges and Form factors from 2+1 clover ensembles	PARK, Sungwoo
14:40	[146] Nucleon axial and electromagnetic form factors from 2+1+1-flavor QCD	JANG, Yong-Chull
	[175] Strange nucleon form factors and isoscalar charges with \$N_f=2+1\$ \$\mathcal{O}(a)\$-improved Wilson fermions	WILHELM, Jonas
15:20	[91] Matrix elements of bound states in a finite volume	JACKURA, Andrew

#### Vacuum Structure and Confinement - Shimao 3A (14:00-15:40)

#### -Conveners: Jeff Greensite

time	e [id] title	presenter
	[71] Quark confinement in the Yang-Mills theory with a gauge-invariant gluon mass in view of the gauge-invariant BEH mechanism	SHIBATA, Akihiro
14:20	[96] Topology of Trace Deformed Yang-Mills Theory	CARDINALI, Marco
14:40	[102] Spectral Projectors Method for Staggered Fermions	BONANNO, Claudio
15:00	[189] Does confinement imply CP invariance of the strong interactions?	SCHIERHOLZ, Gerrit
15:20	[235] How to extract the "Abelian" part of double-winding Wilson loop	MATSUDO, Ryutaro

#### Algorithms and Machines - Shimao 5 (14:00-15:40)

#### -Conveners: Andrei Alexandru

time [id] title	presenter
14:00 [136] Disconnected Loop Subtraction Methods in Lattice QCD	WHYTE, Travis
14:20 [174] Frequency-splitting estimators of single-propagator traces	HARRIS, Tim
14:40 [104] Sparsening Algorithm for Multi-Body Correlation Functions	MURPHY, David
15:00 [297] Machine Learning in Lattice QCD: Confinement/Deconfinement classification in SU(2) and SU(3).	BOYDA, Denis
15:20 [173] Classifying topological sector via machine learning	KITAZAWA, Masakiyo

### Physics Beyond the Standard Model - Shimao 3B (14:00-15:40)

#### -Conveners: Vincent Drach

time	e [id] title	presenter
	[138] Resonance study of SU(2) model with 2 fundamental flavours of fermions.Resonance study of SU(2) model with 2 fundamental flavours of fermions.	JANOWSKI, Tadeusz
14:20	[65] Meson spectrum of Sp(4) lattice gauge theory with two fundamental Dirac fermions	LEE, Jong-Wan

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14:40 [195] Sp(2N) Yang-Mills towards large N.	HOLLIGAN, Jack
15:00 [263] Towards a composite Higgs and a partially composite top quark	SVETITSKY, Benjamin
15:20 [249] Gauge-invariant path-integral measure for the overalp Weyl fermions in 16 of SO(10) and the SM	KIKUKAWA, Yoshio

#### <u>Theoretical Developments</u> - Shimao 1A+1B (14:00-15:40)

#### -Conveners: Richard Brower

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time [id] title	presenter
14:00 [63] TKNN formula for general lattice Hamiltonian in odd dimensions	ONOGI, Tetsuya
14:20 [130] Spectral Methods and Running Scales in Causal Dynamical Triangulations	CLEMENTE, Giuseppe
14:40 [126] The meson spectrum of large N gauge theories	GONZALEZ-ARROYO, Antonio
15:00 [160] Numerical study of ADE-type \$\mathcal{N}=2\$ LandauGinzburg	MORIKAWA, Okuto

#### Coffee/Tea break (15:40-16:10)

#### -Conveners: Prasad Hegde

time [id] title	presenter
16:10 [101] Study of 2+1 flavor finite-temperature QCD using improved Wilson quarks at the physical point with the gradient flow	KANAYA, Kazuyuki
16:30 [57] Lattice computation of the quark propagator in Landau gauge at finite temperature	e SILVA, Paulo
16:50 [66] Partial Deconfinement	WATANABE, Hiromasa
17:10 [77] High temperature expansion method for QCD effective theories	PHAM, Quang

#### Weak Decays and Matrix Elements - Shimao 5 (16:10-17:50)

#### -Conveners: Andrew Lytle

time	e [id] title	presenter
	[106] Calculation of the \$K_L - K_S\$ mass difference for physical quark masses	WANG, Bigeng
16:30	[253] Investigating Rare Kaon Decays with the All-to-All Method	O HOGAIN, Fionn
16:50	[157] S-wave pi-pi I=0 and I=2 scattering at physical pion mass	WANG, Tianle
	[144] Update on the improved lattice calculation of direct CP-violation in K decays	KELLY, Christopher
17:30	[124] Charm CP & the lattice	SONI, Amarjit

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#### Applications Beyond QCD - Shimao 3A (16:10-17:10)

#### -Conveners: Benjamin Svetitsky

time [id] title	presenter
16:10 [142] Lattice Analysis of SU(2) with 1 Adjoint Dirac Flavor	GREBE, Anthony
16:30 [197] Lattice study of the 2-flavor U(1) gauge Higgs model at topological angle \$\theta=\pi\$	GÖSCHL, Daniel
16:50 [242] Quantum Critical Phenomena in an O(4) Fermion Chain	LIU, Hanqing

#### Chiral Symmetry - Shimao 3B (16:10-17:10)

#### -Conveners: yibo yang

time	[id] title	presenter
16:10	[183] Properties of the \$\eta\$ and \$\eta^\prime\$ mesons	SIMETH, Jakob
	[251] Zero modes of the domain wall operator for 2+1 flavor lattices with \$a^{-1} \approx 1\$ GeV	GUO, Duo

#### Hadron structure - Wuchang (16:10-17:30)

#### -Conveners: Hiroshi Ohki

time [id] title	presenter
16:10 [265] Neutron Electric Dipole Moments with Clover Fermions	YOON, Boram
16:30 [90] \$N\pi\$ excited state contamination in nucleon 3-pt functions using ChPT	BAER, Oliver
16:50 [200] Structure and transitions of nucleon excitations via parity- expanded variational analysis	STOKES, Finn

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### Saturday 22 June 2019

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#### Plenary-Wuchang+Hankou (09:00-10:45)

#### -Conveners: Anna Hasenfratz

time [id] title	presenter
09:00 [264] Models of strong electroweak symmetry breaking.	DRACH, Vincent
09:45 [302] Prospects for large N gauge theories on the lattice	GARCIA-PEREZ, Margarita
10:15 [266] Delineating the properties of neutron star matter in cold, dense QCD	KOJO, TORU

#### Coffee/Tea break (10:45-11:15)

#### Plenary - Wuchang+Hankou (11:15-11:45)

#### -Conveners: Carsten Urbach

time [id] title	presenter
11:15 [169] Quantum computing zeta-regularized vacuum expectation values	JANSEN, Karl

#### <u>Closing remarks - Future Conferences Announcement</u> - Wuchang+Hankou (11:45-12:30)

End.

## Shuttle Buses & Instructions to Taxi drivers

### **Schedule of Shuttle Buses**

	Time
Leave from Tieqiao JianGuo Hotel to the Hilton Hotel for	Leave at 16:30, 17:30 and 18:30 on Sunday
welcome reception & registration	(June 16)
Leave from Hilton Hotel to Tieqiao JianGuo Hotel	Leave at 19:00, 20:30 on Sunday (June 16)
	Leave at 8:10 sharply every morning from
Leave from Tieqiao JianGuo Hotelto the Hilton Hotel for	Monday to Saturday. For those who missed the
scientific programs	bus please take Taxi or Metro to go to the
	conference venue
Leave from Hilton Hotel to the campus of CCNU for the public lecture	Leave at 17:55 on Monday (June 17)
Leave from Hilton Hotel for excursions	Leave at 13:30 on Wednesday (June 19)
Leave from Hilton Hotel for Banquet	Leave at 17:35 on Thursday (June 20)

### Instructions to Taxi drivers

To the Hilton Hotel (conference venue):

请带我去

### 汉阳世茂希尔顿酒店

(汉阳区滨江大道 190 号, 鹦鹉 洲长江大桥旁)

### 谢谢!

Please bring me to Hilton Wuhan Riverside Hotel! Thanks!

地址/Address: 武汉市汉阳区滨江大道 190 号/No.190 Binjiang Avenue, Hanyang District, Wuhan, China 电话/Tel.: +86-27-5955888

Emergency Contact (紧急联系人) 华中师范大学物理科学与技术学院:

Ms. Ya MA:(马亚老师): +86 15527890078 Prof. Heng-Tong DING (丁亨通老师): +86 18627978786



To the Tieqiao JianGuo Hotel:

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## 铁桥建国大酒店

### (汉阳区汉阳大道 648 号)

### 谢谢!

Please bring me to TieQiaoJianGuo hotel! Thanks!

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