2021WE论坛
量子物质和量子信息分论坛

2021 WE Forum of Westlake University
Quantum Matter and Quantum Information Symposium

会议手册
—PROGRAM—

主办单位
西湖大学 | 浙江省科学技术协会 | 温州市人民政府

Organizers
Westlake University | Zhejiang Association for Science and Technology
Wenzhou Municipal People's Government

2021年10月26-27日　中国 · 杭州
October 26th-27th, 2021　Hangzhou, China

Contents（目录）

About the 2021 WE Forum

The World Young Scientist Summit (WYSS) as an academic event held once a year for the world young talents is jointly sponsored by the China Association for Science and Technology (CAST) and the People's Government of Zhejiang Province.

With its long-term vision for building a community of common destiny for all humanities, WYSS sets on the Converging the World's Talents Creating a Better Future theme; oriented for one global vision with international interests and a China voice, WYSS attracts talents from all corners of the world for their dreams in sciences. In acknowledging 'the future of science and technology is dependent of our young' being the global and century concerns, WYSS highlights its main discussion premise around world's young scientists with integrated interest from industries, venture capitals, arts and other societal endeavors. It has led to another improvement in academic and cultural exchanges, enabled leadership from world's top scientist, offered enhanced participations from young scientists and involved private entrepreneurs, to jointly address global challenges, establish a platform for talent exchange in a wider range of fields and provide a carrier of higher-level scientific and technological innovation.

The first WYSS was held with great success in Wenzhou, China, in October 2019.

Westlake University, established in 2018, is a new type of research university, a first in the history of modern China. It enjoys strong public support and aims to be a reformer in our higher education system. Westlake University is striving to cultivate top talent, to make breakthroughs in basic research and innovation in cutting-edge technologies, and to foster human development through science and technology. Founded by prominent scientists and scholars, Westlake University is committed to building a truly international, world leading, research-focused university.

The WE Forum is an international academic symposium held by Westlake University since 2018. The WE is the abbreviation of "Westlake Education" and the short name for "Westlake Education Foundation", which is the fund-raising body of Westlake University. It implies that Westlake University will focus on academic development to achieve its mission on higher education reforms and development. The WE also means you and me, implying academics are closely linked with each other. WE forum emphasizes the importance of people in academic exchanges and advocates global scholars to be participants, sharers, and contributors of academic exchanges.

In August 2021, the Secretariat of World Young Scientist Summit (WYSS) and Westlake University signed an agreement to enhance collaboration, in which the WE Forum was officially listed in the programs of WYSS.

The depth of understanding of matter structures and the precision of information control determine the level of human civilization in modern society. The development of quantum mechanics points out the way forward and provides the basic tools for exploring the deep principles of matter and information. As one of the sub-forums in 2021 WE Forum, **Quantum Matter and Quantum Information Symposium will** focus on the exploration of novel quantum states of matter and the underlying organizational principles in condensed matter physics, such as superconductivity, quantum magnetism, topological physics, ultra-cold atomic state of matter, and quantum physics research frontiers (including quantum information and quantum Computing). It aims to provide an open platform for communication and discussion for senior scholars, young researchers and students engaged in these studies, stimulate brainstorming, generate collision of the sparks of thought, and obtain inspiration to promote innovation in interdisciplinary directions. This is of great significance for promoting the exploration of new material and state structures, the research and development of new quantum materials, and the innovation of quantum technology.

The experts and graduate students who are engaged in related fields are warmly welcomed to participate in this symposium. Our symposium provides a perfect venue for an extensive and in-depth discussion on the new achievements and progress in Physics or related fields.

Time: October 26th - 27th, 2021
Venue: Hangzhou Narada Resort & Spa Liangzhu, Zhejiang, China
Sponsors: China Association for Science and Technology (CAST), The People’s Government of Zhejiang Province
Organizers: Westlake University, Zhejiang Association for Science and Technology, Wenzhou Municipal People's Government

关于本论坛

世界青年科学家峰会是中国科学技术协会与浙江省人民政府共同发起、联合主办的面向全球青年高层次人才的活动，每年举办一次。峰会以推动人类命运共同体建设为愿景目标，围绕“汇聚天下英才共创美好未来”主题，把握“全球视野、国际议题、中国声音”要求，根据“科技的未来在青年”这一全球性、时代性主题，开展国际科技人文交流，让顶尖科学家高端引领、让青年科学家深度参与、让民营企业家精准对接，共同应对全球性挑战，打造更宽领域人才交流平台、更高能级科技创新载体。

西湖大学是一所社会力量举办、国家重点支持的新型高等学校，于 2018 年 2 月 14 日正式获教育部批准设立，致力于集聚一流师资、打造一流学科、培育一流人才、产出一流成果，努力为国家科教兴国和创新驱动发展战略作出突出贡献，立志成为人类文明的重要创新引擎和孵化器。学校坚持“高起点、小而精、研究型”的办学定位，积极探索适合中国国情的新型研究型大学治理制度和鼓励原始创新的新型科技评价制度，聚焦基础前沿科学研究，注重学科交叉融合，取得了一系列具有影响力的科技创新成果。

WE 论坛（WE Forum）是西湖大学主办的大型国际性学术论坛，首届论坛于 2018 年 10 月举办。WE 是 Westlake Education 的缩写，同时，也是中文“我们”的意思。WE 论坛寓意西湖大学以学术研究为根本、促进教育事业的发展。同时，WE 论坛强调人在学术交流中的重要性，倡导全球学人做学术交流的参与者、分享者和贡献者。

2021 年 8 月，世界青年科学家峰会执委会与西湖大学签署合作协议，深化合作，在世界青年科学家峰会框架下共同举办好 WE 论坛。

2021 WE 论坛将主题确定为“加强合作，共谋未来”，旨在通过学术交流推动世界各国青年科学家的交流与合作。论坛设一个主论坛、四个分论坛，聚焦生命科学、智能科学、微纳加工、先进材料、环境资源、前沿合成与功能分子、量子物质和量子信息等学科前沿领域。

人类对物质结构的理解深度和对信息的调控水平，决定了社会的文明层次。而量子力学的发展为探索物质和信息的深层次原理，指明了前进的方向，并提供了基本工具。**量子物质和量子信息论坛**作为分论坛之一，将聚焦于凝聚态物理中对新奇量子物态及其背后组织原理的探索，比如超导电性、量子磁性、拓扑物理、超冷原子物态，和量子物理研究前沿（包括量子信息和量子计算）的互动。本论坛旨在为从事这些研究的学者和学生提供一个交流和讨论的开放平台，激发头脑风暴，产生思维碰撞和火花，获得灵感，来促进交叉学科方向的创新。这对推动探索新的物质和物态结构，研发新的量子材料，进行量子科技创新，有着重要的意义。

组委会热诚欢迎从事相关领域研究的专家、研究生参加本次研讨会，就物理及相关领域的新成就和新进展进行广泛而深入地交流与探讨。

时　　间： 2021 年 10 月 26 日-27 日

地　　点： 浙江省杭州市良渚君澜酒店

指导单位： 中国科学技术协会、浙江省人民政府

主办单位： 西湖大学、浙江省科学技术协会、温州市人民政府

Agenda（日程）

Quantum Matter and Quantum Information Symposium

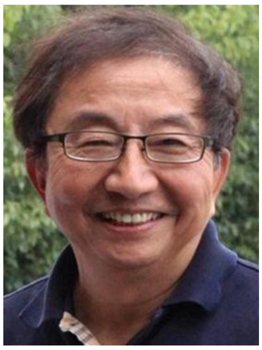
- Wenhua Hall, Hangzhou Narada Resort & Spa Liangzhu -
- 杭州良渚君澜酒店，文华厅 –

October 26th, Tuesday, Day 1	
08:30-08:40	Welcome Remarks
Session I	Chair: Fuchun Zhang (University of Chinese Academy of Sciences/ The University of Hong Kong)
08:40-10:00	**Topological Physics in Iron-Based Superconductors** Speaker 1: Jiangping Hu（Institute of Physics CAS）
	Long-Range Mutual Quantum Entanglement and Mechanism of High-*Tc* Superconductivity Speaker 2: Zhengyu Weng（Tsinghua University）
10:00-10:20	Photo-Taking / Refreshment Break
Session II	Chair: Fuchun Zhang (University of Chinese Academy of Sciences/ The University of Hong Kong)
10:20-12:20	**Lecture 3 (巡游电子与磁性自由度相互作用的实验展现)** Speaker 3: Donglai Feng（University of Science and Technology of China）
	Lecture 4 (复杂体系量子物态的超快调控和时间分辨光谱探测) Speaker 4: Nanlin Wang（Peking University）
	Cuprate High-Temperature Superconductivity in the Extreme Two-Dimensional Limit Speaker 5: Yuanbo Zhang（Fudan University）
12:20-13:30	Buffet & Lunch Break
Session III	Chair: Zhenyu Zhang（University of Science and Technology of China）
13:30-15:30	**Iron-Based Superconductors as a New Majorana Playground** Speaker 6: Hong Ding（Institute of Physics CAS）
	Quantum Transport Phenomena in $MnBi_2Te_4$ Antiferromagnetic Topological Insulators Speaker 7: Yayu Wang（Tsinghua University）
	Giant Anomalous Nernst Effect in Magnetic Topological Semimetals Speaker 8: Zhu'an Xu（Zhejiang University）
15:30-18:00	Free Tour
18:00-20:00	Dinner

October 27th, Wednesday, Day 2	
Session IV	Chair: Ruirui Du（Peking University）
08:30-10:30	**Exploiting Quantum Plasmonics for Enhanced Functionalities of Low-Dimensional Heterostructures** Speaker 9: Zhenyu Zhang（University of Science and Technology of China）
	Ferrovalley, Half-Valley and Supervalley Materials Speaker 10: Chungang Duan（East China Normal University）
	Determining the Range of Magnetic Interactions from the Relations Between Magnon Eigenvalues at High-Symmetry *k* Points Speaker 11: Xiangang Wan（Nanjing University）
10:30-10:50	Refreshment Break
Session V	Chair: Ruirui Du（Peking University）
10:50-12:10	**Phonon Magnetic Moment and Chirality: Electronic Geometrical Phase Effect** Speaker 12: Qian Niu（University of Texas at Austin/University of Science and Technology of China）
	Universal Topological Quantum Computation with Strongly Correlated Majorana Edge Modes Speaker 13: Yue Yu（Fudan University）
12:10-13:30	Buffet & Lunch Break
Session VI	Chair: Qian Niu（University of Texas at Austin/University of Science and Technology of China）
13:30-15:30	**Merits of and Challenges in Semiconductor-Based Majorana Platform** Speaker 14: Ruirui Du（Peking University）
	Determination of the Fractionalized Spin Excitations in Magnetically Ordered States via Entanglement Entropy Speaker 15: Jianxin Li（Nanjing University）
	Non-Fermi Liquid and Unconventional Superconductivity: Intrinsic Properties of an Emergent Bose Liquid Speaker 16: Wei Ku（Shanghai Jiao Tong University）
15:30-15:50	Refreshment Break
Session VII	Chair: Jianxin Li（Nanjing University）
15:50-17:50	**Exceptional Surface in a Pseudo-Hermitian Magnon Polariton System** Speaker 17: Ke Xia（Beijing Computational Science Research Center）
	Polaron Picture for the Quantum Rabi and Related Models Speaker 18: Honggang Luo（Lanzhou University）
	Exploring the Nucleon Structure at Fermi Scale Speaker 19: Hongxi Xing（South China Normal University）
18:00-20:00	Dinner

Invited Chair：Prof. Fuchun Zhang （张富春 教授）

University of Chinese Academy of Sciences/ The University of Hong Kong
(中国科学院大学/香港大学)



Prof. Fuchun Zhang is an international leader of theoretical condensed matter physics, specializing unconventional superconductivity, heavy fermion and other strongly correlated electron systems. He is best-known for the work of Zhang-Rice singlet, which plays a crucial role in understanding high *Tc* superconductors.

Prof. Zhang received Ph.D. in physics at Virginia Tech in 1983. He was a postdoc fellow in Univ. of Minnesota, Univ. of Maryland, and ETH-Zurich 1983-1988, before he joined Univ. of Cincinnati, Ohio as a faculty. He was elected as a fellow of American Physical Society in 1999, and became a university distinguished professor at Univ. of Cincinnati in 2002. He moved to Univ. of Hong Kong as Chair of Physics in 2003, and was the Head of Physics Dept for several years. Zhang joined Zhejiang Univ. in China in 2014, and has been Director of Kavli Inst. of Theoretical Science at the Univ. of Chinese Academy of Sciences since 2017.

Lecture 1：Topological Physics in Iron-Based Superconductors

Speaker：Prof. Jiangping Hu （胡江平 研究员）

Institute of Physics CAS （中国科学院物理研究所）

胡江平，1994 年北京大学技术物理系核物理专业本科毕业，1997 年中科院理论物理所硕士毕业，2002 年获美国斯坦福大学理学博士学位。2002-2004 年在加州大学洛杉矶分校做博士后研究，2004-2008 年为普渡大学物理系助理教授，2009 年被聘为普渡大学副教授。2010 年起任中国科学院物理研究所杰出研究员、博士生导师。现任中科院物理研究所副所长。

主要研究方向包括：（1）强关联电子系统理论（包括铜氧化物超导材料的理论，低维量子强关联系统，量子霍尔效应等）；（2）铁基超导体的物性和机理；（3）多铁性材料的物性和机理；（4）拓扑材料，自旋电子学和强自旋轨道结合体系的新物理规律；（5）冷原子系统的物理。

Lecture 2：Long-Range Mutual Quantum Entanglement and Mechanism of High-*Tc* Superconductivity

Speaker：Prof. Zhengyu Weng （翁征宇 教授）
Tsinghua University （清华大学）

Abstract: In the past three decades, the high-*Tc* mechanism of the cuprate superconductor has been one of the most challenging issues in the condensed matter physics. In this talk, I will first point out that due to the strong correlation effect, the Fermi statistics is fundamentally changed in a doped Mott insulator, which will be replaced by a new sign structure known as the phase string that represents a long-range spin-charge quantum entanglement. Consequently, a novel pseudogap phase emerges as a long-range quantum entangled state, whose instability towards a short-range entangled state at low-temperature will lead to the high-*Tc* superconductivity. Finally, I will briefly outline a mathematical description in the dual physical world, which may unify the complex phase diagram of the cuprate.

翁征宇，清华大学理论物理教授。1978 年考入中国科大少年班，1987 年在中国科大物理系获博士学位。1987 年在休斯顿大学做博士后并随后在德州超导中心任研究职位多年。2001 年加入清华大学高等研究院任教授。2004 年担任杨振宁讲席教授。目前主要研究方向与兴趣：凝聚态物理理论尤其是量子多体强关联系统的研究，包括各种 emergent 现象特别是非常规高温超导机理的探索。

Lecture 3：巡游电子与磁性自由度相互作用的实验展现

Speaker：Prof. Donglai Feng （封东来 教授）

University of Science and Technology of China （中国科学技术大学）

Abstract: 在关联体系中，电荷与自旋自由度的相互作用尤为重要，而它们在具体体系中层展出多样的表现形式和物态。在本报告中，我将通过 3 个例子来讲述巡游电子与局域磁矩的相互作用、局域磁矩通过巡游电子而形成的 RKKY 相互作用、巡游电子与局域磁矩的集体激发（即磁子）的相互作用。这些相互作用决定了体系的基态。其中涉及到 $4f^2$ 体系的 c-f 耦合、双杂质近藤效应的详细相图、电子与反铁磁子形成的能带扭结等是近期才被直接观察到的。

封东来，中国科学技术大学国家同步辐射实验室主任、“严济慈”讲席教授。封东来教授致力应用同步辐射谱学和散射技术、扫描隧道显微镜和分子束外延等来构筑和理解高温超导、拓扑超导、界面与二维体系等复杂量子材料及其原型器件，共发表论文 180 余篇。获得过国家自然科学二等奖、海外华人物理学会亚洲成就奖、亚太物理学会联盟杨振宁奖、美国物理学会会士、联合国教科文组织青年科学家奖等奖励。

Lecture 4：复杂体系量子物态的超快调控和时间分辨光谱探测

Speaker：Prof. Nanlin Wang （王楠林 教授）

Peking University (北京大学)

Abstract: 超短超强激光脉冲可以驱动量子材料发生超快时间尺度、非绝热的相变，实现改变温度、压力、外场等绝热变化途径完全不能达到的全新量子物态。超快调控作为量子调控的崭新手段正在成为凝聚态物理的活跃研究前沿之一，对发现新现象、新效应、新物理有着重要意义，并为开发超快时间尺度工作的量子器件奠定基础。本报告将介绍我们小组近些年在基于超短超强脉冲激光发展的时域光谱测量技术及在部分量子材料系统的应用，包括在几个不同体系实现脉冲激光诱导的超快相变，光诱导"瞬态高温超导"问题讨论，超导体中 Higgs 集体激发模式的探测等。

王楠林，北京大学物理学院量子材料科学中心讲席教授。1982 年本科毕业于郑州大学物理系，1991 年 11 月中国科技大学物理系博士毕业。主要从事超导和强关联电子体系的低温物性研究、量子物态的超快调控和时间分辨光谱探测。2012 年当选美国物理学会会士。曾获中国物理学会叶企孙物理奖，香港求是科技基金会求是杰出科技成就集体奖，国家自然科学一等奖等。

Lecture 5: Cuprate High-Temperature Superconductivity in the Extreme Two-Dimensional Limit

Speaker: Prof. Yuanbo Zhang（张远波 教授）

Fudan University （复旦大学）

Abstract: Recent experiment has demonstrated that two CuO_2 planes in a monolayer $Bi_2Sr_2CaCu_2O_{8+\delta}$ (Bi2212) contain all essential physics of high-temperature superconductivity. Here, we study cuprate superconductor in the two-dimensional limit—monolayer of $Bi_2Sr_2CuO_{6+\delta}$ (Bi2201) that contains only one CuO_2 plane. The extreme thickness brings unprecedented tunability; we succeed in covering the entire phase diagram of Bi2201 with controlled oxygenation in a single monolayer specimen, enabling us to demonstrate an anomalous metallic ground state between the superconducting and insulating region. Although the high-temperature superconductivity, along with various other correlated phenomena, persists in the monolayer, for the first time, we discover the dimensional effect in cuprate superconductors: optimal transition temperature in monolayer Bi2201 is ~ 3 K lower than that of bulk samples. Our results establish monolayer Bi2201 as a new two-dimensional material with highly tunable high-temperature superconductivity and a minimal model system of cuprate superconductor.

张远波，北京大学学士学位（2000 年），美国哥伦比亚大学博士（2006 年），美国加州大学伯克利分校米勒研究员（2006-2009），美国 IBM Almaden Research Center 博士后研究员。2011 年全职加入复旦大学，入选国家首批“青年千人计划”，于 2016 年评为“长江学者”特聘教授。张远波长期从事新型二维材料、器件的制备和量子物性研究，在石墨烯、新型二维半导体材料、二维磁性和高温超导材料、二维拓扑材料等多个方向取得了系列有影响力的研究成果。相关研究成果入选国家自然科学基金委 2014 年度十大成果，获得 2021 年上海市自然科学一等奖。获得腾讯科学探索奖（2020），“求是”杰出青年学者奖（2013），2017 年获教育部“青年科学奖”（2017），IUPAP Young Scientist Prize (IUPAP, 2010)等奖项。

Lecture 6：Iron-Based Superconductors as a New Majorana Playground

Speaker：Prof. Hong Ding（丁洪 研究员）

Institute of Physics CAS （中国科学院物理研究所）

Abstract: Majorana zero modes (MZMs) in solid materials and devices have attracted tremendous interest owing to their non-Abelian statistics and potential applications in topological quantum computation. Last ten years witness rapid progresses and serious setbacks in searching for MZMs. Recently iron-based superconductors emerged as a new and promising Majorana playground due to relatively high temperature and high purity. In this talk I will report a series of our discoveries which help to establish this iron-based Majorana platform. We have observed a superconducting topological surface state of Fe(Te, Se) with *Tc* ~ 15K by using ARPES [1], and a pristine MZM inside a vortex core of this material by using STM [2]. We have observed a half-integer level shift of vortex bound states [3] and nearly quantized Majorana conductance [4] in this material, which are hallmarks of MZMs. We have also found that most of iron-based superconductors [5], including monolayer Fe(Te, Se)/STO [6], have similar topological electronic structures. One of them, $CaKFe_4As_4$, an Fe-As bilayer superconductor (*Tc* ~ 35K), is found to possess MZM and other bound states that can be well reproduced by a simple theoretical model [7]. In addition, we found that impurities and pressure can be used as tuning methods to control MZMs in iron-based superconductors [8,9]. The combination of intrinsic topological nature of vortex and large energy spacing among the discreet bound states inside these vortices proves the Majorana nature of vortex zero-modes discovered in the iron-based superconductors, thus creating an exciting playground for realizing and manipulating Majorana modes [10].

References:

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[2] Dongfei Wang et al., *Science* 362, 334 (**2018**)
[3] Lingyuan Kong et al., *Nature Physics* 15, 1181 (**2019**)
[4] Shiyu Zhu et al., *Science* 367, 189 (**2020**)
[5] Peng Zhang et al., *Nature Physics* 15, 41 (**2019**)
[6] Xun Shi et al., *Science Bulletin* 62, 503 (**2017**)
[7] Wenyao Liu et al., *Nature Communications* 11, 5688 (**2020**)
[8] Peng Fan et al., *Nature Communications* 12, 1348 (**2021**)
[9] Lingyuan Kong et al., *Nature Communications* 12, 4146 (**2021**)
[10] Lingyuan Kong and Hong Ding, *Acta Physica Sinica* 69, 110301 (**2020**)

Prof. Hong Ding, a professor of the Institute of Physics (IOP), Chinese Academy of Sciences, and the Chief Scientist of Beijing National Laboratory for Condensed Matter Physics. He obtained BS degree in physics from Shanghai Jiao Tong University in 1990 and PhD degree in physics from University of Illinois at Chicago in 1995. He was a Postdoctoral Fellow in Argonne National Laboratory from 1996 to 1998. He was a faculty member of Department of Physics at Boston College as an assistant, associate and full professor during 1998 - 2008. He joined IOP full time in 2008. His major scientific achievements include discovery of pseudogap in cuprate superconductors, observation of s-wave superconducting gap in iron-based superconductors, discovery of Weyl fermions in solids, and discovery of Majorana zero modes in iron-based superconductors. He has published more than 280 papers with total citations over 27000 and H-index of 81 (Google Scholar). He received Sloan Research Fellowship Award in 1999, was elected as American Physical Society Fellow in 2011, received European Advanced Materials Award in 2018 and Outstanding Science and Technology Achievement Prize (Individual Prize) of Chinese Academy of Sciences in 2020.

Lecture 7：Quantum Transport Phenomena in $MnBi_2Te_4$ Antiferromagnetic Topological Insulators

Speaker：Prof. Yayu Wang（王亚愚 教授）
Tsinghua University （清华大学）

Abstract: The intricate interplay between nontrivial topology and magnetism in two dimensional materials can lead to the emergence of interesting phenomena such as the quantum anomalous Hall effect. The axion insulator is another exotic topological phase that has zero Chern number but a finite topological Chern-Simons term. Recently, the layered van der Waals compound $MnBi_2Te_4$ has been theoretically predicted and experimentally verified to be a topological insulator with interlayer antiferromagnetic order. It is a rare stoichiometric material with coexisting topology and magnetism, thus represents a perfect building block for complex topological-magnetic structures.

In this talk, we report quantum transport properties of exfoliated $MnBi_2Te_4$ flakes in a field effect transistor geometry. For the 6 septuple layer (SLs) device tuned into the insulating regime, we observe a large longitudinal resistance and zero Hall plateau, which are characteristics of an axion insulator state. The robust axion insulator state occurs in zero magnetic field, over a wide magnetic field range, and at relatively high temperatures. Moreover, a moderate magnetic field drives a quantum phase transition from the axion insulator phase to a Chern insulator phase with zero longitudinal resistance and quantized Hall resistance h/e^2 [1].

We then performed transport experiments on exfoliated $MnBi_2Te_4$ in exceedingly high magnetic fields above 60 T. Surprisingly, the Chern insulator phase with Chern number C = -1 evolves into a novel phase characterized by an extremely broad zero Hall plateau (C = 0) in the high field limit. Nonlocal transport measurements and theoretical calculations demonstrate that the C = 0 phase is a helical quantum phase arising from two topological Chern bands originated from ferromagnetic order and Zeeman-effect-induced band inversion, respectively [2].

More recently, we observe pronounced nonlocal transport signals at low magnetic fields in 6SL $MnBi_2Te_4$ the axion insulator state. As a magnetic field drives it into the Chern insulator phase, the nonlocal resistance almost vanishes due to the dissipationless nature of the chiral edge state. These results strongly suggest that the charge transport in the axion insulator state is carried by a pair of counterpropagating one-dimensional conduction channels that is proposed to appear at the hinges of the top and bottom surfaces [3]. These results shed important new lights on the quantum transport behaviors of antiferromagnetic topological insulator.

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[1] Chang Liu et al., *Nature Materials* 19, 522 (**2020**).
[2] Chang Liu et al., *Nature Communications* 12, 4647 (**2021**).
[3] Yaoxin Li et al., *arXiv 2105.10390* (**2021**).

Prof. Yayu Wang received his B.S. degree in physics from the University of Science and Technology of China in 1998 and his Ph.D. from Princeton University in 2004. From 2004 and 2007 he was a Miller research fellow at UC Berkeley. After a brief visit to MIT, he joined the physics department of Tsinghua University in December 2007, and is currently the chair of the department. His recent research interests include transport studies of topological insulators and STM studies of high temperature superconductors.

Lecture 8：Giant Anomalous Nernst Effect in Magnetic Topological Semimetals

Speaker：Prof. Zhu'an Xu（许祝安 教授）
Zhejiang University （浙江大学）

Abstract: Topological phases in magnetic materials and correlated electron materials attract various attentions because of the exotic transport properties including anomalous Hall effect (AHE), planar Hall effect, and giant Nernst effect etc. Recently the kagome lattice is known as a promising structure to study the anomalous transport properties associated with the magnetic topological phases. Here we present the giant anomalous Nernst effect and separated Berry phase contributions in three magnetic semimetals with the kagome lattice: (1) Weyl semimetal $Co_3Sn_2S_2$, (2) Dirac semimetal Fe_3Sn_2, and (3) nodal-line semimetal Fe_3GeTe_2. The effect of topological bands on the enhanced anomalous thermoelectric effect was discussed.

许祝安，浙江大学物理学系教授，浙江大学求是特聘教授，浙江省量子技术与器件重点实验室主任。1988 年中国科技大学本科毕业，1994 年浙江大学获博士学位，1997 年-2000 年普林斯顿大学访问学者。从事非常规超导电性，量子调控和拓扑量子材料研究。在铜氧化物高温超导体利用 Nernst 效应探测到 *Tc* 以上的位相型涨落。近年来在铁基超导体，量子相变和拓扑半金属材料等研究上取得进展。发表 SCI 收录学术论文 250 余篇，论文被他人引用超 6000 次。2002 年获杰出青年基金资助，2004 年聘为教育部"长江学者"特聘教授；曾获教育部自然科学一等奖和二等奖，2014 年担任科技部重大科学研究计划项目首席科学家。培养研究生 30 余名，6 名学生入选国家高层次人才计划青年项目。

Lecture 9：Exploiting Quantum Plasmonics for Enhanced Functionalities of Low-Dimensional Heterostructures

Speaker：Prof. Zhenyu Zhang（张振宇 教授）

University of Science and Technology of China （中国科学技术大学）

Abstract: In systems of reduced dimensionality containing metals as constituent building blocks, the pertinent conduction electrons are quantum mechanically confined, and their collective excited states of motion are termed plasmons. Recent research has witnessed intensive efforts on exploiting the rich quantum nature of plasmonic excitations in a wide variety of processes, including photon entanglement, solar energy harvesting, electron dephasing, and catalysis, to name just a few. In this talk, we will briefly review situations where the quantum nature of plasmons is bound to play a vital role. Then we will use a few recent representative systems to demonstrate how quantum plasmonics can be exploited to enhance the performance of low-dimensional heterostructures for optimal functionalities. Our first example is the enhanced energy transfer between plasmons and excitons in the strongly coupled regime known as the plexcitons. Here, we reveal the various spectroscopic signatures of the coupling strength and its tunability in systems of molecular species adsorbed on noble metal nanoparticles. The next example is the demonstration and understanding of drastically enhanced phase coherence of the electron transport in graphene proximity coupled with a plasmonic system. Pushing further on the scope, we show in the third example how plasmons can join force with phonons in enhancing the superconducting transition temperatures of interfacial superconductors and beyond.

张振宇，中国科学技术大学杰出讲席教授及严济慈讲席教授。1982年本科毕业于武汉大学，1989年获美国 Rutgers 大学博士学位(CUSPEA 项目)。1995-2010 年任职于美国橡树岭国家实验室（研究员至杰出研究员），1997-2011 年兼任美国 Tennessee 大学教授至讲席教授，2011 年初全职回科大。长期从事凝聚态理论研究，致力于原子尺度微观生长机理，新材料预言及物性优化，注重理论与实验互动合作，其理论预言多为实验验证。近期研究重心包括层状材料、界面超导、拓扑超导、量子反常霍尔效应、量子等离激元等。共发表 SCI 论文 310 余篇，总引用 13000 余次，并从 2014 年起连续入选 Elsevier 发布的中国高被引学者榜单。邀请报告与学术讲座 300 余次。1998 年当选美国物理学会会士，曾任两届 *Phys. Rev. Lett.*凝聚态物理副主编。

Lecture 10：Ferrovalley, Half-Valley and Supervalley Materials

Speaker：Prof. Chungang Duan（段纯刚 教授）

East China Normal University （华东师范大学）

Abstract: In this talk, I will present our recent research on valley materials. Particularly, I will introduce the concept of ferrovalley, half-valley and supervalley materials. It is very interesting that three new valley Hall effects, *i.e.* anomalous valley Hall effect, quantum anomalous valley Hall effect and quantum super-valley Hall effect, are respectively related to these materials. Our theory not only opens a new way to understand the collective motions of electrons in solid, but provides hints to create various elementary particles in a crystal universe.

Prof. Chungang Duan earned his Ph.D. degree in theoretical physics from Institute of Physics, Beijing, Chinese Academy of Sciences, China in 1998. Then he worked in University of Nebraska, USA from 1998 to 2007. In 2008, he joined East China Normal University as full professor. He is now the director of key lab of polar materials and devices, Ministry of Education, China. His group is currently working on multiferroic, spintronic, valleytronic, and neuromophic computing materials. He has published more than 200 papers in peer-reviewed journals, including *Nature Elec., Nature Commun., PRL, PNAS, Nano Lett., Adv. Mater., etc.*, with more than 9000 citations. He is also the associative editor of *NPJ Comp. Mater.,* board member of *JPCM*, *etc*.

He is the recipient of Outstanding Young Scientist Award (2011) in China. In 2017, he received the 12th Shanghai Peony Award in Science for his contribution in the study of multiferroics and magnetoelectric effect.

Lecture 11：Determining the Range of Magnetic Interactions from the Relations Between Magnon Eigenvalues at High-Symmetry *k* Points

Speaker：Prof. Xiangang Wan（万贤纲 教授）

Nanjing University （南京大学）

Abstract: Magnetic exchange interactions (MEIs) define networks of coupled magnetic moments and lead to a surprisingly rich variety of their magnetic properties. Typically MEIs can be estimated by fitting experimental results. But how many MEIs need to be included in the fitting process for a material is not clear a priori, which limits the quality of results obtained by these conventional methods. In this paper, based on linear spin-wave theory but without performing matrix diagonalization, we show that for a general quadratic spin Hamiltonian, there is a simple relation between the Fourier transform of MEIs and the sum of square of magnon energies (SSME). We further show that according to the real-space distance range within which MEIs are considered relevant, one can obtain the corresponding relationships between SSME in momentum space. We also develop a theoretical tool for tabulating the rule about SSME. By directly utilizing these characteristics and the experimental magnon energies at only a few high-symmetry k points in the Brillouin zone, one can obtain strong constraints about the range of exchange path beyond which MEIs can be safely neglected. Our methodology is also general applicable for other Hamiltonian with quadratic Fermi or Boson operators. Focus on 3d systems, we also demonstrate that the interplay between crystal symmetry and electron correlation can dramatically enhance the SOC effect in certain partial occupied orbital multiplets, through the self-consistently reinforced orbital polarization as a pivot. We then provide design principles and comprehensive databases, in which we list all the Wyckoff positions and site symmetries, in all two-dimensional (2D) and three-dimensional (3D) crystals that potentially have such enhanced SOC effect.

万贤纲，南京大学物理学院教授，1990 年至 2000 年在南京大学学习，获得学士、硕士、博士学位。2001 起在南京大学历任讲师，副教授，2010 年任教授。主要采用第一性原理和有效模型相结合的手段研究具有强自旋轨道耦合的关联电子体系。因在烧绿石结构 Ir 氧化物中预言新奇 Weyl 半金属态的理论工作及相关第一性原理电子结构计算物理研究而获得 2014 年度香港大学 Daniel Tsui (崔琦) Fellowship。2015 年，获得国家杰出青年科学基金。

Lecture 12：Phonon Magnetic Moment and Chirality: Electronic Geometrical Phase Effect

Speaker：Prof. Qian Niu（牛谦 教授）

University of Texas at Austin/University of Science and Technology of China

(美国德克萨斯大学奥斯汀分校/中国科学技术大学)

Abstract: The Born-Oppenheimer approximation assumes an adiabatic evolution of electronic states following ions' motion. During the evolution, the electronic state can collect nontrivial geometrical phase. The physical consequences of the phase will be discussed in this talk. On the one hand, the presence of a phonon can perturb the electronic system [arXiv: 2103.05786]. In response to a circularly polarized phonon, the geometrical phase leads to a topological magnetic moment expressed in a second Chern form. This refines the Born effective charge to be *k*-resolved. When a Yang's monopole presents near the parameter space of interest, the second Chern form can diverge, resulting in a large phonon magnetic moment. Topological insulators/semimetals can also have phonons with large magnetic moment. On the other hand, the electronic response can have back actions on phonon [To be submitted]. The geometrical phase leads to a non-local effective magnetic field for ions when the electronic ground state breaks time reversal symmetry. This can lift the degeneracy of optical phonons at the Gamma point and make them circularly polarized. As a result, zero-point lattice angular momentum and phonon bands with finite Chern number can arise.

Prof. Qian Niu received his B.S. Degree from Peking University in 1981, M.S. degree from University of Washington in 1983 and got a Ph.D. degree from University of Washington in 1985. He has been an assistant professor at University of Texas at Austin from 1990-1996 and was promoted to Trull Centennial Professor since 2001. Dr. Niu's research interests include： Condensed matter theory; quantum Hall effect; nanostructures and quantum devices; quasi-periodic systems and vortex dynamics. Dr. Niu is the fellow of the American Physical Society. He was also director of the International Center for Quantum Structures, Beijing from 2007 to 2008. And Dr. Niu is the Editorial Board Member of the International Journal of Modern Physics Band Modern Physics Letters B since 1995. Dr. Niu has received many awards, including Trull Centennial Fellowship (1990-1992), Blumberg Fellowship (1992-1993), NIST Precision Measurement Award (1992-1995) and Outstanding Overseas Young Scientist (1999, Natural Science Foundation of China).

Lecture 13：Universal Topological Quantum Computation with Strongly Correlated Majorana Edge Modes

Speaker：Prof. Yue Yu（虞跃 教授）

Fudan University （复旦大学）

Abstract: Majorana-based quantum gates are not complete for performing universal topological quantum computation while Fibonacci-based gates are difficult to be realized electronically. Here we show that when a strongly correlated Majorana edge mode in chiral topological superconductor is decomposed into a Fibobacci anyon τ and a thermal operator anyon ε in the tricritical Ising model, a set of universal topological quantum gates can be realized. Furthermore, the deconfinement of τ and ε via the interacting potential yields anyon collisions and gives the braiding of either τ or ε. With these braidings, complete members in a set of universal gates, the Pauli gates, Hadamard gate and extra phase gates for 1-qubit as well as the controlled-not gate for 2-qubits, are topologically assembled. Encoding quantum information and reading out the computation results can be carried out through electric signals. With the sparse-dense mixed coding, we set up the quantum circuit and design the corresponding devices with thin films of the chiral topological superconductor. As an example of the universal topological quantum computing, we show the application to Shor's integer factorization algorithm.

虞跃，复旦大学物理系教授。1982 年毕业于浙江大学物理系，1987 年在浙江大学物理系获理学博士学位。1992 年-2013 年任中国科学院理论物理研究所任副研究员、研究员。2013 年至今为复旦大学物理系教授。从事凝聚态物理理论研究，主要研究方向为凝聚态强关联物理理论和拓扑物态。

Lecture 14：Merits of and Challenges in Semiconductor-Based Majorana Platform

Speaker：Prof. Ruirui Du（杜瑞瑞 教授）
Peking University （北京大学）

Abstract: 在二维拓扑绝缘体边缘态和超导体界面实现马约拉纳零能模，是构筑拓扑量子计算平台的重要方案。其特殊优势在于，拓扑保护的本征一维通道将保证单对马约拉纳零能模的存在，以及相对容易利用半导体平面工艺扩展。实行该方案的主要挑战之一是制备高纯度的 InAs/GaSb 半导体材料并实现边缘态/超导体约瑟夫森结。我们在此方向进行了长期的实验探索，验证了反带 InAs/GaAs 异质结存在电导量子化的螺旋边缘态，并观察到其一系列重要性质，例如由于边缘态中电子关联引起的 Luttinger 液体行为，以及螺旋边缘态之间的库仑拖曳效应。近年来我们和半导体所合作，设计并生长了具有近室温能隙的 InAs/GaInSb 拓扑绝缘体，为优化和调控边缘态提供了新途径。最近我们已经初步实现高度透明的单晶铝/边缘态原位分子束外延生长，下阶段将进行直流或微波条件下的分数约瑟夫森效应实验。

杜瑞瑞，现任北京大学物理学院讲席教授。全职回国前任美国莱斯大学物理与天文系教授。杜瑞瑞毕业于复旦大学，1990 年获得美国伊利诺斯（香槟）物理学博士学位。1990 至 1994 年于普林斯顿大学与贝尔实验室进行博士后研究。杜瑞瑞教授一直从事凝聚态中低温量子输运实验研究，如量子霍尔效应和低维半导体中的其它电子输运现象，以及拓扑量子材料和拓扑量子计算的基础问题等，长期以来做出了一系列具有重要国际影响的工作。1996 年获得 Sloan 研究奖；1997 获得海外华人物理学家协会 OCPA 杰出研究奖；2003 年被选为美国物理学会 Fellow。

Lecture 15: Determination of the Fractionalized Spin Excitations in Magnetically Ordered States via Entanglement Entropy

Speaker：Prof. Jianxin Li（李建新 教授）

Nanjing University （南京大学）

Abstract: We introduce an entanglement entropy analysis to identify the fractionalized spin excitations in quantum magnets. We elaborate quantitatively the deconfinement-to-confinement transition of spinons in the anomalous spectra of a honeycomb-lattice antiferromagnet, and find that the well-defined magnons are absent completely in the itinerant edge ferromagnetic state of graphene arising from the flatband edge electronic states.

Prof. JianXin Li received his Ph.D from Wuhan University in 1993, then carried out the postdoctoral research at Nanjing University from 1993 to 1995. After that, he joined the faculty of Nanjing University and became a professor in 2001. His current research interest is theoretical condensed matter physics, mainly on strongly correlated electron systems, unconventional superconductivity, and quantum magnetism. He has won several honors including the Chang Jiang Professor by the Ministry of Education of China in 2008 and the National Outstanding Young Investigator Fund by NSFC in 2005.

Lecture 16：Non-Fermi Liquid and Unconventional Superconductivity: Intrinsic Properties of an Emergent Bose Liquid

Speaker：Prof. Wei Ku（顾威 教授）

Shanghai Jiao Tong University （上海交通大学）

Abstract: Non-Fermi liquid behavior, including the so-called strange metal, bad metal, weak insulator, and pseudo-gap behaviors, are commonly found in strongly correlated materials, particularly often accompanying unconventional superconductivity. This talk will present a coherent and consistent picture, showing that all these behaviors are generic features of an emergent Bose liquid. Even semi-quantitative agreement with experimental observations can be achieved within the same Hamiltonian and a single set of experimentally extracted parameters. Particularly interesting, at low density and temperature the theory finds the long-sought uniform Bose metal as a stable thermodynamic phase of matter, providing a simple description of the pseudo-gap phase.

Prof. Wei Ku received his PhD from University of Tennessee at Knoxville and conducted his Postdoctoral research in University of California at Davis. He then joined Brookhaven National Laboratory as an Assistant Physicist, and an Adjunct Professor of Stony Brook University and later got promoted to Associate Physicist and Physicist. In 2016, he received the Chinese National Talent Award and joined Shanghai Jiao Tong University as a Zhiyuan Professor. Since 2018, he joined Tsung-Dao Lee Institute as Head of Quantum Division and later as Deputy director of the institute. Professor Ku’s research interests include strongly correlated functional materials, unconventional superconductors, and their elementary excitations. In recent years, he has been developing an “emergent Bose liquid” theory of solids as a complementary theory of the Fermi-liquid theory to account for a wide scope of non-fermi liquid behavior and unconventional superconductivity.

Lecture 17：Exceptional Surface in a Pseudo-Hermitian Magnon Polariton System

Speaker：Prof. Ke Xia（夏钶 教授）

Beijing Computational Science Research Center （北京计算科学研究中心）

Abstract: The discovery of strong coupling between magnetic oscillations in magnetic material and electromagnetic wave in a cavity triggered a great interest in the field of cavity spintronics due to the possibility of realizing quantum information processing via magnon-polariton. Exciting new possibilities in cavity spintronics have been revealed by exploiting inherent non-Hermitian nature of the coupled magnon-photon systems.

We introduce a pseudo-Hermitian Hamiltonian allowing us to obtain a three dimensional "exceptional surface" in real parameter space in a magnon-polariton coupled system. A two-tone driving system gives rise to a complex effective coupling in our system. Possibility of tuning of the real and imaginary components of the coupling provides additional degrees of freedom. The available new dimensions allow us to form a four dimensional real parameter space, in which, a three-dimensional "exceptional surface" is proposed. We show that the pseudo-Hermitian Hamiltonian of our system has the most general form in cavity-spintronics with generalized CPT symmetry. We introduce a non-Hermitian Time-Reversal Symmetry, which leads to exceptional line and show that PT - and anti-PT -symmetries are special cases. Our proposal makes the cavity magnon polariton a rich platform for realizing intriguing phenomena of "exceptional points" regardless fabrication imperfections or exact detuning of the system frequencies.

Prof. Ke Xia, got Ph.D from the Physics Department of Nanjing University. In 2002, he joined Institute of Physics Chinese Academy of Sciences supported by Hundred Talents Program. In April 2009, he joined Department of physics, Beijing Normal University as Professor. In December 2011, he became the Head of Department till 2018. In 2020, he moved to Beijing Computational Science Research Center. Prof. Ke Xia developed an electronic structure calculation method based on nonequilibrium Green's function and coherence potential approximation. In addition, he investigated in depth the effect of spin orbit coupling on spin transport in noncollinear magnetic multilayer systems. Professor Ke Xia has published more than 120 papers. At present, he is mainly engaged in the research of cavity-spintronics and spin based Neuromorphic Computing.

Lecture 18：Polaron Picture for the Quantum Rabi and Related Models

Speaker：Prof. Honggang Luo（罗洪刚 教授）

Lanzhou University（兰州大学）

Abstract: The quantum Rabi model (QRM) [1], as a most basic archetype to describe light-matter interaction, has recently attracted a renewed interest [2-7] due to its integrability understanding and more importantly, experimental breakthroughs in upgrading atom-cavity coupling order where a full QRM is needed as well as requests on understanding its physics. However, the challenge to formulate exact wavefunction in a general case still hinders physical exploration of the QRM despite that its energy spectra are exactly available [2,4]. In this talk, we present a polaron picture to explore the physics involved in the QRM and related extensions [7]. We present a novel competition diagram of the polaron and anitpolaron in the QRM by using a variational wavefunction which facilitates to extract physics in entire parameter regimes with high accuracy. Some recent progress is also mentioned.

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罗洪刚，兰州大学教授，博士生导师，获得国家杰出青年基金资助，教育部长江学者。兰州大学物理科学与技术学院院长。1992 年兰州大学理论物理学士，1995 年兰州大学理论物理硕士， 1999 年兰州大学和德国 Giessen 大学联合培养博士。2006 年被兰州大学聘任为教授。现从事凝聚态理论与数值方法研究，在强关联电子系统、高温超导、介观输运，非线性系统及数值计算方法的发展及应用等方面共发表 130 余篇 SCI 论文。

Lecture 19：Exploring the Nucleon Structure at Fermi Scale

Speaker：Prof. Hongxi Xing （邢宏喜 研究员）

South China Normal University（华南师范大学）

Abstract: The protons and neutrons, collectively called nucleons, are the fundamental building blocks of nearly all visible matter in the universe. Within Quantum Chromodynamics, the fundamental theory of strong interaction in the standard model, the nucleons emerge as bound states of quarks and gluons at Fermi scale. Such femtoscale structure of the nucleon represents a central endeavor of modern high-energy and nuclear physics. In this talk, I will review the current status of nucleon quark-gluon structure that have been revealed by the existing accelerator facilities such as the Relativistic Heavy Ion Collider (RHIC) in US and HERMES at DESY. I will also demonstrate the essential and complementary roles of future Electron Ion Collider (EIC) in US, EicC in China, as well as the promising technology from quantum computing, to image the nucleon structure at Fermi scale.

邢宏喜，华南师范大学研究员，博士生导师。2012 年博士毕业于华中师范大学，先后在美国伯克利国家实验室、洛斯阿拉莫斯国家实验室、阿贡国家实验室/西北大学从事高能核物理的理论研究。近几年的研究工作主要围绕下一代核物理对撞机 (美国电子-离子对撞机和中国极化电子-离子对撞机) 的重要物理目标展开，主要集中在核子结构相关的物理，包括质子自旋结构、冷核介质效应、以及量子计算在核子结构研究中的应用等。共发表文章 50 余篇，其中包括 *Phys. Rev. Lett.* 4 篇。2020 年获国家优秀青年基金资助。

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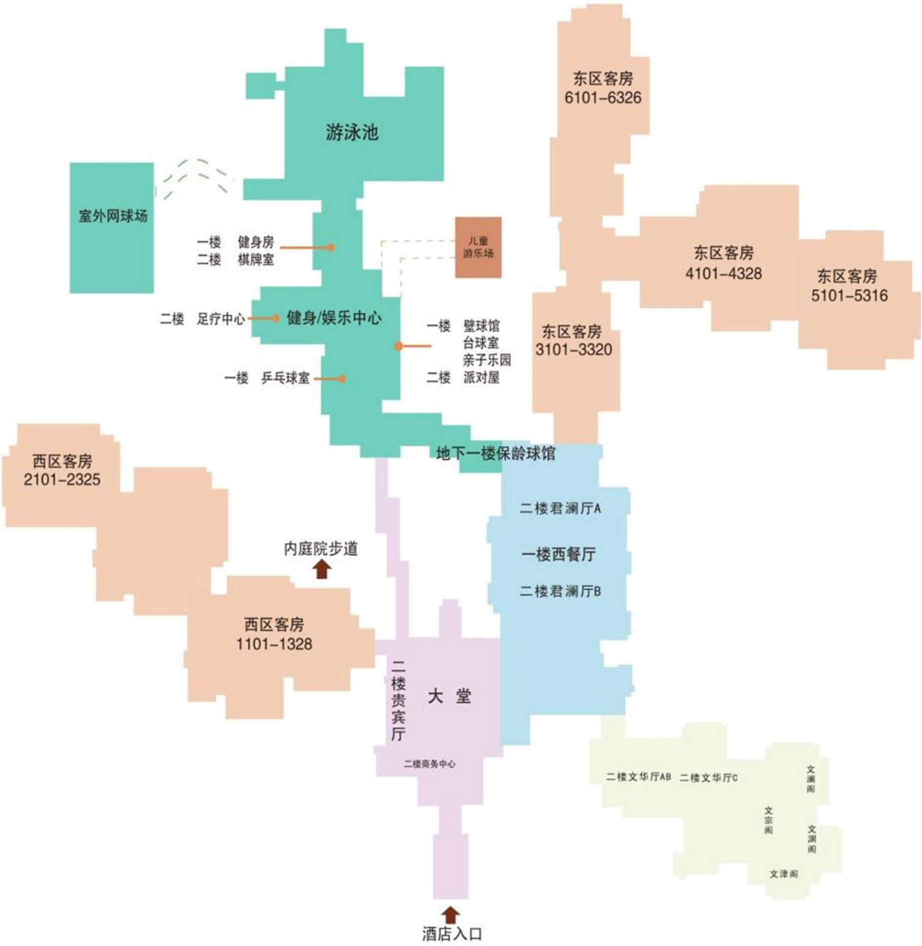

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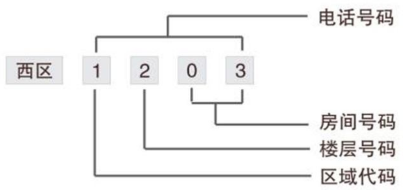

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东区对应区域代码为：3. 4. 5. 6

Transportation（交通指南）

1. If you arrive at Hangzhou Xiaoshan International Airport by plane, you can directly take a taxi from the airport to the hotel. (The distance is about 58 kilometers, and the taxi fare is about 170 yuan).

2. If you arrive at Hangzhou East Railway Station by high-speed train:

   2.1 You can directly take a taxi from Hangzhou East Railway Station to the hotel (the distance is about 26 kilometers, the taxi fare is about 80 yuan).

   2.2 You can take Metro Line 1 to Fengqi Road, transfer to Line 2 to reach Dufu Village, and then take a taxi to the hotel (taxi fee is about 13 RMB).

1. 如果您乘飞机到达杭州萧山国际机场，您可以直接乘出租车从机场到酒店。（距离约 58 公里，出租车费约 170 元人民币）。

2. 如果您乘高速列车到达杭州东站：

   2.1 您直接可以乘出租车从杭州东站到酒店（距离约 26 公里，出租车费约 80 元人民币）。

   2.2 您可以乘地铁 1 号线到凤起路，换乘 2 号线到达杜甫村，然后乘出租车到酒店（出租车费用约 13 人民币）。

Accommodation（住宿推荐）

◆ **Hangzhou Narada Resort & Spa Liangzhu**

Room type	**Standard King Room/Standard Twin Room**
Price per night	**RMB 650**

Booking process:
Step 1: Call the hotel sales manager 13656653446
Step 2: Report the name of the meeting and enjoy the special price of the meeting
Step 3: The hotel will charge a part of the room rate as a deposit (cannot be cancelled after booking)
Step 4: Booking is successful!

◆ **SSAW Boutique Hotel** (It is 3.4km away from Liangzhu Junlan Resort, 8 minutes by taxi.)

Room type	**King Room/Twin Room**
Price per night	**RMB 375**

Booking process:
Step 1: Call the hotel reception +86-571-88777766
Step 2: Report the name of the meeting and enjoy the special price of the meeting
Step 3: The hotel will charge a part of the room rate as a deposit (cannot be cancelled after booking)
Step 4: Booking is successful!

◆ **Manju Prestige Hotel · Archaeological Ruins of Liangzhu City Hangzhou** (It is 9km away from Liangzhu Junlan Resort, 20 minutes by taxi.)

Room type	**Manju King Room/Manju Twin Room**
Price per night	**RMB 358**

Booking process:
Step 1: Call the hotel reception +86-571-88669777
Step 2: Report the name of the meeting and enjoy the special price of the meeting
Step 3: The hotel will charge a part of the room rate as a deposit (cannot be cancelled after booking)
Step 4: Booking is successful!

◆ 杭州良渚君澜酒店

房间类型	标准大床房、标准双床房
价 格	650 元/晚

预订流程：
第一步：致电酒店销售，手机号：13656653446
第二步：报会议名称即可享受酒店会议价
第三步：酒店会收取一部分房费作为押金（不可取消预订）
第四步：预定成功

◆ 杭州良韵君亭酒店 (距离良渚君澜度假酒店 3.4 公里，打车 8 分钟)

房间类型	标准大床房、标准双床房
价 格	375 元/晚

预订流程：
第一步：致电酒店前台，电话：+86-571-88777766
第二步：报会议名称即可享受酒店会议价
第三步：酒店会收取一部分房费作为押金（不可取消预订）
第四步：预定成功

◆ 开元曼居臻选·杭州良渚古城遗址店 (距离良渚君澜度假酒店 9 公里, 打车 20 分钟)

房间类型	曼居大床房、曼居双床房
价 格	358 元/晚

预订流程：
第一步：致电酒店前台，电话：+86-571-88669777
第二步：报会议名称即可享受酒店会议价
第三步：酒店会收取一部分房费作为押金（不可取消预订）
第四步：预定成功

General Information（温馨提示）

◆ Registration

Service Time：13:00 – 20:00, 25th Oct.
08:00 – 20:00, 26th Oct.
08:00 – 17:00, 27th Oct.

Venue：Lobby, Hangzhou Narada Resort & Spa Liangzhu

◆ Contact Information

Ms. Qianqian CUI （+86 13738064493）

◆ Emergency Phone Numbers

119: Fire, Rescue
120: Hospital Services
110: Police

◆ Weather Information

It is autumn during October in Hangzhou, a pleasant season to visit the city. The temperature is typically between 13℃ to 21℃. It seems unlikely to rain, but just in case please take your umbrella with you.

◆ 会务服务台

服务时间：10 月 25 日 13:00 – 20:00
10 月 26 日 08:00 – 20:00
10 月 27 日 08:00 – 17:00

地点：杭州良渚君澜酒店大堂

◆ 会务联系人

崔倩倩（+86 13738064493）

◆ 紧急求救电话

119 火警电话
120 紧急医疗求救电话
110 公安报警电话

◆ 天气信息

会议时间时值金秋十月，杭州秋高气爽、金桂飘香。预计白天平均气温为 21 度，夜晚平均气温为 13 度。杭州常年多雨，友情提醒随身携带雨伞。