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COMMITTEE

Scientific Committee

Organizing committee:

Fu-Chun Zhang (张富春)	Kavli ITS, UCAS
Gerrit Bauer (包格瑞)	Tohoku Univ.
Ke Xia (夏钊)	CSRC
Bo Gu (顾波)	Kavli ITS, UCAS

Program committee:

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Gerrit Bauer (包格瑞)	Tohoku Univ.
Ke Xia (夏钊)	CSRC
Bo Gu (顾波)	Kavli ITS, UCAS
Yun-Shan Cao (曹云姗)	UESTC
Wan-Jun Jiang (江万军)	Tsinghua Univ.
Wei Han (韩伟)	PKU
Xiu-Feng Han (韩秀峰)	IOP
Tai Min (闵泰)	XJTU
Xiang-Rong Wang (王向荣)	USTHK
Di Wu (吴镛)	Nanjing Univ.
Jiang Xiao (肖江)	Fudan Univ.
Hai-Ming Yu (于海明)	BUAA
Zhe Yuan (袁喆)	BNU
Jian-Hua Zhao (赵建华)	IOS, CAS
Wei-Sheng Zhao (赵巍胜)	BUAA

Secretariat:

Ms. Tracy Jin (金楠)	Kavli ITS, UCAS
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GENERAL INFORMATION

Venue

Rm. S304, Teaching Building,
Zhong-Guan-Cun Campus, UCAS
Add: No.3, Zhong-Guan-Cun Nan Yi
Tiao, Haidian, Beijing, China

Registration

The registration desk will be opened at
the UCAS, Zhong-Guan-Cun Campus
during the following hours:
16:00-18:00, 10 October 2021
09:00-18:00, 11-15 October 2021

Catering

Lunch&dinner

Name tag will be given to you when you
register. You should present it in order
to obtain lunch & dinner.

Place: 4th Floor, Wuke Restaurant (物科
餐厅 4 层)

Morning and Afternoon Tea Breaks

Tea breaks during the workshop will be
served outside Rm. S304, Teaching
Building

Nearby Cafes and Restaurants

There are numerous cafes and
restaurants near Kavli ITS. Have fun
with Chinese food and language!

Hybrid Kavli ITS-IOP 2021 Workshop on “Multidisciplinary Spintronics”

10-15 October 2021, Beijing, China

S304, Teaching Building, Zhong-Guan-Cun Campus, UCAS

No. 3, Zhong-Guan-Cun Nan Yi Tiao, Haidian, Beijing

PROGRAM

10 October (Sunday)

16:00-18:00 Registration

11 October (Monday)

Morning session: Topology and strong correlation

Chair: Ke Xia, CSRC

09:00-09:15 **Opening** Fu-Chun Zhang, Kavli ITS, UCAS & Xin-Cheng Xie, PKU

09:15-09:45 **Sadamichi Maekawa**, RIKEN/Kavli ITS, UCAS **(On-line)**

Nonreciprocity of Surface Acoustic Waves in Magnetic Thin Films

09:45-10:15 **Zhen-Yu Zhang**, USTC

Topologicalization of 2D magnets via elemental mutation: From predictions to experiments

10:15-10:35 **Photo & Tea Break**

10:35-11:05 **Chang-Qing Jin**, IOP, CAS

Progress on New Diluted Magnetic Semiconductors with Independent Spin & Charge Doping

11:05-11:35 **Guo-Qiang Yu**, IOP, CAS

Current-driven magnetization switching in a van der Waals material-based spintronic device

11:35-12:05 **Cheng Song**, Tsinghua Univ.

Antiferromagnet: a controllable spin source

12:05-15:30 **Lunch & Break**

Afternoon session: Antiferromagnets

Chair: Wei Han, PKU

15:30-16:00 **Ming-Liang Tian**, HFIPS, CAS

Magnetic skyrmion bundles with multiple topological charges and motion dynamics driven by current

16:00-16:30 **Zhi-Cheng Zhong**, NIMTE, CAS

Spin textured band driven colossal anisotropic magnetoresistance effect in an antiferromagnetic semiconductor

16:30-17:00 **Tea Break**

17:00-17:30 **Mathias Kläui**, Johannes Gutenberg-Universität Mainz **(On-line)**

Antiferromagnetic Insulatronics: Spintronics without magnetic fields

18:00-19:30 **Welcome banquet**

12 October (Tuesday)

Morning session: Heat

Chair: Hai-Ming Yu, BUAA

09:00-09:30 **Ken-ichi Uchida**, NISM (On-line)

Transverse thermoelectric conversion using magnetic materials

09:30-10:00 **Zhen-Gang Zhu**, UCAS

Nonlinear transport theory on spin, charge and valley degree

10:00-10:30 **Ka Shen**, BNU

Strain-Driven Dzyaloshinskii-Moriya Interaction for Room-Temperature Magnetic Skyrmions

10:30-10:45 Tea Break

10:45-11:15 **Young Sun**, Chongqing Univ.

The fourth fundamental circuit element: principle and applications

11:15-11:45 **Da-Zhi Hou**, USTC

Phase boundary resolving by lock-in thermography

12:00-16:00 Lunch & Break

Afternoon session: Magnonics

Chair: Wan-Jun Jiang, Tsinghua

16:00-17:00 **Free discussion**

17:00-17:15 Tea Break

17:15-17:45 **Andrii Chumak**, Univ. of Vienna (On-line)

Inverse-design magnonics

18:00-19:30 Dinner

13 October (Wednesday)

Morning Session: Computation

Chair: Zhe Yuan, BNU

09:00-09:30 **Shunsuke Fukami**, Tohoku (On-line)

Probabilistic computing with spintronics

09:30-10:00 **Rong-Hua Liu**, Nanjing Univ.

Spin-wave dynamics in various spin current nano-oscillators

10:00-10:30 **Yuan-Yuan Mi**, Chongqing Univ. (on-line)

A Brian-inspired Computational Model for Anticipative Tracking and its Application

10:30-10:45 Tea Break

10:45-11:15 **Chao-Wei Yu**, Fudan Univ.

Intelligent Magnetic Textures

11:15-11:45 **Peng Yan**, UESTC

Magnonic Frequency Comb

12:00-16:00 Lunch & Break

Afternoon session: Mechanics

Chair: Peng Yan, UESTC

16:00-17:00 **Free discussion**

17:00-17:15 Tea Break

17:15-17:45 **Klein Olivier**, SPINTEC (On-line)

Bright and dark states of two distant macrospins strongly coupled by phonons

18:00-19:30 Dinner

14 October (Thursday)

Morning Session: Microwaves

Chair: Di Wu, Nanjing Univ.

09:00-09:30 **Eiji Saitoh**, Tokyo Univ. (On-line)

TBC

09:30-10:00 **Hai-Feng Ding**, Nanjing Univ.

Evidence of the inverse Rashba-Edelstein effect in heavy metal/Cu interfaces

10:00-10:30 **Tao Yu**, HUST

Phase boundary resolving by lock-in thermography

10:30-10:45 Tea Break

10:45-11:15 **Wei Han**, PKU

Giant oscillatory Gilbert damping in superconductor/ferromagnet/superconductor junctions

11:15-11:45 **Zhao-Chu Luo**, PKU

Chirally coupled nanomagnetic system

12:00-16:00 Lunch & Break

Afternoon session: Electronic structure

Chair: Jian-Hua Zhao, IOS, CAS

16:00-17:00 **Free discussion**

17:00-17:15 Tea Break

17:15-17:45 **Paul J. Kelly**, Univ. of Twente (On-line)

The spin Hall effect in thin films and multilayers from first principles calculations

18:00-19:30 Dinner

15 October (Friday)

Morning Session: Quantum

Chair: Yun-Shan Cao, UESTC

09:00-09:30 **Koji Usami**, Tokyo Univ. (On-line)

Magnon-exciton proximity coupling at van der Waals heterointerface

09:30-10:00 **Qiong-Yi He**, PKU

Remote Generation of Magnon Schrödinger Cat State via Magnon-Photon Entanglement

10:00-10:30 **Jian-Qiang You**, Zhejiang Univ.

Nonlinearity and non-Hermiticity in cavity magnonic systems

10:30-10:45 Tea Break

12:00-16:00 Lunch & Break

Afternoon session: Low dimensions

Chair: Ka Shen, BNU

16:00-16:30 **Shi-Wei Wu**, Fudan Univ.

16:30-17:00 **Hai-Long Wang**, IOS, CAS
Second harmonic generation of two-dimensional magnetic materials
High mobility magnetic semiconductors based on pnictides

17:00-17:15 Tea Break

17:15-17:45 **B.J. van Wees**, Univ. of Groningen (On-line)
Electrical and thermal generation of spin currents by magnetic graphene

17:45-19:30 Closing & Dinner