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# About TDLI

**In December, 2014**, professor Tsung-Dao Lee submitted a proposal to the Chinese Central Government, for establishing a top-notch physics research institute in Shanghai similar to the Niels Bohr Institute in Denmark, which could attract the greatest scientists in the world, cultivate the top scholars, and lead the development of physics and astronomy. The central government has strongly committed to this endeavor.

**In November, 2016**, Tsung-Dao Lee Institute was founded at Shanghai Jiao Tong University.

**In September, 2017**, Frank Wilczek, 2004 Nobel Laureate in physics, was appointed as the founding director of Tsung-Dao Lee Institute.

**In April, 2018**, Tsung-Dao Lee was appointed as honorary director of Tsung-Dao Lee Institute.

**The goal of Tsung-Dao Lee Institute** is to be a world famous source of original innovation, a point of convergence for the world's top scientists, and a launch platform for the careers of young scholars.

**The functions of Tsung-Dao Lee Institute** are to be a gathering point of top-notch scientists from domestic and overseas, an institute of research addressing fundamental scientific challenges; a platform of international academic exchange and collaboration; a public outreach for society.

**The Tsung-Dao Lee Institute** will concentrate on Particle & Nuclear Physics, Astronomy & Astrophysics, and Fundamental Quantum Science, particularly in understanding the extremes of our universe, the connection between ultra-large scale and the ultra-small scale, dark matter and dark energy, the most basic description and deep order of nature.

# About the SUGAR-RUSH Conference

This international conference SUGAR-RUSH will focus on large-scale structure from ongoing and future galaxy surveys, including

- ✧ latest results from ongoing surveys;
- ✧ opportunities, challenges, and synergies with next-generation galaxy surveys;
- ✧ simulation and computational development for the forthcoming data sets;
- ✧ statistical and theoretical modeling of galaxy distribution and galaxy-halo connection.

The conference will bring together survey scientists and theorists to foster discussions, aiming at maximizing the scientific returns from galaxy surveys.

Conference Website: <https://sugar-rush2018.github.io/>

## **Keynote Speakers**

Yanchuan Cai (Edinburgh)

Xuelei Chen (NAOC)

Kyle Dawson (Utah)

Daniel Gruen (Stanford)

Shirley Ho (CMU/LBL)

Fabian Koehlinger (IPMU)

Franscois Lanusse (CMU)

Masamune Oguri (Tokyo)

Eduardo Rozo (Arizona)

Masahiro Takada (IPMU)

Jeremy Tinker (NYU)

Xiaohu Yang (SJTU)

Pengjie Zhang (SJTU)

## **SOC**

Jiaxin Han (IPMU/SJTU, Co-Chair)  
Katrín Heitmann (ANL)  
Alexie Leauthaud (UCSC)  
John Peacock (Edinburgh)  
David Spergel (Flatiron/Princeton)  
Masahiro Takada (IPMU)  
Frank van den Bosch (Yale)  
Risa Wechsler (Stanford)  
Simon White (MPA)  
Zheng Zheng (Utah/TDLI, Co-Chair)  
Ying Zu (SJTU, Co-Chair)

## **LOC**

Li Fu (TDLI)  
Sheng Li (TDLI)  
Zhaozhou Li (SJTU)  
Mengzhu Lu (SJTU)  
Qiuyue Miao (SJTU)  
Yijie Ren (TDLI)  
Jinghua Shi (TDLI, Co-Chair)  
Yu Yu (SJTU)  
Jun Zhang (SJTU)  
Le Zhang (SJTU)  
Ying Zu (SJTU, Co-Chair)



# General Information



## Registration

Registration Time	Location
June 10, 17:00 - 20:00	Jian Guo Hotel
June 11, 09:00 – 12:00	Conference Venue, Lecture Hall of TDLI

**Note:** *there will be a shuttle bus leaving at 17:00 from Ji Hotel on June 10 for the reception at Jianguo Hotel, and returning at 21:00 from Jianguo Hotel back to the Ji hotel.*



## Meals

Date	Breakfast	Lunch	Dinner
June 10	-----	-----	Reception Dinner at Jian Guo Hotel
June 11	Hotel	2 <sup>nd</sup> floor, No. 4 Dining Hall	-----
June 12	Hotel	2 <sup>nd</sup> floor, No. 4 Dining Hall	-----
June 13	Hotel	2 <sup>nd</sup> floor, No. 4 Dining Hall	-----
June 14	Hotel	2 <sup>nd</sup> floor, No. 4 Dining Hall	Banquet at Downtown
June 15	Hotel	2 <sup>nd</sup> floor, No. 4 Dining Hall	-----



## Accommodation

### Option 1

Hotel Name: Jianguo Hotel (4-star)

Address: No. 439 North Cao Xi Road, Xuhui District

Tel: +8621-64399299

Below is the address of the hotel in Chinese.

酒店名称：上海建国宾馆

酒店地址：上海市徐汇区漕溪北路 439 号

电话：+8621-64399299

### **Option 2**

Hotel Name: New East Asia Hotel (4-star)

Address: No.238 East Nan Dan Road, Xuhui District

Tel: +8621-6428 2222

Below is the address of the hotel in Chinese.

酒店名称：上海新东亚酒店

酒店地址：上海市徐汇区南丹东路 238 号

电话：+8621-6428 2222

### **Option 3**

Hotel Name: Ji Hotel

Address: No.445 Humin Road, Minhang District

Tel: +8621 60292355

Below is the address of the hotel in Chinese.

酒店名称：上海全季酒店东川路店

酒店地址：上海市闵行区沪闵路 445 号

电话：+8621 60292355



## **Conference**

Time: June 11-15, 2018

Venue: Lecture Hall, underground floor of Tsung-Dao LEE Library,  
Shanghai Jiao Tong University  
800 Dongchuan Road, Minhang District

上海交通大学李政道图书馆地下一层报告厅  
闵行区东川路 800 号



## Wifi Information

### Option 1:

Wifi: SJTU-Guest

Username: TDLICONF Password: 247307

### Option 2:

Wifi: eduroam



## Contact

Jiaxin Han: 13262702145; [jiaxin.han@ipmu.jp](mailto:jiaxin.han@ipmu.jp)

Ying Zu: 13918343056; [yingzu@sjtu.edu.cn](mailto:yingzu@sjtu.edu.cn)

Zheng Zheng: 13248256597; [zhengzheng@astro.utah.edu](mailto:zhengzheng@astro.utah.edu)

Jinghua Shi: 13611947014; [jhshi87@sjtu.edu.cn](mailto:jhshi87@sjtu.edu.cn)



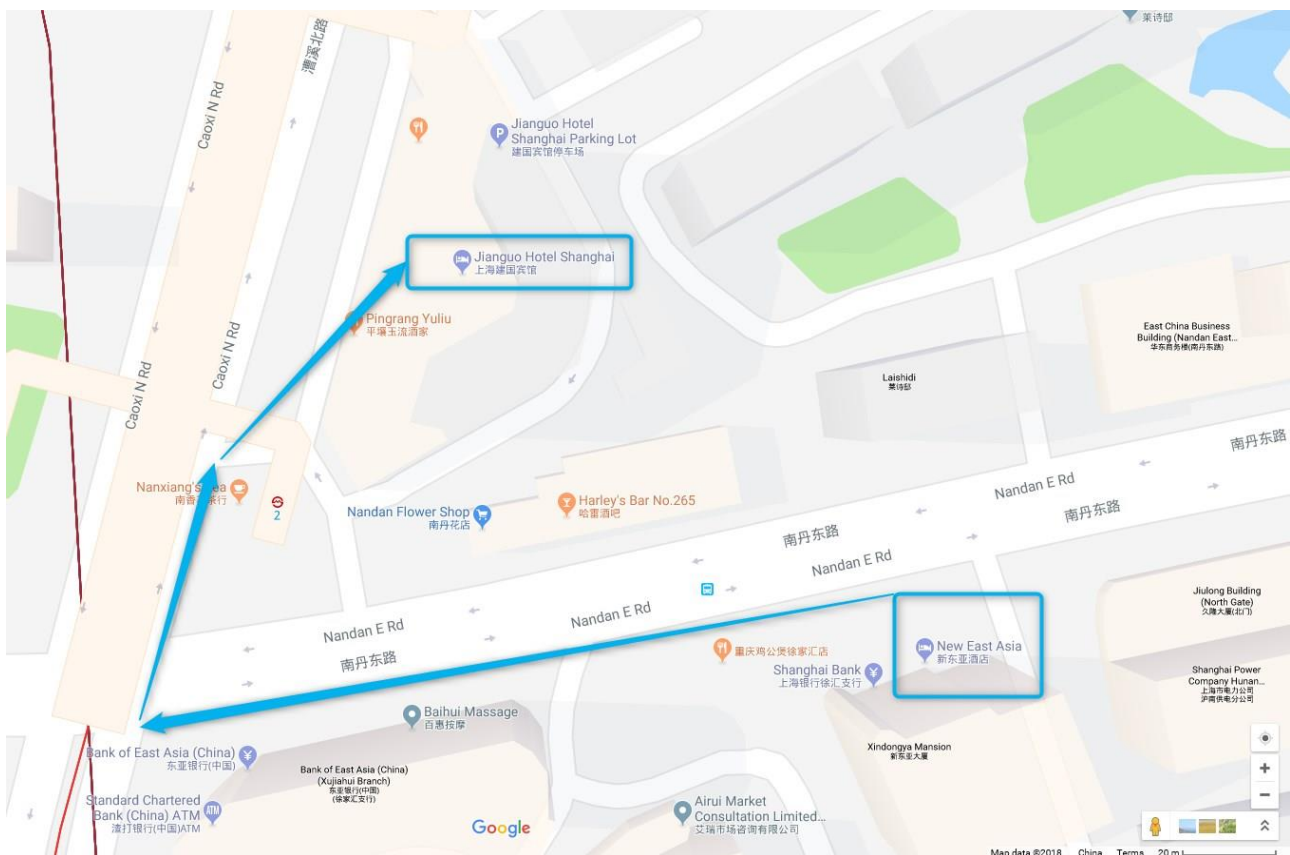
## Transportation between the Hotels and Conference Venue

### Shuttle Bus

Date	Route	Departure Time
June 11-15	Jianguo Hotel → Tsung-Dao LEE Library	8:20 AM
June 11-15	Ji Hotel → Tsung-Dao LEE Library	9:00 AM
June 11, 12, 15	Tsung-Dao LEE Library → Jianguo Hotel	5:00 PM
June 13	Tsung-Dao LEE Library → Jianguo Hotel	After Lunch
June 14	Tsung-Dao LEE Library → Banquet Restaurant	5:00 PM
June 14	Banquet Restaurant → Jianguo Hotel/Ji Hotel	9:00 PM

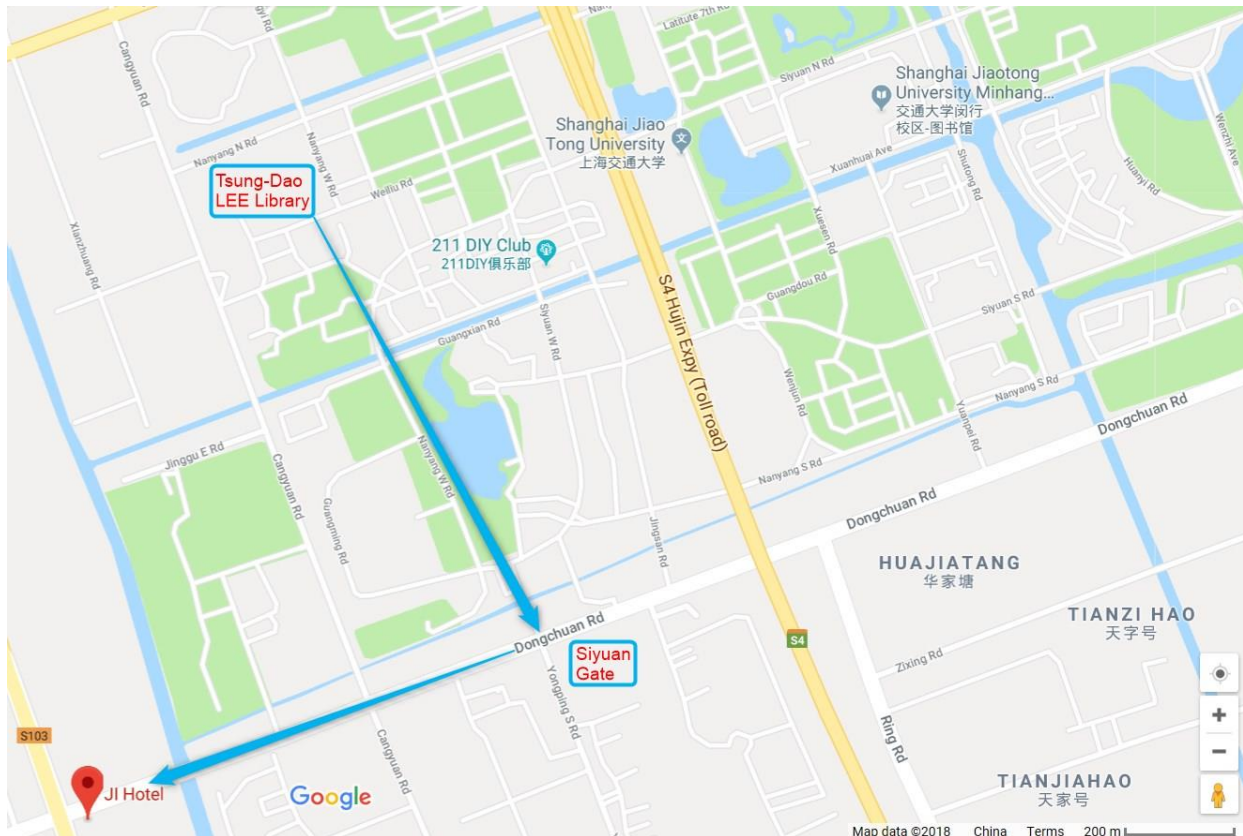
## Note:

- If you stay at **Jianguo Hotel**, please take a [shuttle bus](#) to the conference venue. The following options are provided in case you miss the shuttle bus.
  - ❖ One is taking a taxi, and it will take 40 minutes, cost 80 RMB.
  - ❖ Another one is taking a subway: Line 1 (direction: Xinzhuang) to Xinzhuang Station, transit to Line 5 (direction: Minhang Development Zone) to Jianchuan Road Station, and walk 1.2 km to the conference venue. It will take 1 hour, cost 5 RMB.
  
- If you stay at **New East Asia Hotel**, please walk to **Jianguo Hotel** and take a [shuttle bus](#) to the conference venue. There will be a volunteer leading the way from **New East Asia Hotel** to **Jianguo Hotel** (≈0.24 km, map with markers listed below).





- If you stay at **Ji Hotel**, please take a **shuttle bus** to the conference venue. The walking route from conference venue to **Ji Hotel** is shown below, which is **≈ 2.0 km, 15 minutes** by walking.



## 🚗 Transportation between Airports/Railway Stations and Hotel

### From airport/railway station to the hotel

#### 1. From Pudong International Airport

##### 1.1 Pudong International Airport→Ji Hotel

1.1.1 **By taxi:** taking around **50minutes**, costing around **180RMB**;

1.1.2 **By subway:** taking the Subway Line 2 East Extension Line(direction: Guanglan Road) to the Guanglan Road Station first, then taking Line 2 (direction: East Xujing) to the People's Square Station, then taking the line 1(direction: Xinzhuang) to the Xinzhuang Station, then taking the line 5(direction: Minhang Development Zone) to the Dongchuan Road Station ① **[2 hours 15minutes, 10RMB]**

## 1.2 Pudong International Airport → Jianguo Hotel/New East Asia Hotel

1.2.1 **By taxi:** taking around **60 minutes**, costing around **170 RMB**;

1.2.2 **By subway:** taking the Subway Line 2 East Extension Line(direction: Guanglan Road) to the Guanglan Road Station first, then taking Line 2 (direction: East Xujing) to the People's Square Station, then taking the line 1(direction: Xinzhuang) to the Xujiahui Station ② [**1 hours 30minutes, 8 RMB**]

## 2. From Hongqiao Airport

### 2.1 Hongqiao Airport→Ji Hotel

2.1.1 **By taxi:** taking around **40minutes**, costing around **100 RMB**;

2.1.2 **By subway:** taking the Subway Line 10 (direction: Xinjiangwancheng) to the Shaanxi South Road Station, then taking line 1 (direction: Xinzhuang) to the Xinzhuang Station, then taking the line 5(direction: Minhang Development Zone) to the Dongchuan Road Station ① [**1hours 20 minutes, 6RMB**]

### 2.2 Hongqiao Airport→Jianguo Hotel/New East Asia Hotel

2.2.1 **By taxi:** taking around **35minutes**, costing around **50RMB**;

2.2.2 **By subway:** taking the Subway Line 10 (direction: Xinjiangwancheng) to the Jiao Tong University Station, then taking line 11(direction: Disney) the Xujiahui Station ② [**30minutes, 4RMB**]

## 3. From Hongqiao Railway Station

### 3.1 Hongqiao Railway Station→Ji Hotel

3.1.1 **Bytaxi:** taking around **35minutes**, costing around **90RMB**;

3.1.2 **By subway:** taking the Subway Line 10 (direction: Xinjiangwancheng) to the Shaanxi South Road Station, then taking line 1 (direction: Xinzhuang) the Xinzhuang Station, then taking the line 5(direction: Minhang Development Zone) to the Dongchuan Road Station ① [**1hours 20 minutes, 6RMB**]

### 3.2 Hongqiao Railway Station → Jianguo Hotel/New East Asia Hotel

3.2.1 **By taxi:** taking around **30 minutes**, costing around **50RMB**;

3.2.2 **By subway:** taking the Subway Line 10 (direction: Xinjiangwancheng) to the Jiao Tong University Station, then taking line 11(direction: Disney) to the Xujiahui Station ② [**30minutes, 4RMB**]

#### 4. From Shanghai Railway Station

##### 4.1 Shanghai Railway Station → Ji Hotel

4.1.1 **By taxi:** taking around **55minutes**, costing around **120RMB**;

4.1.2 **By subway:** taking the Subway Line 1(direction: Xinzhuang) to the Xinzhuang Station, then taking the line 5(direction: Minhang Development Zone) to the Dongchuan Road Station ① **[1hours 10 minutes, 6RMB]**

##### 4.2 Shanghai Railway Station → Jianguo Hotel/New East Asia Hotel

4.2.1 **By taxi:** taking around **25minutes**, costing around **35RMB**;

4.2.2 **By subway:** taking the Subway Line 1(direction: Xinzhuang) to the Xujiahui Station ② **[25minutes, 4RMB]**

#### 5. From South Shanghai Railway Station

##### 5.1 South Shanghai Railway Station → Ji Hotel

5.1.1 **By taxi:** taking around **40minutes**, costing around **65RMB**;

5.1.2 **By subway:** taking the Subway Line 1 (direction: Xinzhuang) to the Xinzhuang Station, then taking the line 5(direction: Minhang Development Zone) to the Dongchuan Road Station ① **[45 minutes, 5RMB]**

##### 5.2 South Shanghai Railway Station → Jianguo Hotel/New East Asia Hotel

5.2.1 **By taxi:** taking around **25minutes**, costing around **35RMB**;

5.2.2 **By subway:** taking the Subway Line 1(direction: Fujin Road) to the Xujiahui Station ② **[16minutes, 3 RMB]**

**Note:**

- ① Dongchuan Road Station– Ji Hotel (Around **600meters**, taking around **9 minutes**)



- ② Xujiahui Station – Jianguo/New East Asia Hotel (Around**300 meters**, taking around **5 minutes**)



For foreign participants, the followings are instructions to the local taxi driver, it could be useful to get to the hotel.

请送我到上海建国宾馆，

地址：上海市徐汇区漕溪北路 439 号

如有问题，请联系石老师（13611947014）。

Please take me to the Shanghai Jianguo Hotel,

The address is No. 439 North Cao Xi Road, Xuhui District, Shanghai

In case of any problem, please contact Ms. Shi (13611947014).

请送我到上海新东亚酒店，

地址：上海市徐汇区南丹东路 238 号

如有问题，请联系石老师（13611947014）。

Please take me to the New East Asia Hotel,

The address is No.238 East Nan Dan Road, Xuhui District, Shanghai

In case of any problem, please contact Ms. Shi (13611947014).

请送我到上海全季酒店东川路店，

地址：上海市闵行区沪闵路 445 号

如有问题，请联系石老师（13611947014）。

Please take me to the Ji Hotel,

The address is No.445 Humin Road, Minhang District, Shanghai In case of any problem, please contact Ms. Shi (13611947014).

请送我到上海交通大学李政道图书馆

地址：上海市闵行区东川路 800 号

如有问题，请联系石老师（13611947014）。

Please take me to the Tsung-Dao LEE Library,

The address is No.800 Dongchuan Road, Minhang District, Shanghai

In case of any problem, please contact Ms. Shi (13611947014).

# Programme

## Monday 11 June 2018

### Current Surveys - (09:30-12:30)

- Conveners: Zheng, Zheng

time	title	presenter
09:30	Opening Remarks	ZHENG, Zheng
09:35	Welcome Remarks	JING, Yi-Peng
09:45	Cosmology from galaxies and lensing in the Dark Energy Survey	GRUEN, Daniel
10:10	Measurement of the Baryon Acoustic Oscillations from the Dark Energy Survey	CHAN, Kwan Chuen
10:30	Measuring Galaxy Clustering with DECaLS Photo-z's	ZHOU, Rongpu
10:50	Coffee Break	
11:20	Cosmology with KiDS	KOEHLINGER, Fabian
11:45	A tomographic measurement of cosmic structure growth and expansion rate from eBOSS DR14 QSO sample based on optimal redshift weights	ZHAO, Gongbo
12:05	BAO and RSD measurements with BOSS/eBOSS surveys	WANG, Yuting

### Gravitational Lensing - (14:00-17:00)

- Conveners: Zu, Ying

time	title	presenter
14:00	Gravitational lensing with Subaru Hyper Suprime-Cam survey	OGURI, Masamune
14:25	Weak Lensing Applications Based on SDSS DR7 Imaging Data	LUO, Wentao
14:45	Galaxy alignments in KiDS x GAMA	GEORGIOU, Christos
15:05	Coffee Break	
15:35	Shear Measurement with the Fourier_Quad Method	ZHANG, Jun
15:55	Cosmic Shear with Forward Modeling and Machine Learning	HERBEL, Jörg
16:15	The elliptical core power-law profile: a new lens mass model for early-type galaxies	DU, Wei
16:35	Right Here Waiting: An Efficient, Guided Search for Strongly-lensed Supernovae	SHU, Yiping

# Tuesday 12 June 2018

## **Galaxy-Halo Connection: I - (09:30-12:10)**

- **Conveners: Takada, Masahiro**

time	title	presenter
09:30	The Aemulus Project: Precision Tools for Precision Cosmology	TINKER, Jeremy
09:55	Cosmology on small scales: Emulating galaxy clustering and galaxy-galaxy lensing into the deeply nonlinear regime	WIBKING, Ben
10:15	Maturing satellite kinematics into a competitive probe of the galaxy-dark matter connection	LANGE, Johannes
10:35	Coffee Break	
11:05	Accurate determination of halo velocity bias in simulations and its cosmological implications	ZHANG, Pengjie
11:30	tomographic BAO+RSD measurement and its implications in cosmology using BOSS data	ZHENG, Jinglan
11:50	Peculiar velocity decomposition, RSD, and velocity reconstruction in redshift surveys: RSD model test	ZHENG, Yi

## **Galaxy-Halo Connection: II - (14:00-16:50)**

- **Conveners: Tinker, Jeremy**

time	title	presenter
14:00	The Conditional Color-Magnitude Distribution (CCMD) of Galaxies	ZHENG, Zheng
14:20	Multi-Variate Dependent Halo and Galaxy Assembly Bias	XU, Xiaoju
14:40	A multidimensional view of halo bias in simulations	HAN, Jiaxin
15:00	Coffee Break	
15:30	Secondary and Neighbor Bias in Halo Clustering	SALCEDO, Andres
15:50	The bimodal age distribution of accreted halos and its connection with galaxy properties	SHI, Jingjing
16:10	Investigation of Environmental Effect on Galaxies In Hydrodynamical Simulations	WANG, Yang
16:30	superthin galaxies and their relation with environment	HU, Jianhong

## **Poster Presentation - (16:50-16:52)**

time	title	presenter
16:50	Researches for Star Formation Rates in Pairs of Galaxies in SDSS DR13	SUN, Yanchun



# Wednesday 13 June 2018

## Galaxy Clusters and Near-Field Cosmology - (09:30-12:30)

- Conveners: Han, Jiaxin

time	title	presenter
09:30	Cosmological Constraints from the Abundance of redMaPPer Clusters	ROZO, Eduardo
09:55	redMaPPer clusters: comparison between simulations and observations	SUNAYAMA, Tomomi
10:15	Hyper Suprime-Cam Weak Lensing Measurement of Galaxy Clusters selected by Atacama Cosmology Telescope Polarimeter	MIYATAKE, Hironao
10:35	Hierarchical structures in galaxy clusters	YU, Heng
10:55	Coffee Break	
11:25	ELUCID simulation and its applications	YANG, Xiaohu
11:50	Measuring the halo mass of the Milky Way from satellite dynamics	LI, Zhaozhou
12:10	Can we measure the halo mass of our Milky Way accurately?	WANG, Wenting

# Thursday 14 June 2018

## **Forthcoming and Future Surveys - (09:30-12:30)**

- Conveners: Gruen, Daniel

time	title	presenter
09:30	Subaru Prime Focus Spectrograph	TAKADA, Masahiro
09:55	The Taipan galaxy survey	SAID, Khaled
10:15	Ingredients for 21cm intensity mapping	VILLAESCUSA-NAVARRO, Francisco
10:35	Coffee Break	
11:05	Large-scale Spectroscopy After DESI	DAWSON, Kyle

## **Statistical & Computational Methods: I - (14:00-16:55)**

- Conveners: Zhang, Pengjie

time	title	presenter
14:00	Revealing dark components of the Universe using the cosmic web	CAI, Yan-Chuan
14:25	Deconstructing the neutrino mass constraints from galaxy redshift surveys	BOYLE, Aoife
14:45	TianNu — nonlinear neutrino effects and next generation cosmic simulations	YU, Haoran
15:05	Coffee Break	
15:35	Gravity tests with galaxy surveys	LI, Jian
15:55	Fast modelling non-linear matter spectrum for the modified gravity	HU, Bin
16:15	ME-Gadget: An N-body Simulation code for Dark Matter Dark Energy Interaction model and more general purpose	ZHANG, Jiajun
16:35	Testing Emergent Gravity with mass densities and dynamical properties of galaxy clusters	HALENKA, Vitali

# Friday 15 June 2018

## **Statistical & Computational Methods: II - (09:30-12:30)**

- **Conveners: Rozo, Eduardo**

time	title	presenter
09:30	A new generation of statistical tools for a new generation of surveys	LANUSSE, François
09:55	Maximizing accuracy with Bayesian hierarchical inference methods	SONNENFELD, Alessandro
10:15	Non-Negative Matrix Factorization for Self-Calibration of Photometric Redshift Scatter in Weak Lensing Surveys	ZHANG, Le
10:35	Coffee Break	
11:05	Digging into Large Scale Structure with Machine Learning	HO, Shirley
11:30	Prediction of Cluster and Group Mass via a Machine Learning Approach	CALDERON, Victor
11:50	The New Era of Large-scale Structure Survey	WANG, Xin

## **HI Mapping - (14:00-16:15)**

- **Conveners: Ho, Shirley**

time	title	presenter
14:00	The Cosmic Dawn	CHEN, Xuelei
14:25	Is there an HI "fundamental plane" of star-forming galaxies? Insight from ALFALFA and SDSS	ZU, Ying
14:45	Coffee Break	
15:15	Source structure and molecular gas properties from high-resolution CO imaging of SPT-selected dusty star-forming galaxies	DONG, Chenxing
15:35	The Evolution of Star-Forming Galaxies during $z=0.7$ to $z=1.2$ with eBOSS	GUO, Hong
15:55	Conference Summary	

# About Shanghai

*Shanghai*, a vigorous and energetic international metro-polis, welcomes people from all over the world to enjoy its special atmosphere. This modern metropolis with its rich heritage of ancient Chinese culture has much to see and do. There're many attractions of Shanghai included Oriental Pearl TV Tower, the Bund, Nanjing Road, Jing'an temple, Yuyuan Garden, Disneyland Park and so on. Due to its rapid growth over the last two decades it has again become a global city, exerting influence over finance, commerce, fashion, technology and culture.

For more sightseeing information, please refer to the following

<http://www.travelchinaguide.com/cityguides/shanghai.htm>

<http://www.chinatravel.com/china-guide/>



**Yuyuan Garden** is a famous classical garden located in Anren Jie. It was finished in 1577 by a government officer of the Ming Dynasty (1368-1644) named Pan Yunduan. Yu in Chinese means pleasing and satisfying, and this garden was specially built for Pan's parents as a place for them to enjoy a tranquil and happy time in their old age.

**The Bund**, is a famous waterfront and regarded as the symbol of Shanghai for hundreds of years. It is on the west bank of Huangpu River from the Waibaidu Bridge to Nanpu Bridge and winds 0.93 mile in length. The most famous and attractive sight which is at the west side of the Bund are the various buildings of different architectural styles including Gothic, Baroque, Romanesque.

