SMBE 2025

ANNUAL MEETING OF THE SOCIETY FOR MOLECULAR BIOLOGY & EVOLUTION, 2025

July 20–24, 2025 · Beijing, China
Organized by Chinese Academy of Sciences

CONFERENCE BOOK

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Supported By

Chinese Academy of Sciences

Institute of Zoology, CAS

Academy of Mathematics and Systems Science, CAS

China Society of Animal Ecology

China Zoological Society

Evolutionary Biology Branch of the China Zoological Society

Contents

WELCOME *MESSAGE*

2025 SMBE meeting in Beijing – Looking forward to the next decade

At the upcoming SMBE annual meeting in Beijing, in addition to traditional topics, there will be a strong emphasis on emerging themes. This commitment to expanding our horizons echoes the early days of Molecular Biology and Evolution in the 1980s, a time when DNA sequencing was considered a luxury, even in the most advanced molecular biology institutions. It was the foresight of Masatoshi Nei and Walter Fitch that the future would be brighter for evolutionists. Indeed, the genomic era arrived at the turn of the century.

Nevertheless, despite the enormous growth, we have not gained the insight we wished for by unleashing a deluge of DNA and RNA sequences. In the early days of genomics, NIH (USA) called a series of meetings seeking expert opinions on sequencing chimpanzee genomes. Many voiced the optimism that, with the chimpanzee genome sequenced, we will know the origin of human intelligence, upright walking, neotenic development and so on. It has turned out that the static DNA sequences are not enough to yield such insights.

To take the next step as Nei and Fitch had taken, we have to be able to manipulate the genomes in large scale and, thus, integrate evolutionary biology with synthetic biology. The latter is the extension of what used to be referred to as Molecular Biological Engineering (MBE, for short). Furthermore, when an engineering project is launched nowadays, AI (artificial intelligence) is often employed for obvious reasons. Therefore, we call for proposals in the various interfaces of "Evolution, synthetic biology and AI".

There are other areas of research that may complete the systems of evolutionary biology but are under-cultivated by MBE. For example, in most systems we study, the sample size is one, such as the single lineage leading to modern humans. While laboratory evolution studies may remedy this inherent constraint somewhat, the evolution of somatic cells (sometimes leading to cancer) is naturally massively repeated. By harvesting the results of thousands (or even millions) of repeated events, it may be possible to fully understand the evolutionary process. Such systems can be easily subjected to manipulation. However, somatic cell evolution is often excluded by evolutionary biologists for its being too closely aligned with medicine. While it is understandable, maybe we should consider the unique characteristics of somatic cell evolution. They include phenotypic plasticity, mutation rate evolution and the unexpected working of positive vs. negative selection. In this view, somatic cell evolution is conceptually a complete evolutionary system that is rarely attained in organismal evolution.

Another criticism of evolutionary studies is that we can only study the outcome, but not the process. That may be why the ancient DNA studies deserve a Nobel. The evolution of SARS-CoV-2 during COVID-19 shows how an evolutionary process could be completely recorded. However, there are enormous confusions about COVID-19 evolution partly because the necessary evolutionary theories have not been developed. For example, genetic drift in viral evolution cannot be rigorously done as it happens in two tiers – within and between hosts. While quite a few have put in substantial efforts into COVID-19, greater investments in viral evolution from the MBE community will be necessary. For example, no evolutionists would conclude the origin of a species in one fixed location by studying only samples from that location. But that is precisely what the virology publications have concluded.

In short, we hope the SMBE meeting in Beijing will see the greater expansion of evolution studies, much like what happened by the launch of MBE itself 40 years ago.

Chung-I Wu

On behalf of the Local Organization Committee

COMMITTEES

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(Alphabetical order by last names)

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Past President, The Society for Molecular Biology and Evolution

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Rebecca Zufall
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Distinguished Professor of Ecology and Evolutionary Biology, UC Irvine
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Guang Yang

Professor, Nanjing Normal University

Weiwei Zhai

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Yongfeng Zhou

Professor, Chinese Academy of Agricultural Sciences

Xuming Zhou

Professor, Chinese Academy of Sciences

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(Alphabetical order by last names)

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Professor, Nanjing Normal University

Jian Lu
Professor, Peking University

Weiwei Zhai
Professor, Chinese Academy of Sciences

Xuemei Lyu
Professor, Chinese Academy of Sciences

Xuming Zhou
Professor, Chinese Academy of Sciences

VENUE INFORMATION

Access to Beijing Conference Center (BCC)

Beijing Conference Center
Address: No. 88, Laiguangying Westroad, Chaoyang District, Beijing.

Beijing Conference Center (BCC), located at No. 88, Laiguangying West Road, Chaoyang District, not far from the Olympic Village and Beijing Capital International Airport, covers an area of 508,000 square meters, of which 66% is covered by greenery and 50,800 square meters by the lake. It is a garden-style venue for meetings, lodging, dining, recreation/leisure and vacation. The design concept of the Center is reunion with nature. The structures are aesthetically scattered in a serene and woody environment; during the evening hours, the colourful illuminated fountain on the plaza complementing the bizarre rocks present a harmonious view. The user-friendly facilities and services ensure an easy and comfortable nature experience; even just a casual walk will be refreshing

Access to Beijing Conference Center

From Beijing Capital International Airport to Beijing Conference Center
- Taxi (about 30 minutes, RECOMMEND)
Beijing Capital International Airport provides taxi stations at the airport so that you can take a taxi from the airport to the symposia venue. Click here to see the BCC Indication Map for Taxi.
Taxi Locations:
T1: Outside Gate 1 on 1F
T2: Outside Gate 5 to 9 on 1F
T3: Please refer to the signs inside the terminal building
Fare: About RMB 70 (USD $ 11 including toll). The cost is subject to change depending on actual traffic conditions

- Airport Express Railway & Subway & Bus/Taxi (about 1 hour)
1) Take the Airport Express at Floor B2 of Parking Garage 2 for Terminal 2, or Floor 2F of Parking Garage 3 for Terminal 3.
2) Get off at Sanyuanqiao Station, and transfer to subway Line 10 (counter-clockwise loop).
3) Get off at Huixinxijienankou Station, and transfer to subway Line 5 (bound for Tiantongyuanbei)
4) Get off at Datunludong Station. Transfer to Bus No.569 or take a taxi to Beijing Conference Center.
Notes:
Availability time span of Airport Express:
T2: 6:35 am - 11:10 pm
T3: 6:20 am - 10:50 pm
Interval: 12 Minutes
Station Locations:
Terminal 2: B2 of Parking Garage No. 2
Terminal 3: 2F of Parking Garage No. 3
Fare: RMB 25 for the Airport Express plus RMB 6 for the subway (USD $ 5 total

From Beijing Daxing International Airport to Beijing Conference Center
- Taxi (about 1 hour and 10 minutes)
Please take a taxi to the driveway on the first floor of the terminal.
Fare: About RMB 240 (USD $ 35 including toll). The cost is subject to change depending on actual traffic **conditions.**

- Daxing Airport Express & Subway & Taxi (about 1.5 hours)
1) Take the Daxing Airport Express on the B1 Floor of the terminal.
2) Get off at Caoqiao Station and transfer to subway Line 19 (bound for Mudanyuan).
3) Get off at Mudanyuan station, and take a taxi to Beijing Conference Center.
Fare: About RMB 40 for airport express and subway, RMB 40 for taxi (USD $ 12 total).

From Train Station to Beijing Conference Center
- Taxi

Train Station	Distance	Fare
From Beijing Railway Station	about 40 minutes	about RMB 55 ($ USD 8)
From Beijing South Railway Station	about 55 minutes	about RMB 90 ($ USD 14)
From Beijing West Railway Station	about 45 minutes	about RMB 90 ($ USD 14)

- Subway & Bus

1) From Beijing Railway Station (about 50 minutes)

Subway Line 2 → Yonghegong Lama Temple Station, transfer to Subway Line 5 → Datunludong Station, walking 100 meters → Take Bus No. 569 at Datunludong bus stop → Get off at Beijing Conference Center bus stop → Walking 160 meters, arrive at Beijing Conference Center.

2) From Beijing South Railway Station (about 1 hour)

Subway Line 14 → Puhuangyu Station, transfer to Subway Line 5 → Datunludong Station, walking 100 meters → Take Bus No. 569 at Datunludong bus stop → Get off at Beijing Conference Center bus stop → Walking 160 meters, arrive at Beijing Conference Center.

3) From Beijing West Railway Station (about 1 hour and 10 minutes)

Subway Line 7 → Ciqi Kou Station, transfer to Subway Line 5 → Datunludong Station, walking 100 meters → Take Bus No. 569 at Datunludong bus stop → Get off at Beijing Conference Center bus stop → Walking 160 meters, arrive at Beijing Conference Center.
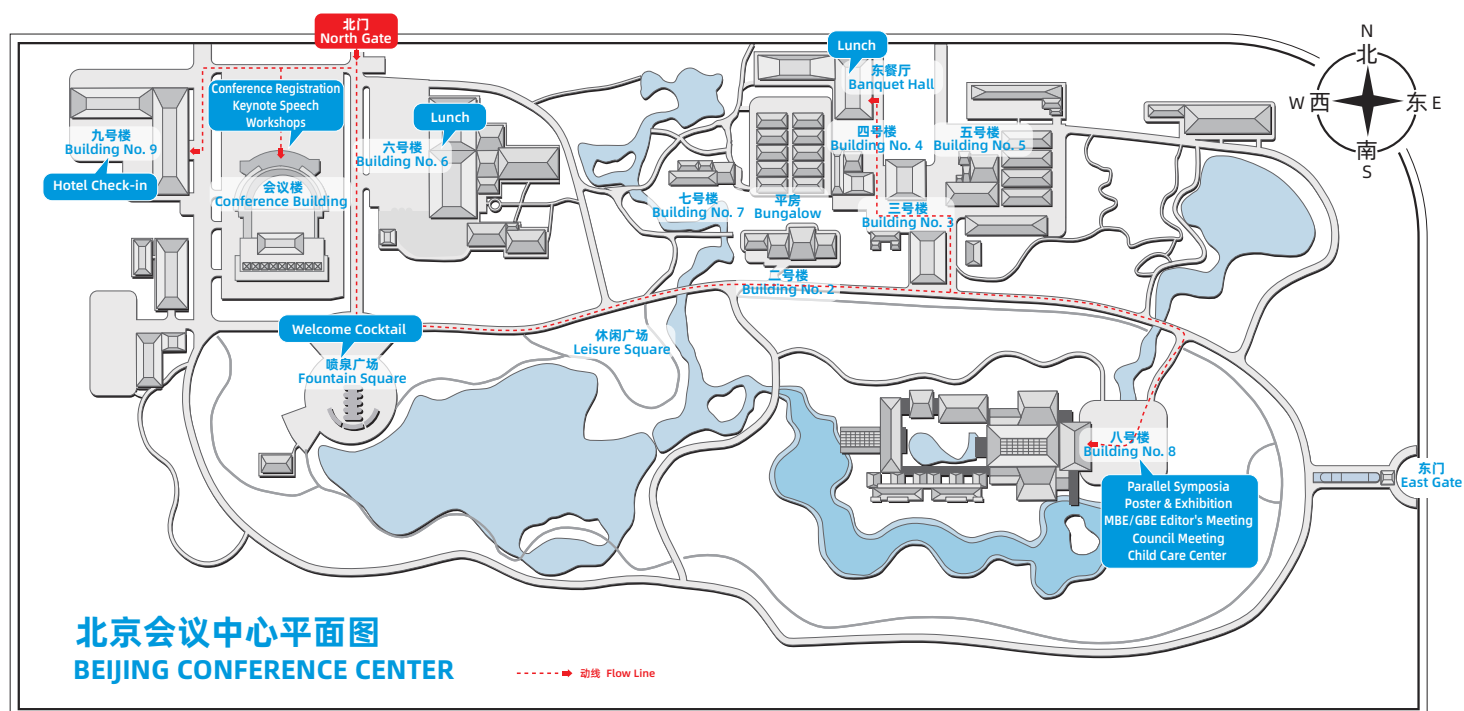
Fare: About RMB 7(USD $1.1) for the above route

Parking:

Beijing Conference Center will supply free parking spaces for SMBE 2025 participants. You could get the parking license from the official web. If you forget to download the parking license before the congress, please come to the registration desk to get one.

Map of Beijing Conference Center (BCC)

BCC Hotel Check-in

Check-in location: all the guests need to check in at the front desk on the lobby floor of **Building No. 9** (suggest entering from the North Gate of the Beijing Conference Center)

Payment: Please pay full amount of your room cost directly to the hotel. The receipt/fapiao of full payment will be issued by the hotel when you checkout.

SMBE 2025 Hospitality Desk: SMBE 2025 sets up a hospitality desk nearby the hotel front desk, if any assistance needed please let the working staff at this desk know, the staff will assist you on hotel issues. The opening hours of the hospitality desk are as follows:

Date	Lobby Floor of Building No. 9
Friday, July 18	08:00-24:00
Saturday, July 19	08:00-24:00
Sunday, July 20	08:00-24:00
Monday, July 21	08:00-18:00
Tuesday, July 22	08:00-18:00
Wednesday, July 23	08:00-18:00
Thursday, July 24	08:00-18:00
Friday, July 25	08:00-18:00
Saturday, July 26	08:00-18:00

Floor Plan of Conference Building

FLOOR PLAN

1F

Main Entrance of
Conference Building

Speaker Ready Room

Registration Desk

Tour Desk

Auditorium

Meeting Room 3
Workshop 3

Meeting Room 2
Workshop 2

Meeting Room 1
Workshop 1
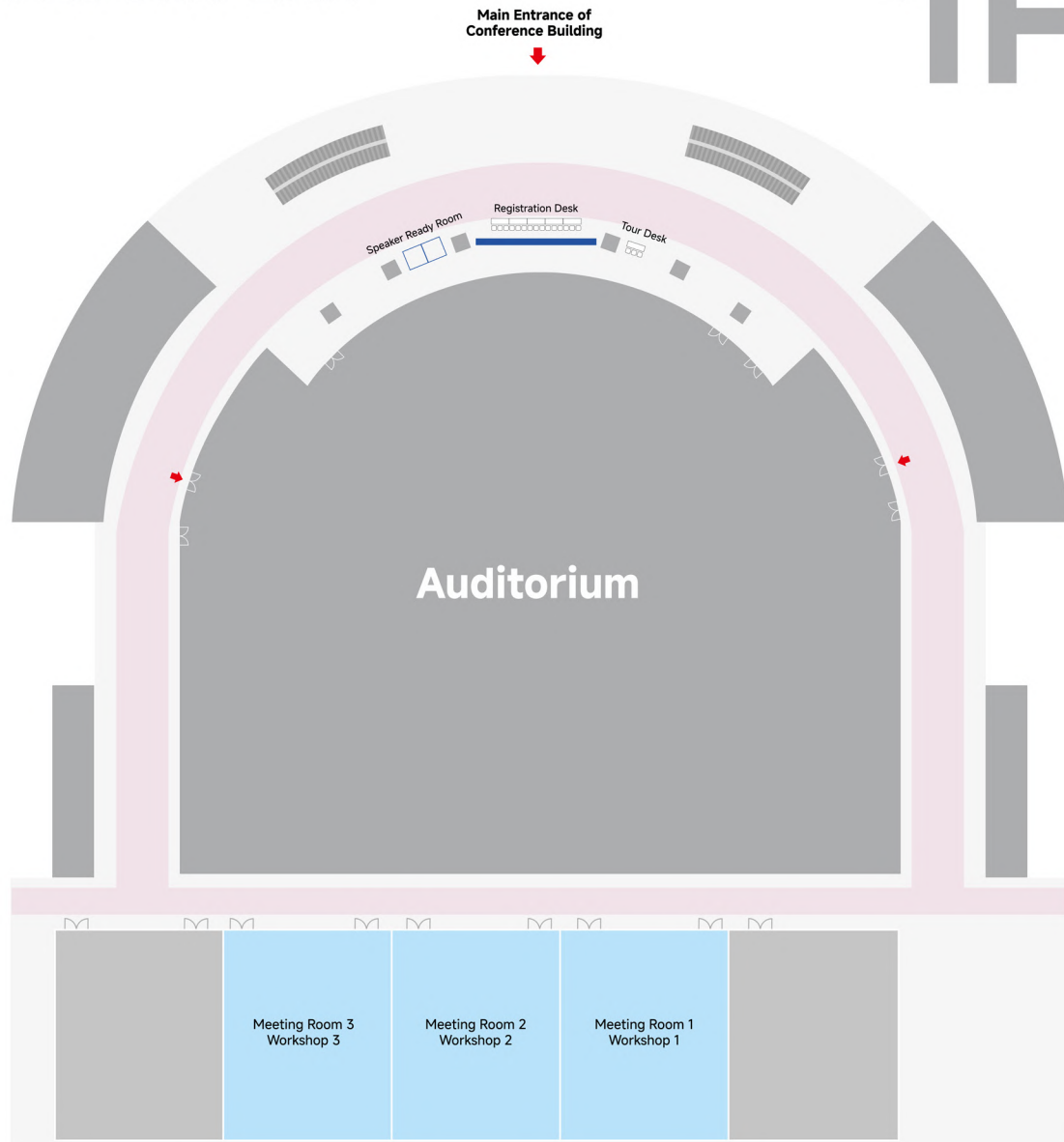
Floor Plan of Building No. 8

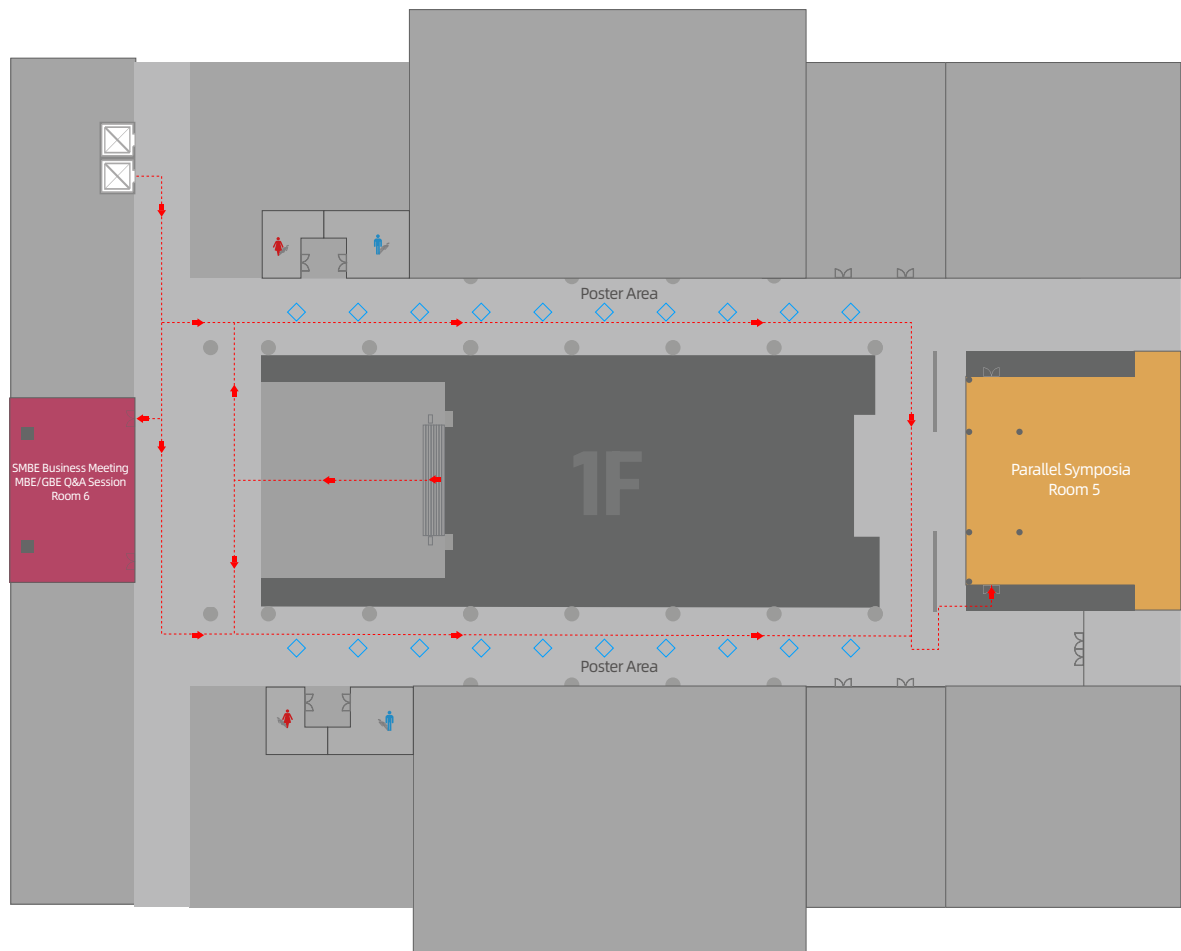**1F FLOOR PLAN** OF CONFERENCE BUILDING
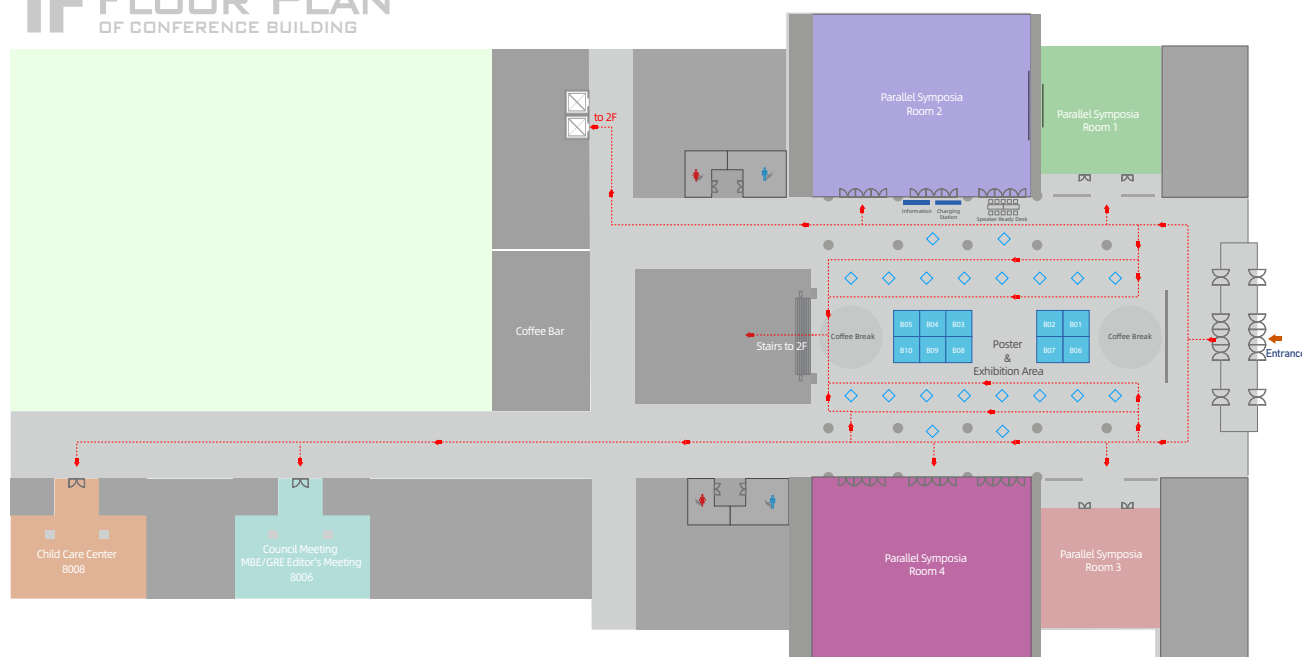
Booth No.	Exhibitor Name
B01	Novogene Co., Ltd. 北京诺禾致源科技股份有限公司
B02	Guangdong Magigene Biotechnology Co., Ltd., China 广东美格基因科技有限公司
B03	Oxford University Press
B04	Annoroad Gene Technology (Beijing) Co., Ltd. 安诺优达基因科技（北京）股份有限公司
B05	Kindstar Sequenon Biotechnology (Wuhan) Co., LTD 康圣序源生物科技（武汉）有限公司
B06	Banmayu Technology Co., Ltd 斑马鱼（北京）科技有限公司
B07	Journal of Systematics and Evolution (JSE) 植物分类学报（英文）
B08	Royal Society Publishing
B09	Chinese Academy of Sciences 中国科学院
B10	Zoological Research Zoological Research: Diversity and Conservation

2F FLOOR PLAN
OF CONFERENCE BUILDING

Poster Area

Poster Area

SMBE Business Meeting
MBE/GBE Q&A Session
Room 6

1F

Parallel Symposia
Room 5

Marco Polo Parkside Beijing Hotel

Marco Polo Parkside Beijing Hotel 5*
Address: No. 78, Anli Road, Chaoyang District, Beijing
Website: https://www.marcopolohotels.cn/en/marco-polo-parkside-beijing
Reservation Department Email: resv.prk@marcopolohotels.com

The hotel is about 15 minutes drive from the conference venue. To ensure smooth transportation, LOC will provide complimentary shuttle buses between the hotel and the venue daily from July 20 to July 24.

Shuttle Bus Schedule Marco Polo Parkside Beijing		
Date	**Departure**	**Routes**
July 20	16:30	Hotel-BCC
	21:00	BCC- Hotel
July 21	07:30	Hotel-BCC
	19:10	BCC- Hotel
July 22	08:00	Hotel-BCC
	17:40	BCC- Hotel
July 23	08:00	Hotel-BCC
	17:40	BCC- Hotel
July 24	08:00	Hotel-BCC
	14:40	BCC- Hotel
Pick-up Point at Hotel: Meet up in front of the Hotel Main Entrance Pick-up Point at the Conference Venue: Meet up in front of the Conference Building, BCC		

CONFERENCE
INFORMATION

Registration

SMBE 2025 participants are asked to register at the registration desks. You could register at Conference Building from July. 20. You will receive your name badge and your conference bag. The opening hours of the Registration Desk are as follows

Date	Opening Hours	Location
Sunday, July 20	12:00-19:30	
Monday, July 21	07:30-19:30	
Tuesday, July 22	08:00-17:30	1F **Conference Building**
Wednesday, July 23	08:00-18:30	
Thursday, July 24	08:00-15:00	

Speaker Ready Desk

- All the speakers are welcome to visit the Speaker Ready Desk to test your slides at least 30 minutes before your session.
- This is especially important if your presentation includes videos, audio, or other multimedia to ensure smooth playback.
- Note: If you do not test in advance, any time needed to load your slides during the session will be counted as part of your presentation time.
- Speaker Ready Desk opening hours

Date	Opening Hours	Location
Sunday, July 20	12:00-19:30	1F **Conference Building**
Monday, July 21	07:30-17:30	
Tuesday, July 22	08:00-17:30	1F **Building No. 8**
Wednesday, July 23	08:00-17:30	
Thursday, July 24	08:00-12:00	

Poster & Exhibition Service Desk

Poster authors could get the tape to put up their posters at the service desk. Exhibitors could get help from this service desk too. The opening hours of the Poster & Exhibition Service Desk are as follows:

Date	Opening Hours	Location
Monday, July 21	07:30-17:30	
Tuesday, July 22	09:00-17:30	1F **Building No. 8**
Wednesday, July 23	09:00-17:30	
Thursday, July 24	08:30-12:00	

Dining Information & Social Events

Registration fee includes lunch, welcome cocktail, and coffee break.

Lunch (Ticket Required)

SMBE 2025 prepared buffet lunches from July 21-23 for the participants you will get coupon when you register for the conference. **There are two venues for lunch, the dining hall of Building No. 6 or Banquet Hall.** The place you will have lunch is shown on the coupon you have in your hand. Kindly note that the dining time is limited. Please have your lunch according to the conference program.

Date	Lunch
Monday, July 21	13:00-14:00
Tuesday, July 22	12:30-14:00
Wednesday, July 23	12:30-14:00

Welcome Cocktail (Ticket Required)

Time: 19:00-21:00, Sunday, July 20

Location: Fountain Square

Coffee Break

Date	Location
Tuesday – Wednesday, July 22-23	Served at the poster & exhibition area at the lobby floor of Building No. 8
Monday & Thursday, July 21 & 24	Served along the corridor at the lobby floor of Conference Building

Gala Dinner (Separate ticket purchase required)

Departure Time: 18:00 Wednesday, July 23

Pick-up Point: Meet up in front of the Conference Building, BCC

Time: 18:30-21:00, Wednesday, July 23

Location: Grand Mansion Restaurant (Zheng Yuan Da Zhai Men)

正院大宅门（西翠路店）

No. 11 Xicui Road, Haidian District, Beijing

北京市海淀区西翠路 11 号

The restaurant is built as Siheyuan, an ancient Chinese-style courtyard house. Grey bricks, wooden carving ornaments on the wall, ancient Chinese furniture, and red palace lanterns. These, at once, bring you to a scenario of a rich traditional Chinese family. The food is a fusion of Beijing, Hangzhou, Sichuan, and Cantonese styles. During the dinner, enjoy the Chinese Traditional Performances of Peking Opera, Face Changing Show, Acrobatics, and Chinese traditional music instruments – Erhu.

Facilities

- **Wi-Fi**
  Free Wi-Fi access for all attendees
  Wi-Fi name: BJHYZX
  Access code: You will receive it by SMS after entering your mobile phone number (for Mainland China +86 numbers only). If you do not have a Chinese mainland phone number or encounter any issues, please go to the Hotel Front Desk at Building No. 9 to get the password or assistance.

- **Smoking Policy**
  BCC is a smoke-free facility. All participants are kindly requested to refrain from smoking in any area of the premises.

- **Little Green Steps at SMBE 2025** :
  To promote sustainability, SMBE 2025 features two green initiatives:
  •Badge Recycling: Please return your name badge at designated collection points after use.
  •Water Stations: Each delegate will receive a souvenir water bottle to use at our water stations (no disposable cups or bottled water provided).
  Thank you for supporting our eco-efforts!

- **Dress Code**
  You are welcome to wear casual or smart casual.

- **Bank or ATM**
  Bank of China (Beijing Beiyuan Sub-branch)
  Location: No. 105 block 1F No. 58 Beiyuan Road, Chaoyang District, Beijing City. (About 5 minutes by taxi from BCC)

  Agricultural Bank of China (ATM)
  Location: Lobby of Building No. 9, BCC

- **Emergency Numbers**

Police (Calling)	110
Police (Text message)	12110
First-aid Ambulance	120 or 999
Fire	119
Traffic Accidents	122

110, 120, and 119 are free calls. 110 may be used for all emergencies. It is the first number to call. Whether 119 or 120 is called depends on the situation.

Local Emergency Contact Information:
Ms. Suzie Qi, +86 189 1177 2076
Ms. Audrey Liu, +86 189 1172 3900

Shuttle Bus Service

Shuttle Bus Schedule
Marco Polo Parkside Beijing

Date	Departure	Routes
July 20	16:30	Hotel-BCC
	21:00	BCC- Hotel
July 21	07:30	Hotel-BCC
	19:10	BCC- Hotel
July 22	08:00	Hotel-BCC
	17:40	BCC- Hotel
July 23	08:00	Hotel-BCC
	17:40	BCC- Hotel
July 24	08:00	Hotel-BCC
	14:40	BCC- Hotel

Pick-up Point at Hotel: Meet up in front of the Hotel Main Entrance
Pick-up Point at the Conference Venue: Meet up in front of the Conference Building, BCC

Shuttle Bus Schedule to
POLPAS Shopping Center & Gala Dinner

ONE WAY Shuttle Bus to POLPAS Shopping Center		
Date	Departure	Routes
July 21	19:10	BCC-POLPAS
July 22	18:30	北辰荟：北京市朝阳区北辰西路 6 号院
July 23	18:30	

Pick-up Point at the Conference Venue: Meet up in front of the Conference Building, BCC

ROUND TRIP Shuttle Bus to Gala Dinner		
Date	Departure	Routes
July 23	18:00	BCC-Gala Dinner Restaurant Grand Mansion Restaurant (Zheng Yuan Da Zhai Men) 正院大宅门（西翠路店） No. 11 Xicui Road, Haidian District, Beijing 北京市海淀区西翠路 11 号
	21:00	Gala Dinner Restaurant - Marco Polo Parkside Beijing Gala Dinner Restaurant - BCC

Pick-up Point at the Conference Venue: Meet up in front of the Conference Building, BCC
Pick-up Point at the Restaurant: Meet up in front of the Restaurant

SCIENTIFIC *PROGRAM*

Program at a Glance

Time	Event	Venue
Day 1, July 20		
08:00-18:00	Council meeting (council members only)	
12:00-18:00	Registration open	Lobby of Conference Building
14:00-16:00	Workshops (1-3)	Meeting Room 1-3, Conference Building
17:45-18:00	Opening session	Auditorium, Conference Building
18:00-19:00	Keynote 1: Ziheng Yang	
19:00-21:00	Welcome cocktail	Fountain Square
Day 2, July 21		
08:30-10:30	Parallel symposia	Room 1-5, Building No. 8
11:00-13:00	Graduate Student Excellence symposium	Auditorium, Conference Building
13:00-14:00	Lunch	Building No. 6 & Banquet Hall
13:00-15:00	MBE editor's meeting	Room 8006, Building No. 8
14:00-15:30	Poster session 1	Poster & Exhibition Area, Building No. 8
15:30-17:30	Parallel symposia	Room 1-5, Building No. 8
18:00-19:00	Keynote 2: Eugene Koonin (online)	Auditorium, Conference Building
Day 3, July 22		
08:50-09:00	Introduction to Day 3	Auditorium, Conference Building
09:00-10:00	Keynote 3: Molly Przeworski	
10:30-12:30	Parallel symposia	Room 1-5, Building No. 8
12:30-14:00	Lunch	Building No. 6 & Banquet Hall
12:30-14:00	The Royal Society Workshop	Room 4, Building No. 8
13:00-14:00	SMBE business meeting	Room 6, Building No. 8
13:00-15:00	GBE editor's meeting	Room 8006, Building No. 8
14:00-15:30	Poster session 2	Poster & Exhibition Area, Building No. 8
15:30-17:30	Parallel symposia	Room 1-5, Building No. 8
18:00- 20:00	MBE editor's dinner GBE editor's dinner	
Day 4, July 23		
08:50-09:00	Introduction to Day 4	Auditorium, Conference Building
09:00-10:00	Keynote 4: Peter Holland	
10:30-12:30	Parallel symposia	Room 1-5, Building No. 8
12:30-14:00	Lunch	Building No. 6 & Banquet Hall
13:00-14:00	MBE/GBE Q&A session	Room 6, Building No. 8
14:00-15:30	Poster session 3	Poster & Exhibition Area, Building No. 8
15:30-17:30	Parallel symposia	Room 1-5, Building No. 8
18:00-21:00	Gala dinner	Off-site venue
Day 5, July 24		
09:00-11:00	Parallel symposia	Room 1-5, Building No. 8
11:30- 12:30	Keynote 5: Qiaomei Fu	Auditorium, Conference Building
12:30-14:30	Awards & Closing ceremony	

Keynote Speakers Biographies

Qiaomei Fu

Institute of Vertebrate Paleontology and Paleoanthropology, Chinese Academy of Sciences (CAS), China

Dr. Qiaomei Fu is a Professor and Head of the Ancient DNA Lab at the Institute of Vertebrate Paleontology and Paleoanthropology, CAS, China. She received her Ph.D. from the Max Planck Institute for Evolutionary Anthropology (MPI EVA) in 2013, and since then, she has conducted postdoctoral research at the MPI EVA and Harvard Medical School. Dr. Fu joined the Institute of Vertebrate Paleontology and Paleoanthropology, CAS, in 2016. She is the first Chinese scientist to receive the UNESCO-Al Fozan International Prize for the Promotion of Young Scientists in Science, Technology, Engineering and Mathematics (STEM).

Dr. Fu's work has reinvigorated research into the origin of humanity through ancient DNA extracting techniques and advanced, next-generation gene sequencing to decode ancient human genomes. By extracting DNA from ancient human remains and sediments, her work has provided us with a fascinating glimpse into the evolutionary history of Eurasian populations, with a particular emphasis on East Asia. One of her remarkable discoveries revolves around populations related to the Tianyuan Cave individual, found near Beijing. Through constructing an intricate genetic map spanning the past 100,000 years, Dr. Fu's findings shed light on the unique diversity of human populations and offer valuable insights into how our ancestors' ancestries have shaped our genetic makeup and adaptive traits today.

Peter Holland

Linacre Professor of Zoology, University of Oxford, UK

Dr. Peter Holland is Linacre Professor of Zoology at the University of Oxford, UK. He obtained a doctorate in genetics at the National Institute for Medical Research, UK, in 1987, and became Professor of Zoology at the University of Reading in 1994 at the age of 30. In 2002, he was elected as a Fellow of Merton College and appointed as the 11th Linacre Professor of Zoology at the University of Oxford, where he was head of the Department of Zoology from 2011 to 2016. He was elected to Fellowship of the Royal Society (FRS) in 2003. Dr. Holland was awarded the Frink Medal of the Zoological Society of London in 2015 and the Royal Society's prestigious Darwin Medal in 2019 given his significant work towards elucidating key aspects of how changes in the genome have influenced the evolution of animal development.

Dr. Holland is interested in how the evolution of animal diversity can be explained through evolution of the genome. Because the body plan of animals is generated through embryonic development, the evolution of genes that control development is of particular interest. In recent years, he has been using whole genome sequence data to analyze the evolution of homeobox genes, particularly in relation to gene and genome duplication. Dr. Holland is currently studying the evolution of homeobox genes and their functions in teleost fish, insects and mammals. He is also currently part of the 'Darwin Tree of Life' project, funded by the Wellcome Trust, which aims to sequence the genomes of all key species in the ecosystems of Britain and Ireland.

Eugene Koonin
National Center for Biotechnology Information, National Library of Medicine, National Institutes of Health, USA

Dr. Eugene V. Koonin is a National Institutes of Health (NIH) Distinguished Investigator at the National Center for Biotechnology Information, National Library of Medicine, NIH (USA). He received his Ph.D. from Moscow State University in 1983, and since 1996, Dr. Koonin has been conducting research at the National Center for Biotechnology Information, National Library of Medicine, NIH. He is a member of the National Academy of Sciences, American Academy of Arts and Sciences and American Academy of Microbiology, and he is also a Foreign Associate of the European Molecular Biology Organization and Academia Europea.</p><p>Dr. Koonin's work is focused on areas including evolutionary genomics and computational biology, and he aims to take advantage of the advances of comparative genomics and systems biology to address fundamental problems in evolutionary biology. He is the author of the concept and implementation of Clusters of Orthologous Genes (COGs) that are central to comparative and evolutionary genomics. His work also investigates the emergence and evolution of genomic and organizational complexity in biological systems through comparative analysis of sequenced genomes and automatic methods for genome-scale annotation of gene functions, including application of comparative genomics for phylogenetic analysis, reconstruction of ancestral life forms and building large-scale evolutionary scenarios. He also conducts mathematical modeling of genome evolution, such as performing comparative-genomic studies of the major transitions in the evolution of life, such as the origin of eukaryotes.

Molly Przeworski
Columbia University, USA

Dr. Molly F. Przeworski is currently a Professor of Biological Sciences and of Systems Biology at Columbia University (USA). She received her Ph.D. from the University of Chicago in 2000, and completed a postdoc in the statistics department at the University of Oxford. Prior to joining Columbia in 2014, she was a researcher at the Max Planck Institute for Evolutionary Anthropology and on the faculty at Brown and the University of Chicago. She is the recipient of an Alfred P. Sloan fellowship, a Howard Hughes Medical Institute Early Career Scientist award, and the Rosalind Franklin Young Investigator award, and most recently elected a member of the National Academy of Sciences and American Academy of Arts and Sciences.</p><p>Dr. Przeworski's research has contributed to a better understanding of how natural selection operates in humans and of how and why recombination and mutation processes evolve in vertebrates. Her work includes modeling how genetic and evolutionary mechanisms give rise to and maintain variation, and in learning from patterns of genetic variation about the underlying processes involved using large-scale genomic data analysis and statistical modeling. Dr. Przeworski's work has revealed the fine-scale recombination landscape to be rapidly evolving in primates and elucidated the causes and consequences of its evolution in vertebrates. Her research has also clarified how natural selection operates in human populations: notably, she has demonstrated that few recent human adaptations involved new, single changes of large effect and characterized the footprints of other forms of adaptation in genetic variation data. Her more recent work seeks to understand sources of variation in mutation rates within and between species.

Ziheng Yang
University College London, UK

Dr Ziheng Yang is the current President of the Society for Molecular Biology and Evolution (SMBE) and RA Fisher Chair of Statistical Genetics at University College London (UK). He received his Ph.D. from Beijing Agricultural University in 1992, and joined UCL in 1997. Dr Yang was awarded the President's Award for Lifetime Achievement of the Society of Systematic Biologists in 2008, the Frink Medal of the Zoological Society of London in 2010, as well as the Darwin-Wallace Medal of the Linnean Society of London in 2023. He was elected a Fellow of the Royal Society in 2006.</p><p>Dr. Yang works on statistical methods and computational algorithms for comparative analysis of genetic sequence data. He is known for developing and maintaining the program packages PAML (for Phylogenetic Analysis by Maximum Likelihood) and BPP (for Bayesian Phylogenetics and phylogeography). Dr Yang has published over 200 research papers and written two graduate-level text books: Computational Molecular Evolution (2006, OUP) and Molecular Evolution: A Statistical Approach (2014, OUP).

Detailed Program

For detailed program, please scan the QR code below.

Presentation Guidelines

1.Oral Presentation Guidelines

1) Format
- Files supported for presentation are PDF and Microsoft PowerPoint (PPT).
- Presentations made on a Mac should be converted to files that are compatible with Windows PC
- All oral speakers should format their presentations in 16:9 ratio.

2) Presentation Time

Keynote speech	60 minutes session
	45-50 minutes presentation, 10 minutes Q & A
Invited talk	30 minutes total incl. 25 minutes presentation and 5 minutes Q & A
Selected talk	15 minutes total incl. 12 minutes presentation and 3 minutes Q & A
Flash talk	5 minutes

* The above durations are general guidelines. Actual presentation times may vary by symposium depending on the number of presenters. Please refer to the detailed program for specific allocation per talk.

3) Presentation Submission
- All presentations must be uploaded via the SMBE2025 registration system

BEFORE the day of your session. The conference staff/volunteer in your session room will download the latest version of the presentation files each morning. Late submissions or replacements will not be accepted after this downloading.

- Upload Instructions:
  * Log in to your SMBE2025 account and go to Submission Management.
  * Click Upload to submit your presentation file.
  * Accepted formats: PDF or PPT (max file size: 300MB).
  * For any upload issues, please contact us at smbe2025@ioz.ac.cn.

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Upload

Presentation File* ⟱ Select Presentation File   Delete

Upload is now completed! **<< Click to download >>**
Upload is successful, please click on confirm to submit video.

Maximum file size: 300MB：ppt、pptx、pdf

Return   **Confirm and Submit**

4) Presentation Suggestions
- Speakers are advised to arrive at the meeting room at least 15 minutes before the start of the session so you can prepare and introduce yourselves to the Session Co-chair(s).
- Please discuss the material as reported in your submitted and approved abstract.
- Although each meeting room has a large LED screen/projection screen, it would be better to have fewer words with larger font sizes on your slides to in consideration for members of the audience who are located further from the stage.

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Home Page

Submission Management

Submission Management

Abstract ID	Classification of papers	Abstract title	The first author	Status	Result	Upload	Operation
383	02. Evolution and regulation of sex chromosomes and sex determination	Debitis veniam aperiam optio ullam non eius eius quas sunt sint hic aut incidunt ut sed nostrum velit dolor ipsum	Kevin Jiang	Abstract submitted	Selected talk	⬆Upload Presentation File submitted	View

Registration

Social Event

WorkShop

Hotel Reservation

‹ **1** › Turn to Page 1 page Go Total 1 10/page

* Once uploaded, repeat the same steps to update the file—new uploads will replace the original.

5) Presentation Testing
- All the speakers are welcome to visit the Speaker Ready Desk to test your slides at least 30 minutes before your session.
- This is especially important if your presentation includes videos, audio, or other multimedia to ensure smooth playback.
- Note: If you do not test in advance, any time needed to load your slides during the session will be counted as part of your presentation time.
- Speaker Ready Desk

Date	Opening Hours	Location
Sunday, July 20	12:00-19:30	1F **Conference Building**
Monday, July 21	07:30-17:30	1F **Building No.8**
Tuesday, July 22	08:00-17:30	
Wednesday, July 23	08:00-17:30	
Thursday, July 24	08:00-12:00	

2. Poster Presentation Guidelines (In-Person Only)

1) Format
• Orientation: Portrait (vertical) only
• Size: ANSI A0 (841 mm width × 1189 mm height)
• Landscape posters will not be accommodated.

2) Poster Preparation
• Poster presenters are responsible for printing their posters.
• Poster boards and display tools (special tape, scissors, etc.) will be provided by conference staff
• Each board is labelled with an assigned poster number. Check your number in the poster list.

① Poster Session 1   ② Poster Session 2   ③ Poster Session 3

• Staff/volunteers at the Information Desk (1F, between Room 1 & Room 2 of Building No.8) can help locate boards or provide tape/scissors.
• Posters must be put up before the start of the poster session.

3) Poster Session Details
• Location: Poster & Exhibition Area, 1F & 2F of Building No. 8
• Daily Sessions: 14:00-15:30 from July 21 to July 23, 2025
• Session Schedule: Posters are grouped by symposium topics presented each day. Please refer to the schedule below for your assigned session.

Poster Session Time	Symposia Number	Poster Number
Poster Session 1 July 21, 2025 (Monday) 14:00-15:30	Symposium 1	S1-P01~P07
	Symposium 2	S2-P01~P15
	Symposium 4	S4-P01~P21
	Symposium 5	S5-P01~P07
	Symposium 6	S6-P01~P06
	Symposium 7	S7-P01~P15
	Symposium 9	S9-P01~P11
	Symposium 10	S10-P01~P05
	Symposium 29	S29-P01~P16
	Symposium 31	S31-P01~P15
	Symposium 35	S35-P01
Poster Session 2 July 22, 2025 (Tuesday) 14:00-15:30	Symposium 3	S3-P01~P16
	Symposium 8	S8-P01~P34
	Symposium 11	S11-P01~P09
	Symposium 13	S13-P01~P05
	Symposium 14	S14-P01~P26
	Symposium 15	S15-P01~P17
	Symposium 16	S16-P01~P06
	Symposium 18	S18-P01~P07
	Symposium 20	S20-P01~P11
	Symposium 28	S28-P01~P05
Poster Session 3 July 23, 2025 (Wednesday) 14:00-15:30	Symposium 12	S12-P01~P29
	Symposium 27	S27-P01~P21
	Symposium 17	S17-P01~P14
	Symposium 19	S19-P01~P15
	Symposium 21	S21-P01~P19
	Symposium 22	S22-P01~P15
	Symposium 23	S23-P01~P06
	Symposium 24	S24-P01~P10
	Symposium 25	S25-P01~P04
	Symposium 30	S30-P01~P10

Setup & Removal:
• Set up
July 21   Before 08:30 on your session day
July 22-23   Before 10:30 on your session day
• Remove by 17:30 on your session day. Posters left behind after each poster session will be disposed of by the conference staff.

4) Presentation Requirements
Stand by your poster during your allocated session (14:00–15:30) to:
• Deliver a brief introduction.
• Engage in discussions with attendees.

 Reminders:

• Set-up, removal, and storage of posters are the responsibility of presenters.
• Use only the provided tape to protect boards/posters.
• If you need any assistance, visit the Information Desk for Poster and Exhibition, 1F between Room 1 & Room 2 of Building No. 8.

Online Speakers & Attendees Guidelines

The Zoom meeting ID and password will be provided on July 20

Meeting Room	Zoom Meeting ID	Password
Auditorium Opening Session, Keynote Speech, Awards & Closing Ceremony	87190916823	2025
Room 1 Parallel Symposia	89988325250	2025
Room 2 Parallel Symposia	85109382931	2025
Room 3 Parallel Symposia	87337019606	2025
Room 4 Parallel Symposia	81011705588	2025
Room 5 Parallel Symposia	87494980499	2025

Online Speaker Guidelines

Pre-Meeting Checklist

Confirm Your Time Slot
• Double-check your presentation time (all times are in Beijing Time, UTC+8). Adjust for your local time zone if needed.
 Update Zoom
• Ensure you're using the latest version of Zoom to avoid technical issues.
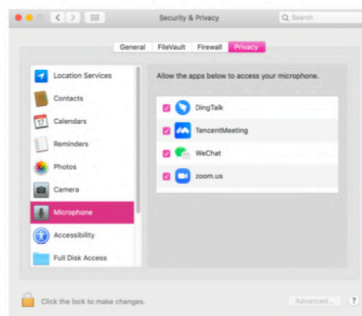**Grant System Permissions (macOS Users)**
• Go to System Preferences > Security & Privacy and enable access for:
      • Camera
      • Microphone
      • Recording (if applicable)
Tip: Test your setup early using Zoom's "Test Speaker & Microphone" tool.

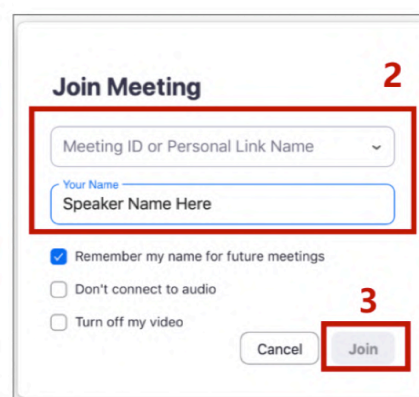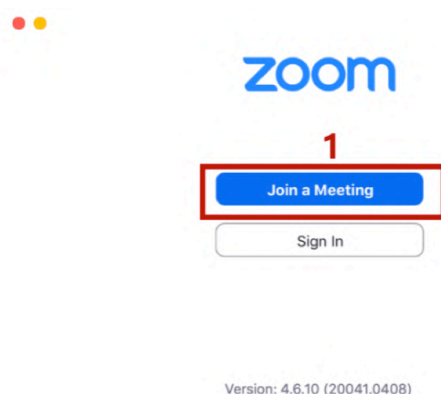Allow Camera Access   Allow Microphone Access   Allow Recording Access

On Meeting Days

1. Joining the Zoom Meeting
• Open Zoom and click Join A Meeting.
• Enter the Meeting Room ID and password when prompted.
• Name Format: Full Name-Country (e.g., Xiaolan Bao-China).
    • Important: Incorrect names may delay or prevent entry.

2. Waiting Room & Approval Process
• After joining, you will enter a waiting room.
• Only registered Online Attendees will be admitted.
    • The moderator will verify your identity before granting access.
    • Approval may take longer time if the session is in progress.

3. Before Your Session Starts
• Log in 30 minutes early to ensure smooth entry.
• Mute your microphone immediately upon joining.
• Set your phone to silent mode before your presentation.

4. During the Session
• Stay muted unless speaking.
• Do not leave until your presentation and Q&A are complete.

5. Backup Preparation
• Upload your PPT to your personal center beforehand in case of technical issues.
• How to upload: Please refer to the oral presentation guideline.

During Your Own Presentation

1. Camera & Screen Sharing
- Turn on your camera before your presentation begins. Your live feed will be shown during the moderator's introduction.
- Keep your camera on during the Q&A session.
- You may start sharing your screen while the moderator introduces you.

2. Timing
- Staff will track time for all presentations.

Keynote speech	60 minutes session 45-50 minutes presentation, 10 minutes Q & A
Invited talk	30 minutes total incl. 25 minutes presentation and 5 minutes Q & A
Selected talk	15 minutes total incl. 12 minutes presentation and 3 minutes Q & A
Flash talk	5 minutes

* The above durations are general guidelines. Actual presentation times may vary by symposium depending on the number of presenters. Please refer to the detailed program for specific allocation per talk.

3. Troubleshooting
- If technical issues arise (e.g., no audio/video, network problems), follow the moderator or IT staff's directions.

4. Important Reminders
- Avoid using PPT Speaker Mode—your notes will be visible to the audience.
- Remember to stop screen sharing after your presentation.

Tips for Online Presentations

Simple Background
- Choose a quiet, distraction-free environment.
- Use a solid-colored background for a clean look.
- Align your screen to minimize visual clutter.
- Ensure any background lines are parallel to the screen edges.

Camera & Framing
- Position your webcam at eye level for a natural perspective.
- Avoid low camera angles—frame yourself straight-on.
- Look directly into the camera to maintain "eye contact" with viewers.

Lighting
- Maximize natural or artificial lighting in the room.
- Face light sources (e.g., a window or soft lamp) to avoid shadows.
- Prevent backlighting to ensure your face is clearly visible.

Appearance & Attire
- Dress in business casual or smart casual clothing.
- Avoid headphones; use your computer's built-in microphone.

Engagement Tips
- Conceal your chair's backrest to minimize distractions.
- Nod occasionally during Q&A to show active listening.
-
Tip: Test your setup beforehand to refine framing, audio, and lighting!

Online Attendee Guidelines

Pre-Meeting Checklist

Session Time Check
• All session times are displayed in Beijing Time (UTC+8). Please convert to your local time zone accordingly.
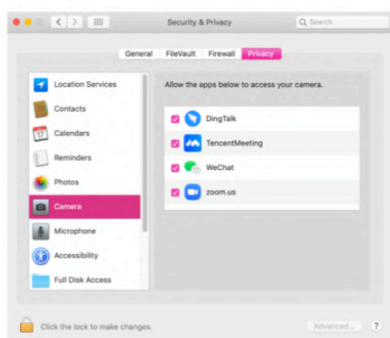**Update Zoom**
• Ensure you're using the latest version of Zoom to avoid technical issues.
Grant System Permissions (macOS Users)
• Go to System Preferences > Security & Privacy and enable access for:
    • Camera
    • Microphone
    • Recording (if applicable)
Tip: Test your setup early using Zoom's "Test Speaker & Microphone" tool.

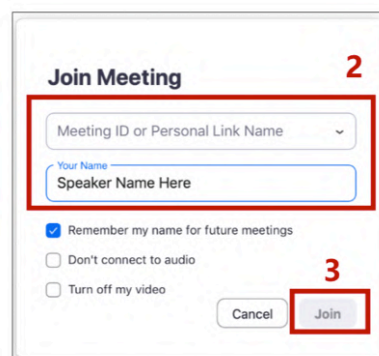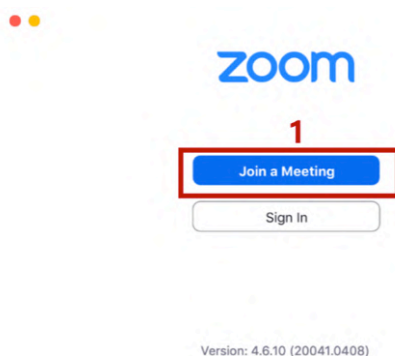Allow Camera Access   Allow Microphone Access   Allow Recording Access

On Meeting Days

1. Joining the Zoom Meeting
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• Enter the Meeting Room ID and password when prompted.
• Name Format: Full Name-Country (e.g., Xiaolan Bao-China).
    • Important: Incorrect names may delay or prevent entry.

2. Waiting Room & Approval Process
• After joining, you will enter a waiting room.
• Only registered Online Attendees will be admitted.
     • The moderator will verify your identity before granting access.
     • Approval may take longer time if the session is in progress.

3. Meeting Etiquette
• Mute your microphone and turn off your camera upon entry.
• Join from a quiet location to minimize background noise.

4. Q&A Session
• To ask a question, please use the 'Raise Hand' feature or type your question in the chat.

Pre- Conference Workshops

Workshop 1 14:00-16:00, July 20, 2025 Meeting Room 1, Conference Building	**Analyzing genomic diversity and modeling complex admixture history** Organizers: Shuhua Xu, School of Life Sciences, Fudan University Daniel Falush, Shanghai Institute of Immunity and Infection, Chinese Academy of Sciences
Workshop 2 14:00-16:00, July 20, 2025 Meeting Room 2, Conference Building	**A Short Trip Exploring Beast2** Organizers: Chi Zhang, Institute of Vertebrate Paleontology and Paleoanthropology, Chinese Academy of Sciences Joëlle Barido-Sottani, Institute of Biology of the École normale supérieure (ENS) - Paris Sciences et Lettres University (PSL)
Workshop 3 14:00-16:00, July 20, 2025 Meeting Room 3, Conference Building	**Use of BPP to infer gene flow from genomic sequence data** Organizers: Thomas Flouris, Genetics, Evolution & Environment, Div of Biosciences, University of College London Xiyun Jiao, Department of Statistics and Data Science, Southern University of Science and Technology (SUSTech)

Notes:
Registered participants can reserve a workshop seat using the online registration system. The price is **USD50/seat**.
These workshops have limited capacity, and access is restricted to registered participants only.

The Royal Society Workshop 12:30-14:00, July 22, 2025 Room 4, Building No. 8	**Getting your work published** Organizers: Sophie Ferguson, Royal Society Publishing

Notes:
The workshop "Getting Your Work Published" is sponsored by The Royal Society and is free of charge for all attendees.

CODE OF CONDUCT/*ALLIES*

SMBE Code of Conduct

SMBE 2025 attendees are expected to adhere to SMBE's Code of Conduct.

SMBE is dedicated to providing a safe, hospitable, and productive environment for all members. Accordingly, SMBE prohibits all forms of discrimination and harassment (including among members, volunteers, and staff) in all Society activities, including events (online or in person), journal correspondence, social media, etc). Behaviour that undermines the integrity of intellectual discourse is an impediment to scientific progress and will not be tolerated. Unacceptable treatment of others includes (but is not limited to) harassment, stalking, belittling, discrimination, bullying/intimidation, assault, trolling, and retaliation (see above link for descriptions). Any misconduct on the basis of gender, gender identity, sexual orientation, age, disability, physical appearance, race, religion, national origin, ethnicity, or other descriptive categories will not be tolerated.

If you need to report an incident, please contact our Safety Officer, Paula Brantner using one of the following channels:
• **Report Form: https://bit.ly/SMBE25ConductReport (Please note that this is linked to a Google Spreadsheet, you may need VPN to access it)**
• **WhatsApp phone or text: Paula Brantner**
• **Email: safeconferencs@gmail.com**

Report Form QR Code:

SMBE Allies

At the SMBE 2025 meeting in Beijing, China, you will notice some attendees wearing a ribbon indicating their status as SMBE Allies. These allies are trained to provide support to those who are victims or witnesses of inappropriate behavior that may violate the SMBE Code of Conduct. Their role is to listen, help affected individuals deal with the situation and provide them with information about their options, including the possibility of filing complaints. However, the allies are not involved in investigations or the imposition of sanctions. In addition, they are committed to creating safe spaces by acting as active observers during the event.

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SMBE 2025 Website

SMBE 2025 Latest Program

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