32nd Congress of the International Council of the Aeronautical Sciences

September 14-18, 2020
Pudong Shangri-La, Shanghai, China
Welcome to 32\textsuperscript{nd} Congress of the International Council of the Aeronautical Sciences in Shanghai, China

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\textbf{Note on Covid19:}

The International Council of the Aeronautical Sciences is highly aware of the Covid19 situation, but as of now, there is no plan to cancel or postpone the ICAS 2020 Congress in Shanghai. We strongly hope that the situation will be solved long before September. However, we are staying vigilant and provide frequent updates. Everyone’s safety is our primary concern. Please check our website regularly: www.icas2020.com
Welcome from the President of the International Council of the Aeronautical Sciences (ICAS), Professor Shinji Suzuki

On behalf of the International Council of the Aeronautical Sciences (ICAS), I welcome you to the 32nd ICAS Congress in Shanghai. Over 60 years, ICAS has provided this pre-eminent forum for the world’s aeronautical engineers, researchers, scientists, and managers to present and discuss the latest developments in aeronautics. This remarkable organization was founded by Theodore von Karman and his international colleagues to promote international collaboration in aeronautics and continues to build on its impressive heritage. This Congress will be held for the second time in China since the ICAS 1992 Congress in Beijing. ICAS is grateful for the efforts of our Chinese colleagues and a high level of sponsorship from a number of companies.

The aerospace and aviation industries inherently require the integration of various disciplines to provide safety in severe flight conditions, solve environmental problems and enable economical operation. In recent years, integration with new fields such as advanced computer technology, unmanned and AI technologies in all aspects such as design, manufacturing, and operations has been required. Furthermore, new flight opportunities such as urban air mobility and super/hypersonic or space flight have been investigated. ICAS Congresses represent unique opportunities every two years to learn and interact with the leaders in the field from more than 40 countries.

The topics addressed at ICAS Congresses are diverse and reflect the challenges and opportunities of the day. The ICAS Program Committee ensures that Congress presentations cover not only core aeronautical disciplines such as aerodynamics and performance, stability and control, materials and structures and propulsion and systems but also new fields such as air traffic management and systems, manufacturing and the supply chain, safety and security, and environment and operations. We select the plenary sessions as General Lectures which focus on the latest topics, the common topics to all fields, and the topics related to collaboration with other organizations.

It is with great pleasure that I welcome you to Shanghai. I invite you to participate actively in this historic 32nd ICAS Congress, making the most of the broad array of technical, networking, cultural opportunities and technical tours prepared for you by a dedicated team of colleagues from all over the world.
Welcome from the Chinese Society of Aeronautics and Astronautics (CSAA)

On behalf of the Chinese Aeronautics and Astronautics (CSAA), we would like to welcome all potential delegates to the 32nd Congress of the International Council of the Aeronautical Sciences (ICAS2020), to be held during September 14-18 in Shanghai, China.

With over 200 corporate and 100,000 individual members from the industry, research and education institutes as well as civil aviation, CSAA has joined ICAS since 1982. It once held the ICAS Congress in Beijing in 1992.

Over a course of nearly three decades, China has witnessed remarkable progress in aeronautics and aviation. A large number of talents including students, administrative personnel, researchers and industry workers are engaged in this filed. A series of self-developed aerial vehicles like the C919, regional jet ARJ21, large civil helicopter AC313, medium-lift utility helicopter Z-20, large transport Y-20, amphibious vehicle AG 600, etc have rolled out and more are in the pipeline. The domestic aviation industry is more engaged in the world industry chain than ever through cooperative project like helicopter Z-15 and acquisition of Cirrus Industries Inc. We are more than happy to show you a very different China with a more advanced aviation industry from 30 years ago through the upcoming Congress.

Meanwhile, according to the previous data collected by ICAS, the abstract submission number and the total of delegates from China ranked right next to the hosting country for the past four Congresses in a row. Chinese talents are eager to communicate with their world peers for more academic exchange and collaboration. The ICAS 2020 will be just an opportunity for that.

Shanghai is an international and dynamic city, known as the Oriental Pearl. It’s also an aviation city with facilities of manufacturing, aero-engine and airborne system research as well as...
assembly all in one. The Congress venue lies in the very heart of it with the sight of Huangpu River on the one side and the skyscrapers on the other. While the ICAS committees mainly devoting to its technical program, the Local Organizing Committee will be committed to providing you with the first-class facilities, handy assistance, diversified social activities and technical tour options. We believe from the venue, you can better explore the city, from the city you can better explore China.

Despite the COVID-19, we plan to hold the Congress as scheduled. We believe the virus will be brought under control soon with the strong actions taken by the government and support from the international community. The Congress which to be held in September shall not be affected.

We hereby cordially welcome delegates both at home and abroad to take part in the ICAS 2020 and value it as an incomparably international platform to hear and to be heard about the latest research progress and some of the world leading scientific results.

Finally we wish you can join us, finding out the ICAS 2020 a both technology and culture-loaded journey yourself.
ICAS Organization and Committees

THE INTERNATIONAL COUNCIL OF THE AERONAUTICAL SCIENCES

ICAS was founded by Theodore von Karman in 1957 as a non-government not-for-profit scientific organization to encourage the free international exchange of information on aeronautical research and technology.

The mission of ICAS is to provide regularly scheduled events and publications that enable a better understanding of engineering science and practice and an improved level of cooperation among aeronautical engineering professionals from around the world. ICAS currently serves as the only international support organization to representative aeronautical engineering professional societies and their members in 30 countries.

ICAS functions under three primary bodies: Council (meets biennially), Executive Committee (meets at least twice each year) and Programme Committee (meets annually). ICAS holds an International Congress in the fields of Aeronautical Sciences on a biennial basis. The venue is chosen by the Council and changes from Congress to Congress. Furthermore ICAS organizes a thematic workshop in the year between the congresses in connection with the meeting of the Program Committee.

ICAS Council

Representatives of Member Societies

C. Bil, Australia  K. Rinoie, Japan
H. Deconinck, Belgium  S. Lee, Korea
E. Belo, Brazil  C. Hermans, The Netherlands
G. Languedoc, Canada  T. Goetzendorf-Grabowski, Poland
J. Yao, P.R. of China  L. Campos, Portugal
J. Juracka, Czech Republic  F. Zaganescu, Romania
M. Kanerva, Finland  A. Mirzoyan, Russia
B. Stoufflet, France  B. Rasuo, Serbia
E. Stumpf, Germany  J. Monk, South Africa
T. Tsitininidis, Greece  M. Olivier, Spain
J. Rohacs, Hungary  A. Blom, Sweden
H: Bhatia, India  L. Manfriani, Switzerland
H. Djojodihardjo, Indonesia  F. Haselbach, United Kingdom
O. Rand, Israel  T. Irvine, U.S.A.
A. Vivani, Italy
ICAS Executive Committee

Officers

President: S. Suzuki, Japan
P.C. Chair: J. Azevedo, Brazil
Treasurer: G. Holmberg, Sweden Past President: S. Ying, U.S.A.
Executive Secretary: A. Probst, Germany

Members

D. Mavris, U.S.A.
C. Atkin, United Kingdom
M. Peters, The Netherlands
M. Scott, Australia
S. Remy, France

X. Zhang, China
R. Gerhards, Germany
Z. Goraj, Poland
S. Chernyshev, Russia
Yu Ce (ICAS 2020)

ICAS Secretariat

The ICAS Secretariat is hosted by the Deutsche Gesellschaft für Luft-und Raumfahrt (DGLR) and located in Bonn, Germany. Axel Probst is the ICAS Executive Secretary and is assisted by Bodo Heinrichs as the ICAS Coordinator.

Address: ICAS Secretariat, c/o DGLR, D-53175 BONN, Germany
Phone: +49-(0)228-30805-0, Fax: +49-(0)228-30805-24
E-mail: icas@icas.org

ICAS Programme Committee

All members of ICAS Programme Committee are listed on the ICAS Web-Site. Below are listed those who took part in the preparation meeting for ICAS 2020.

Alaimo, Andrea
Anderson, Ken
Atkin, Chris
Azevedo, Joao
Bagassi, Sara
Bayandor, Javid
Bil, Cees
Blom, Anders
Bouissierre, Francois
Breitsamter, Christian
Chen, Yingchun
Collier, Fayette
Djojodihardjo, Harijono
Fu, Jian
Fu, Song
Fu, Yongling
 Gerhards, Roland
Goraj, Zdobyslaw
Göttendorf, Tomasz
Gowree, Erwin
Han, Jae-Hung
Harigae, Masatoshi
Holmberg, Gunnar
Ikeda, Tadashige
Itoh, Eri
Minghua, Zhu
Juracka, Jaroslav
Karneva, Mikko
Kimmel, Bill
Krein, Axel
Krus, Petter
Mavris, Dimitri
Melkert, Joris
Mirzoyan, Artur
Monk, John
Müller-Wiesner, Detlef
Nagel, Björn
Padulo, Mattia
Peters, Michel
Pinon Fischer, Olivia
Prakash, Prajwal
Rein-Weston, Karl
Remy, Sebastien
Rinoie, Kenichi
Scott, Murray
Stezycki, Pawel
Stumpf, Eike
Suzuki, Shinji
Viola, Nicole
Viviani, Antonio
Wan, Tung
Yimer, Ibrahim
Ying, Susan
Zhang, Xinguo
Zhang, Y. Z.
Zhang, Yufei

X. Zhang, China
R. Gerhards, Germany
Z. Goraj, Poland
S. Chernyshev, Russia
Yu Ce (ICAS 2020)
ICAS 2020 Local Organizing Committee

The committee members are subject to change.

Chair:
Zhang Xinguo (VP of CSAA, Chief Expert of CAE, distinguished professor of Tsinghua Univ. Former EVP of AVIC and President of CAE)

Co-Chairs:
Wu Guanghui (VP, Commercial Aircraft Corporation of China Ltd, COMAC)
Chen Shaoyang (VP, Aero Engine Corporation of China, AECC)
Shi Jianzhong (VP, Chinese Society of Aeronautics and Astronautics, CSAA, President of Shanghai Society of Aeronautics)
Yao Junchen (Secretary General, CSAA)

Committee Member (by alphabetical order of the family name):

Chen Peng (President, AVIC Chinese Flight Test Establishment)
Chen Ping (Division Director, Shanghai Municipal Tourism Administration)
Dai Shenglong (President, AECC Beijing Institute of Aeronautical Materials)
Chang Wenqing (Secretary General, AECC S&T Committee)
Du Zhaoqiu (Dean, School of Mechanical Engineering, Shanghai Jiao Tong University)
Jiang Mingfan (VP, AECC Commercial Aircraft Engine Co., LTD)
Lei Hongjie (President, AVIC Xi’an Flight Automatic Control Research Institute)
Li Yueming (Deputy Dean, School of Aerospace Engineering, Xi’an Jiaotong University)
Liu Daizun (AVIC)
Liu Lin (Department Director, AVIC)
Liu Zhimin (President, AVIC Shenyang Aircraft Design&Research Institute)
Shuai Chaolin (VP, AVIC Chengdu Aircraft Industrial (Group) Co., Ltd)
Song Kepu (President, AVIC First Aircraft Institute)
Sun Shaoshan (VP, AVIC Chengdu Aircraft Design&Research Institute)
Sun Xiasheng (Deputy VP, Chinese Aeronautical Establishment)
Tang Qingru (VP, Civil Aviation Flight University of China)
Tao Zhi (VP, Beihang University)
Tong Gang (VP, Shenyang Aerospace University)
Wang Jinyan  (President, AVIC Chinese Aeronautical Radio Electronics Research Institute)  
Wang Yupeng  (VP, AVIC Aircraft Strength Research Institute)  
Wei Jinzhong  (Department Director, AVIC)  
Wu Renbiao  (VP, Civil Aviation University of China)  
Xi Lifeng  (VP, Shanghai Jiao Tong University )  
Xu Chunlin  (VP, AVIC Xi'an aircraft industry (Group) Co., Ltd.)  
Xu Wei  (VP, AVIC Changhe Aircraft Industry (Group) Corporation of China)  
Xu Xiwu  (VP, Nanjing University of Aeronautics and Astronautics, NUAA)  
Yang Xiaoguang  (VP, Nanchang Hangkong University)  
Yuan li  (President, AVIC Aerodynamics Research Institute)  
Zhang Mingxi  (President, AVIC Research Institute for Special Structures of Aeronautical Composites)  
Zhang Weihong  (VP, Northwestern Polytechnical University, NPU)  
Zhu Minghua  (Vice Director, Office of COMAC S&T Committee )  

**Secretariat**  
Yu Ce  (Department Director, CSAA)  
Zhang Xue  (Business Supervisor, CSAA)  

Chinese Society of Aeronautics and Astronautics  
Beijing, No. 2, Andingmenwai, Beiyuan, Chaoyang District, Beijing, China  
P.O. Box: 761-2, Beijing-100012  
Call: +86 10 84924385/84934114  
Email: icas2020@csaa.org.cn
# ICAS Member Societies & Associates

## ICAS Member Societies

### Australia

The Royal Aeronautical Society - Australian Division  
PO Box 1583  
Crows Nest, NSW 2065

### Belgium

VKI - Von Kármán Institute for Fluid Dynamics  
Chaussée de Waterloo 72  
1640 Rhode – St. Genese

### Brazil

ABCM - Associação Brasileira de Engenharia e Ciências Mecanicas  
Av. Rio Branco, 124/14 andar - Centro  
20040-001 Rio de Janeiro

### Canada

CASI - Canadian Aeronautics and Space Institute  
350 Terry Fox Drive Suite 104 Kanata, Ontario K2K 2w5

### People's Republic of China

CSAA - Chinese Society of Aeronautics and Astronautics  
No.2 Beiuyan, Andingmenwai Chaoyang District, Beijing 100012  
Post Box 761-2, Beijing

### Czech Republic

CSM - Czech Society for Mechanics  
c/o Brno University of Technology Institute for Aerospace Engineering  
Technicka 2896/2  
616 69 Brno

### Finland

The Finnish Association of Graduate Engineers TEK  
Ratavartijankatu 2  
00520 Helsinki

### France

AAAF - Association Aéronautique et Astronautique de France  
6, rue Galiére  
75782 Paris Cedex 16

### Germany

DGLR - Deutsche Gesellschaft für Luft und Raumfahrt  
Godesberger Allee 70  
53175 Bonn

### Hungary

GTE - Scientific Society of Mechanical Engineers  
PO Box 433  
1371 Budapest

### India

AeSI - Aeronautical Society of India  
13-B, Indra Pasthra Estate  
New Dehli - 110002

### Indonesia

IAAI - Institute of Aeronautics and Astronautics Indonesia  
Institut Teknologi Bandung  
Jalan Ganesha 10  
40132 Bandung

### Israel

Israel Society of Aeronautics and Astronautics  
P.O. Box 15524  
Rishon Le-Zion 7505401

### Italy

AIDAA - Associazione Italiana Di Aeronautica e Astronautica  
Casella Postale 227  
00187 Roma V. R.

### Japan

JSASS - Japan Society for Aeronautics and Space Sciences  
4-1-21 Nihonbashi-Muromachi, Chu-o-ku,  
Tokyo 103-0022
<table>
<thead>
<tr>
<th>Country</th>
<th>Organization</th>
<th>Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>Korea</td>
<td>KSAS - Korean Society for Aeronautical and Space Sciences</td>
<td>#635-4, Yeogsam-dong, Gangnam-gu, Seoul 135-703</td>
</tr>
<tr>
<td>Poland</td>
<td>Polish Society of Aerospace Sciences</td>
<td>c/o Warsaw University of Technology, ul. Nowowiejska 24, 00-665 Warsaw</td>
</tr>
<tr>
<td>Portugal</td>
<td>CCTAE - Centro de Ciencias e Tecnologias Aeronauticas e Espaciosis</td>
<td>c/o Instituto Superior Técnico, Av. Rovisco Pais, 1069 Lisboa Cedex</td>
</tr>
<tr>
<td>Romania</td>
<td>Commission d'Astronautique de l'Academie de Roumanie</td>
<td>125 Calea Victoriei S.1, 71102 Bucuresti</td>
</tr>
<tr>
<td>Russian Federation</td>
<td>TsAGI - Central Aerohydrodynamic Institute</td>
<td>1, Zhukovski Street, Zhukovski, Moscow Region 140160</td>
</tr>
<tr>
<td>Republic of Serbia</td>
<td>Serbian Aerospace Society</td>
<td>c/o Faculty of Mechanical Engineering, University of Belgrade, Kraljice Marije 16, 11120 Belgrade 35</td>
</tr>
<tr>
<td>Republic of South Africa</td>
<td>AeSSA - Aeronautical Society of South Africa</td>
<td>P.O. Box 14717, Sinoville 0129</td>
</tr>
<tr>
<td>Sweden</td>
<td>SSAA - Swedish Society of Aeronautics and Astronautics</td>
<td>c/o SSC, PO Box 4207, S-171 04 Solna</td>
</tr>
<tr>
<td>Switzerland</td>
<td>SvFW - Schweizerische Vereinigung Fur Flugwissenschaften</td>
<td>c/o RUAG Aerospace, CH-6032 Emmen</td>
</tr>
<tr>
<td>The Netherlands</td>
<td>NVVL - The Netherlands Association of Aeronautical Engineers</td>
<td>Anthony Fokkerweg 2, 1059 CM, Amsterdam</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>RAeS - Royal Aeronautical Society</td>
<td>4 Hamilton Place, London W1J 7BQ</td>
</tr>
<tr>
<td>United States</td>
<td>AIAA - American Institute of Aeronautics and Astronautics</td>
<td>12700 Sunrise Valley Drive, Suite 200, Reston, VA 20191-5807</td>
</tr>
</tbody>
</table>
# ICAS Associates

<table>
<thead>
<tr>
<th>Country</th>
<th>Institution</th>
<th>Address</th>
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<tbody>
<tr>
<td><strong>Australia</strong></td>
<td>Defence Science and Technology Group</td>
<td>506 Lorimer Street, Fishermans Bend, Victoria 3207</td>
</tr>
<tr>
<td><strong>Brazil</strong></td>
<td>Embraer S.A.</td>
<td>Av. Brigadeiro Faria Lima, 2.170 12227-901 – São José dos Campos – SP</td>
</tr>
<tr>
<td><strong>Canada</strong></td>
<td>Aerospace NRC</td>
<td>Montreal Road Ottawa, Ontario, K1A 0R6</td>
</tr>
<tr>
<td><strong>China</strong></td>
<td>AASRC - Taiwan, China</td>
<td>Room R3-211,No.300, Jhongda Rd., Jhongli City, Taoyuan County 320</td>
</tr>
<tr>
<td></td>
<td>CAE - Chinese Aeronautical Establishment</td>
<td>P.O. Box 761 No.2 Anwai Beiyuan Beijing 100012</td>
</tr>
<tr>
<td></td>
<td>COMAC - Commercial Aircraft Corporation of China, Ltd.</td>
<td>Zhang Yang Road 25 Shanghai 200120</td>
</tr>
<tr>
<td><strong>Czech Republic</strong></td>
<td>VZLU - Czech Aerospace Research Centre</td>
<td>Beranovych 130 199 05 Praha - Letnany</td>
</tr>
<tr>
<td><strong>France</strong></td>
<td>Airbus S.A.S.</td>
<td>1 Rond Point Maurice Bellonte 31707 – Blagnac</td>
</tr>
<tr>
<td></td>
<td>ONERA - French Aeronautics and Space Research Center</td>
<td>BP 72 92322 Chatillon Cedex</td>
</tr>
<tr>
<td></td>
<td>SAFRAN</td>
<td>2 bd du Général Martial Valin 75724 Paris Cedex 15</td>
</tr>
<tr>
<td><strong>Germany</strong></td>
<td>Bauhaus Luftfahrt e.V.</td>
<td>Willi-Messerschmitt.Str. 1 82024 Taufkirchen</td>
</tr>
<tr>
<td><strong>Italy</strong></td>
<td>C.I.R.A.-Italian aerospace research centre</td>
<td>Via Maiorise 81043 Capua (CE)</td>
</tr>
<tr>
<td></td>
<td>University of Naples “Federico II”</td>
<td>Department of Aerospace Engineering Via Claudio, 21 80125 Napoli</td>
</tr>
<tr>
<td><strong>Japan</strong></td>
<td>ENRI - Electronic Navigation Research Institute</td>
<td>7-42-23 Jindaiji-higashi-machi, Chofu, Tokyo 182-0012</td>
</tr>
<tr>
<td></td>
<td>JAXA - Institute of Aeronautical Technology (IAT)</td>
<td>7-44-1 Jindaiji-higashimachi, Chofu, Tokyo 182-8522</td>
</tr>
<tr>
<td><strong>Germany</strong></td>
<td>DLR - German Aerospace Center</td>
<td>Linder Höhe 51147 Köln</td>
</tr>
<tr>
<td><strong>Japan</strong></td>
<td>Mitsubishi Aircraft Corporation</td>
<td>Nagoya Airport, Toyoyama-cho, Nishikasugai-Gun, Aichi 480-0287</td>
</tr>
</tbody>
</table>
Lithuania
Vilniaus Gedimino
technikos universitetas
- VGTU
Saulėtekio alėja 11,
Vilnius 10223

Pakistan
Institute of Space Technology
1, Islamabad Highway,
Islamabad 44000

Poland
ILOT - INSTITUTE OF AVIATION
Al. Krakowska 110/114
02-256 Warsaw

Instytut Techniczny Wojsk Lotniczych - Polish Air Force Institute of Technology
6 Ks. Bolesława Street
01-494 Warsaw

Russia
CIAM - Central Institute of Aviation Motors
2, Aviamotornaya St.
111116 Moscow

MAI - Moscow Aviation Institute
4 Volokolamskoye shosse
125993 Moscow

Republic of South Africa
CSIR - DPSS
PO Box 395
Pretoria 0001

Sweden
FOI - Swedish Defence Research Agency
SE-16490 Stockholm

SAAB AB
SE-58188 Linköping

The Netherlands
Airbus S.A.S.
2 Rond Point Maurice Bellonte
31700 – Blagnac

NLR - National Aerospace Laboratory
PO Box 90502
1006 BM Amsterdam

United Kingdom
Poll Aerosciences
114 High Street
Cranfield - Bedfordshire - MK43 0DG

Rolls-Royce
PO Box 31
Derby DE24 8BJ

United States
Aerospace Systems Design Laboratory
Georgia Institute of Technology
Atlanta, GA 30332-0150

Boeing Company
WEO&T Enterprise Technology Strategy, External Technical Affiliations
P.O. Box 3707, MC 03-FR
Seattle, WA 98124-2207

Honda Aircraft Company
6430 Ballinger Rd
Greensboro, NC 27410

Lockheed Martin Corporation
6801 Rockledge Drive
Bethesda, Maryland 20817
Programme & Session Overview

<table>
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<th>Monday, 54. September 2020</th>
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<tr>
<td><strong>Room</strong></td>
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<tr>
<td><strong>General Lecture 1</strong> - CTO - Chair: J. Kanek, ICAS-SC Chair, JP</td>
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<td><strong>Tuesday, 55. September 2020</strong></td>
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<td><strong>Break</strong></td>
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Detailed Technical Programme
For the current version of the Detailed Technical Programme please use the following link:
https://icas.dglr.de/icas2020/programme.html

List Of Reserve Papers
For the current version of the List of Reserve Papers please use the following link:
https://icas.dglr.de/icas2020/reserves.html

List Of Interactive Presentations
For the current version of the List of Interactive Presentations please use the following link:
https://icas.dglr.de/icas2020/interactive.html
The Congress participants are invited to visit a number of aeronautical research centers, labs and aviation enterprises located in Shanghai, Xi’an, Shaanxi Province and Chengdu, Sichuan Province of China. The facilities cover assembly, design, static test, customer service, flight training etc., catering to various interests of the delegates.

The technical tour is scheduled on September 18. The routes will be made available online at www.icas2020.com for registration. It’s limited to registered delegates with a certain limit of seats for each route. The participation will be subject to identity verification upon request.
Commercial Aircraft Corporation of China (COMAC) is a state-owned limited liability company established in 2008 headquartered in Shanghai. It functions as the main vehicle in implementing large passenger aircraft programs in China. It is also mandated with the overall planning of developing trunk liner and regional jet programs and realizing the industrialization of civil aircraft in China. COMAC is engaged in the research, manufacture and flight tests of civil aircrafts and related products, as well as marketing, servicing, leasing and operations of civil aircraft through its nine member organizations. The company endeavors to manufacture large passenger aircraft that are safer, cost-effective, comfortable and environment-friendly. So far, it has two products.

COMAC Shanghai Aircraft Manufacturing Co., Ltd. is the aircraft manufacturing center of COMAC. SAMC is responsible for the manufacturing and assembly of ARJ21-700, C919 and CR929 aircrafts. It is also leading series of key research on manufacturing, materials, tooling, etc.
Commercial Aircraft Corporation of China - Shanghai Aircraft Customer Service Centre

COMAC Shanghai Aircraft Customer Service Co., Ltd. is the custom service center of COMAC. Shanghai Aircraft Customer Service Co., Ltd. SACSC is responsible for the research, system construction and implementation of life-cycle customer service of ARJ21-700, C919 and CR929 aircrafts, and is mainly engaged in civil aircraft flight, maintenance, crew and dispatch training.

Commercial Aircraft Corporation of China - Shanghai Aircraft Design and Research Institute

COMAC Shanghai Aircraft Design and Research Institute is the design and development center of COMAC. SADRI undertakes the design, test, research and key technology development of ARJ21-700, C919 and CR929 aircraft with independent intellectual property rights.

AVIC Aircraft Strength Research Institute---Static & fatigue testing laboratory for full-scale civil aircraft
Aircraft Strength Research Institute (ASRI) is affiliated to Aviation Industry Corporation of China (AVIC), which is the only aircraft structural strength research center and ground strength verification base in aviation industry of China. It undertakes full-scale aircraft ground strength appraisal and verification test for the whole aviation industry and gives strength conclusions of new research and modification aircraft on the behalf of the nation. Besides, ARSI provides test data and conclusions for aircraft structure lifetime and reliability. It is an indispensable link in the four important links of aircraft development: design, production, testing and flight testing.

**Shanghai Jiao Tong University**

Delegates will be able to visit its History Museum and several labs of its School of Mechanical Engineering and School of Aeronautics and Astronautics.

Shanghai Jiao Tong University (SJTU) is a comprehensive, research-oriented, and internationalized top university in China.

SJTU has 30 schools/departments, 31 research institutions, 13 affiliated hospitals, 2 affiliated medical research institute, 12 directly affiliated units and 6 directly affiliated enterprises, with 16,000+ undergraduates and 30,000+ postgraduates, 3,000+ overseas students. The university faculty includes 3,000+ full-time teachers, 22 members of Chinese Academy of Sciences, 22 members of Chinese Academy of Engineering.

SJTU has 67 undergraduate programs covering 9 major disciplines: economics, law, literature, science, engineering, agriculture, medicine, management and arts. SJTU has 2 teachers of "Ten-thousand Talents Program", 1 teacher of "National Special Support Program for High-Level Personnel Recruitment" and 8 nationally renowned teachers. SJTU won the 1st national "double demonstration base" and established student innovative center.
AVIC China Aeronautical Radio Electronics Research Institute (CARERI)

Established in 1957, China Aeronautical Radio Electronics Research Institute is a research institute specialized in avionics integration and radio technology researches, undertaking the tasks of military and commercial airborne core system, equipment and UAV test and control technology development. Its scope of business covers scientific research, manufacture, distribution and after-market service.

Laboratories are equipped with advanced technologies such as avionics integration, cockpit display and control, airborne core processing, integrated information management, air traffic management, wireless radio communication and navigation, UAV test and control command and computer hardware.
The Institute is of first-rate technology background and capability: 7 aeronautical product R&D platforms, 4 avionics integration supporting platforms; completed system and product testing, validation and evaluation environment, advanced SMT electronic mounting production line, machine processing production line, aviation product integration and testing center. It is capable of carrying out researches on all types of weaponry development, manufacturing and maintenance. The technical and management systems of CARERI are also standardized and mature: it is GJB9001A, GJB5000, CMM-3 and AS9100C approved, and is undergoing the qualification approval of civil airworthiness management system. The institute is heading toward an all-around quality system that is catering to military and commercial aviation products research and service.

**Technical visit facilities in Xi'an, Shaanxi Province**

Xi’an is home to a cluster of aeronautical research centers and higher education institutes. As an ancient city famous for its historical relics like the Terra-Cotta Warriors, Xi’an is among the most popular tourist destinations.

Xi’an is around 3-hour away from Shanghai by air. For delegates choosing this route, we will provide the recommended flight and booking service. It will be a one-way travel. After visit, delegates shall dismiss and go on with their post-tour on their own.
AVIC Xi’an Aircraft Industrial (Group) Company, Ltd (abbreviated as XAC), founded on May 8th, 1958, is served as an important aviation industry base of scientific research, development and manufacturing of large and medium sized military and civil aircraft in China. Over 60 years, XAC has developed a series of aviation products including H6 Bomber, China Flying Leopard family, MA series and large transport aircraft.

In recent years, XAC has been building itself a rapid pace, leading to continuous enhancement of capability and strength. XAC has successively completed final assembly and integration of large transport aircraft, development of critical parts and components for large airliner and seaplane, making tremendous contribution to the development of China’s national defense and aviation industry. On the 70th anniversary parade of National Day, XAC-made five types of total 15 aircraft flew over Tian’anmen Square in formation, receive review by the CPC and the people across the world.

By actively advocate the strategy of “One Belt One Road” and pushing construction of the “Air Silk Road”, XAC has establish a robust system of development, manufacturing, marketing, services and airworthiness management system for commercial aircraft, resulting in professional development system of commercial aircraft. XAC has been playing an active role in participating workload in international aviation industry. XAC has also set a long and stable partnership with world-renowned aircraft builders such as Boeing, Airbus, Bombardier, Alenia.

Looking to the future, under the guidance of Xi Jinping’s Thought on socialism with Chinese characteristics for a New Era, XAC will put into practice AVIC development strategy of “One Mission, Two Integration, Three Capabilities and Five Upgrades” in a new era, fully push forward the enterprise’s development program and sustain an initiative of “Smart XAC” in all effort to construct an aviation power in a new era.
Northwestern Polytechnical University (NPU)

Located in the historic city of Xi'an, cradle of Chinese civilization and terminus of the ancient Silk Road, Northwestern Polytechnical University (NPU) is the only multidisciplinary and research-oriented in China that is simultaneously developing education and research programs in the fields of aeronautics, astronautics, and marine technology engineering. It is now affiliated to the Ministry of Industry and Information Technology (MIIT).

Since the establishment of the People's Republic of China (PRC), NPU has always been one of the nation’s key universities. In 1960 it was approved as a state key university by the State Council. It ranked among China’s top 15 universities in the state’s 7th and 8th Five-Year plans; and NPU is one of the first 22 universities to have established a graduate school. It was one of the first universities to enter into the 211 Project in 1995 and the 985 Project in 2001. NPU is a member of the "Outstanding University Alliance" program and is honored as a National Role Model Unit, a National Pioneer for Optimal Advanced Basic-level Party Organization and a Model University for Graduate Employment etc.

NPU adheres to the motto "Loyalty, Integrity, Courage and Perseverance" while carrying forward the spirit of "Strong Preparation, Diligent Effort, Practical Attitude, and Creative Innovation". NPU has put its roots down in the west; dedicated itself to national defense and written several "firsts" into the history of the PRC. Now NPU will continue to pioneer new pathways into the future in the process of building a world first-class university and world first-class disciplines.
Technical visit facilities in Chengdu, Sichuan Province

Chengdu is another major aviation city with a variety of aviation industry facilities and training centers. Located in the hinterland of China, it’s also best known for its giant pandas.

Chengdu is around 3.5-hour away from Shanghai by air. For delegates choosing this route, we will provide the recommended flight and booking service. It’s a one-way travel. It will be a one-way travel. After visit, delegates shall dismiss and go on with their post-tour on their own.

AVIC Chengdu Aircraft Industrial (Group) Co., Ltd

The Chengdu Aircraft Industrial (Group) was founded in 1958. It is a subsidy of the Aviation Industry Corporation of China. It’s a center for the development, production and export of equipment and civil aircraft parts.

It has undertaken the research and production of the self-developed commercial aircraft C919, ARJ21, and the large amphibious aircraft AG600. It is an international leading supplier for civil aircraft components, producing and delivering more than 10,000 subcontract products for civil aircrafts. It’s also involved in the development of civil UAVs and business jets.

A visit to the company’s exhibition hall will be arranged.
Civil Aviation Flight University of China (CAFUC)

In the past 62 years CAFUC accumulates abundant experiences and possesses over 600 flight or other specialty teachers with precise teaching style and exquisite technology. Nowadays CAFUC has 5 well-equipped flight-training airports in Xinjin, Guanghan, Mianyang and 30 supporting simulators and exercisers. In recent years CAFUC has made extraordinary achievements in aviation safety. It has won the highest award for general aviation—“Golden Seagull Cup” granted by CAAC for six times and been successively granted the honorable titles of “National Advanced Primary Party Organization”, “National Model Unit of Safe Flying”, “National Civil Aviation Advanced Unit of Safe Flying”, “Sichuan Model Unit”, “Sichuan Advanced Unit in Ideological and Political Work in Colleges and Universities”, “Excellent Higher Education of Carrying out School Sports Work Regulations”, etc.

At Present CAFUC offer 33 specialties for undergraduates, including flight technology (Cargo transport aircraft pilot, general aircraft pilot, helicopter pilot), transport and communication (air traffic control, flight dispatch, aeronautical information and airfield control), English, computer science and technology, business administration, heat energy and power engineering, electronic information engineering, safety engineering, traffic engineering, logistic management, marketing, cabin attendant and tourist management, business management and air service.

During the 62 years CAFUC has cultivated over 32000 pilots (about 70% of Chinese pilots) and 10000 ground technical professionals for Chinese civil aviation and done the transition training of about 15000 (person-times) pilots and continuing education of 20000 (person-times) professionals of civil aviation. It also has cultivated a large number of pilots for such countries and regions as Japan, Vietnam, Indonesia, Malaysia, Iran, Mongolia, Cambodia, Hong Kong and Macao. Its adult education and private pilot certificate training has begun to take shape.

A visit to its history exhibition hall, flight training airports in Guanghan, simulator training center, aero-Engine maintenance training center and civil aviation lab will be arranged. The visit to all or part of the above will be arranged according to agenda.
Social Programme

Lunch & Coffee Break (Morning/Afternoon)

**Time:** TBC  
**Date:** 14-17 September, 2020  
**Location:** Foyers, restaurant and ballroom  
**Attendees:** Included for all delegates  
**Description:** Morning and Afternoon Coffee-break will be served at the congress hotel foyers to enable delegates to view the exhibition and network with colleagues. Lunch will be served at the restaurant and ballroom of the venue.

Welcome Reception

**Time:** TBC  
**Date:** 13 September, 2020  
**Location:** Chang’an and Luo Yang Ballroom of the venue  
**Attendees:** Included for all delegates.  
**Description:** Catch your fellows and warm up on an easy Cocktail party with live music powered by food and beverages.

Congress Reception

**Time:** TBC  
**Date:** 14 September, 2020  
**Location:** Night cruise on Huangpu River  
**Attendees:** Exclusive for student registrants; included in the registration fee.  
**Description:** The Congress Reception will be held on a double-layer dragon boat cruising the famous Huangpu River. One can have the delicious buffet while enjoying the fantastic night view of the bund and skyscrapers. The cruise will take about two hours. Shuttle bus between the venue and the port will be arranged.
Congress Banquet

**Time:** TBC  
**Date:** 17 September 2020  
**Location:** Hall of Summit 1+2 at the venue  
**Attendees:** upon purchase of voucher at 120 Euros each  
**Description:** It’s going to be a really fancy occasion for gathering and celebrating on the successful convention of the Congress. It will be a formal round-table seated dinner with delicate Chinese cuisines and abundant Baijiu (Chinese white liquor), wine and soft drinks. Performance of Chinese arts will be staged. ICAS committee members, CSAA Local Organizing Committee members as well as representatives from sponsors will join you there.

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Student Party

**Time:** TBC  
**Date:** 16 September 2020  
**Location:** BMW Experience Shanghai  
**Attendees:** Exclusive for student registrants; included in the registration fee.  
**Description:** The BMW Experience Shanghai is next to the China pavilion, which is the main venue of the 2010 World expo. Students can do some networking while enjoying snacks, soft drinks and the night view of the Pavilion.
General Information

LOCATION AND DATES
The 32nd Congress will be held at the Shangri-La Hotel, Pudong, Shanghai from Sunday, 13 September to Friday, 18 September. The Hotel address is 33 Fu Cheng Road, Pudong, Shanghai, 200120, China. Tel: +8621 6882 8888

CONFERENCE LANGUAGE
The conference official Language is English.

REGISTRATION FEES
The ICAS Executive Committee has fixed the fees as follows:

<table>
<thead>
<tr>
<th></th>
<th>Early Registration (full payment received before 30 June)</th>
<th>Regular Registration (full payment received before 31 August)</th>
<th>Onsite Registration (full payment received before 18 Sept.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Member* (Member of ICAS Member Societies)</td>
<td>€880</td>
<td>€1000</td>
<td>€1100</td>
</tr>
<tr>
<td>Non-member</td>
<td>€1050</td>
<td>€1200</td>
<td>€1300</td>
</tr>
<tr>
<td>Retired (Above 65 years of age)</td>
<td>€605</td>
<td>€650</td>
<td>€700</td>
</tr>
<tr>
<td>Student (Undergraduate or graduate full-time students, who will not have completed doctorate studies by the date of the Congress)</td>
<td>€200</td>
<td>€260</td>
<td>€300</td>
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</table>

The registration fee covers:

<table>
<thead>
<tr>
<th></th>
<th>Full delegate (Member/Non-member)</th>
<th>Retired</th>
<th>Student</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Technical Sessions Admittance</td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>Coffee Breaks</td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>Four Lunches (14-17 Sep.)</td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>Conference Bag and Materials</td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>Welcome Reception (13 Sep.)</td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>Congress Reception (14 Sep.)</td>
<td>√</td>
<td>√</td>
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<tr>
<td>Technical Visit (18 Sep.)</td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>Student Party (15/16 Sep.)</td>
<td>×</td>
<td>×</td>
<td>√</td>
</tr>
<tr>
<td>Paper Online Publication</td>
<td>√</td>
<td>√</td>
<td>√</td>
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</tbody>
</table>
- Participants registered as student shall upload the student identity certificate for verification upon online registration. They shall also bring it upon on-site check-in.

- Participants can complete the registration online at www.icas2020.com

- All attendees must complete the online registration form indicating all the events they would like to attend that are not included in a regular registration.

- Please register as early as possible to get the opportunity for social events and technical visits given there are limited seats. The online registration system will be valid from spring to 6 September, 2020. Beyond this date, only on-site registration with credit card payment can be accepted. Authors shall register before the early-bird deadline.

**REGISTRATION & INFORMATION DESK**

The main registration desk, located on the Hotel Ground Level will be open during the following hours:

<table>
<thead>
<tr>
<th>Date</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sunday 13 September</td>
<td>14:00–20:00</td>
</tr>
<tr>
<td>Monday 14 September – Friday 18 September</td>
<td>07:00–17:00</td>
</tr>
</tbody>
</table>

**REGISTRATION POLICY**

Refund application shall be submitted in writing at secretariat@icas2020.com, indicating the registrant name, registration ID, amount paid and refund reason. It will be validated upon a confirmation reply. For applications received before 10 July, 2020, 20% of the registration fee will be deducted from the total; received between 11 July and 20 August, 80% will be deducted from the total, then the rest will be returned. No refund application can be made after 20 August, 2020.

Substitution will not generate any cost, but the transfer must be made in written at secretariat@icas2020.com before 29 August.

All the above timeline refers to Beijing time.
METHODS OF PAYMENT

• **For Chinese delegates:**
  **Bank Transfer (RMB Account)**
  By selecting this payment mode, you will receive an invoice with detailed bank account information and your registration ID by email.

  **Alipay (RMB Account)**
  By selecting this payment mode, you will be directed to the Alipay payment page.

• **For International delegates:**
  **Bank Transfer (Euro Account)**
  We highly recommend you choose this method as it will cause less processing fee, which shall be borne by the remitter.

  By selecting this payment mode, you will receive an invoice with detailed bank account information and your registration ID by email.

  **PayPal (Online Credit Card Payment)**
  By selecting this payment mode, you will be directed to the PayPal payment page. Extra 5% processing fees will be added to your total amount.

*Please kindly note that all bank charges for remittances and telegraphic transfers are the responsibility of the delegates. For identification, **please indicate the attendee’s name and registration ID on your remittance sheet.**

Upon receiving your registration form and payment, ICAS 2020 Registration Services will send you the receipt by email.

For further information concerning registration and payment, please contact Conference Registration Services by the following e-mail:

ICAS 2020 Conference Registration Services
E-mail: secretariat@icas2020.com
Conference Website: www.icas2020.com
Working Hour: Monday to Friday, 10:00 – 18:00, Beijing time.
Accommodation

Official Venue Hotel: Pudong Shangri-La, East Shanghai

ICAS 2020 Local Organizing Committee is pleased to recommend you choose the hotel where the conference is held: Pudong Shangri-La, East Shanghai. The hotel is located on the famous Huangpu River, in Shanghai’s vibrant Luqiazui financial district, directly opposite the historical Bund. Guests can walk from the hotel to the Oriental Pearl TV Tower, Shanghai International Convention Center, Super Brand Mall and IFC Mall, making it the ideal starting point for travellers to explore Shanghai.

Nearby Sightseeing
Riverside Garden
The Bund
Oriental TV Pearl Tower

Distance to transportation hubs:
Pudong International Airport: 31.1 KM
Hongqiao International Airport: 16.9 KM
Shanghai Railway Station: 4.5 KM
Shanghainan Railway Station: 11.3 KM
Shanghai Hongqiao Railway Station: 17.6 KM
Metro Line 2, Luqiazui Metro Station: 0.35 KM

Nearby Shopping Malls
IFCt
Super Brand Mall
Pearl & Flea Market
60+ outside Dining options

We have negotiated a very favorable room rate for you. Please book via our online link at http://www.icas2020.com/data/list/hotel. The below price for single includes one breakfast; for double includes two breakfasts. There are limited rooms for each type. As September is the best season for travel during the year and there are limited rooms for each type, please book early to ensure you enjoy your top choice. The price includes tax and service fee, not payment processing fee.
### Deluxe Room

### Deluxe Bund Room

### Executive Room
Each room offers 40 – 45 sqm/430 – 485 sqf of luxury.

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**Contact Information**
For inquiries about booking: +86(21) 3279 8797
For others: +86(21) 6882 8888
Hotel Option for Students: Grand Youyou Hotel Shanghai

As a 3-star standard modern hotel, the Grand Youyou Hotel was established by the Shanghai Youyou Industrial Developing General Company. Conveniently located in the center of the Lujiazui Finance and Trading Area of Pudong next to the Nan Pu Bridge.

It takes 30 minutes by bus or 15 minutes by taxi to the venue hotel.

Take Bus Line 985: Walk 400 meters to the bus station South Pudong Road Ningyang Road, get off at Lujiazui Road Mingshang Road, and walk 240 meters to Pudong Shangri-La Hotel. Please refer to the map for the update route.

Delegates stay at this hotel and others shall take care of the transportation to the venue on their own.

Contact Information
Address: 2111 South Pudong Road (Pudong Nan Lu) Shanghai China
Phone: (86 21) 58810888
Website: http://www.grandyouyouhotel.com/

The room rate is about 70 Euros, subject to change from day to day. Please consult through the above link or phone call for price and reservation.
Tour Information
Shanghai City

Shanghai, with a population of more than 24 million (data by 2018), is the largest and traditionally the most developed metropolis in Mainland China. Shanghai was the largest and most prosperous city in the Far East during the 1930s. In the past 20 years it has again become an attractive city for tourists from all over the world.

Shanghai is a fascinating mix of East and West. It has historic shikumen houses that blend the styles of Chinese houses with European design flair, and it has one of the richest collections of Art Deco buildings in the world. As there were so many concessions (designated districts) to Western powers during the turn of the 20th century, in many places the city has a cosmopolitan feel. There is everything from classic Parisian style, to Tudor style buildings and 1930s buildings reminiscent of New York or Chicago.

As one of the earliest Chinese ports to open to the outside world, Shanghai is charming for its modern and international atmosphere. Its sound tourism facilities, convenient traffic system, abundant tourist attractions leave tourists with good impressions. The city is heading towards a world-famous tourism city and a destination for business trips.
There are plenty to see and to experience in Shanghai as well as cities around within 1-hour distance by China Railway High Speed. Tour options provided by a travel agency will be open for booking online and on-site. Please check www.icas2020.com for more update information.

Sightseeing spots in Shanghai city

The Bund
With a total length of 1.5 kilometers, the Bund, which has extraordinary significance for Shanghai is located on the bank of the Huangpu River. It starts from the Shiliupu Pier on the south and ends up with the Waibaidu Bridge to the north, facing the Huangpu River on the east and 52 buildings in different Chinese and western style on the west. It is widely regarded as the "Exhibition of World Architecture".

Shanghai Science and Technology Museum
Shanghai Science and Technology Museum is an AAAAA national tourist spot focusing on the theme of "Nature, Human and Technology". SSTM aims to make the science popular with high-techs. There are 11 permanent exhibition galleries on the themes of Biological Diversity, Earthcrust Exploration, Cradle of Designers, Lights of Wisdom, Home Planet, Information Era, World of Robots, Lights of Exploration, Human and Health, Space Navigation, Children’s Fantasy land, and 2 special exhibition galleries on World of Spiders and World of Animals and two relief galleries on Technologies in Ancient China and Science Explorers.

Shanghai Museum
As a large museum of ancient Chinese art, the Shanghai Mu-seum boasts a collection of 140,000 precious relics, featuring bronzes, ceramics, paintings and calligraphy. The abun-dance and quality of the collection have enjoyed a high reputation both at home and abroad.
Yu Garden
Yu Garden is located in the northeast of the old city of Shanghai, adjoining with the City God Temple. It is a world-famous classical garden in the southern Yangtze which was built more than 400 years ago in the Ming Dynasty. It is regarded as one of the representatives of the traditional culture in Shanghai. The garden has the Exquisite Jade Rock, one of the three most famous rocks in Jiangnan region, and the Dianchun Hall, the command center of the Small Swords Society. In its neighborhood are many tourist attractions including the Chenghuang Temple and the shopping streets.

Xintiandi
It is a modern leisure and entertainment neighborhood in downtown Shanghai, provides an interesting window on the city and the rest of the world, on city’s yesteryears, today and tomorrow. Culturally and historically imbued old homes known as Shikunmen and cover an area of nearly 30,000 square meters have been turned into a hive of activity for diners, shoppers and entertainment and leisure seekers. Beneath the veneer of old bricks and roofs that have been preserved to this day and age are modern amenities.

An easy stroll makes you feel you are transported back in time to a Shanghai of the 20’s and 30’s of the last century, but once you step into a door, the ambience of modernity is just overwhelming. Galleries, designer clothing shops, theme eateries, cafés and bars are everywhere. Street shows and trendy activities abound. Xintiandi is Shanghai’s new landmark. It is where tradition and modernity meet, a classy venue for urban slickers.
Sightseeing Spots Around

Zhujiajiao Water Town
Zhujiajiao Water Town is about 50 km away from the Bund, Shanghai. If your time is limited, Zhujiajiao would be the best and 2nd nearest option to get a feel of such ancient towns around Shanghai. Similar to Venice in Italy, there are many well preserved bridges and boat ride is available. Zhujiajiao is a township in the Qingpu District of Shanghai. In the centuries past Zhujiajiao was a trading area due to the many canals, which were used to ferry products along in little boats and barges. This ancient town is well endowed with waterways, 36 ancient bridges, and traditional Chinese-style residences.

Xitang Water Town
Xitang is level, densely distributed with rivers and has a very quiet and natural environment. 9 rivers converge in this town, dividing it into 8 sections, but many bridges link this water town together (anciently called as “nine dragon old pearl” and “wind from 8 sides”). Inside the town, there are many well-preserved architectural groups constructed during the Ming and Qing dynasties, which boast a higher artistry and study value, thus being highlighted by the experts at home and abroad studying antique buildings. Through a bird'seye view of the whole town, green waves ripple everywhere and every family resides near water. In the morning, water flows beneath bridges, thin mist is like silk, pinkish walls on both banks stand tall and erect and tiled houses are reflected inversely in the water. In the evening, the setting sun shines slantwise; songs come from fishing boats, lamps flicker and the fragrance of wine drifts. The whole old town is like a poem and a picture. In this town, people will feel that they are seemingly in an earthly paradise. It is hard to know that people exist in the picture or picture exists in the heart of people.
Suzhou City, Jiangsu Province

Suzhou is a beautiful city. It is a place of gardens and canals. Several classic gardens, including the Humble Administrator’s Garden and the Lingering Garden, are listed as UNESCO World Heritage Sites and are great for sight-seeing.
Suzhou is very much a water town - it’s thoroughly crisscrossed with canals and bridges and you can still see traces of a very old lifestyle centered around the Grand Canal.

Two or three days are enough to experience Suzhou. Spare one more day and you can enjoy the extension Suzhou tours including the nearby water towns, such as Zhouzhuang Water Town and Tongli Water Town to experience the residence and bridges of hundreds of years old.

Hangzhou City, Zhejiang Province

Hangzhou is the picturesque capital of the Zhejiang province, located on China’s east coast and in proximity to Shanghai. For travelers wanting the opportunity to experience all this city has to offer, one of our Hangzhou tours offers the ideal way to see a different side of China.

For millennia favored by locals for its quintessentially Chinese scenery of wispy willows and green mist covered hills, the city’s major landmark, the West Lake makes it a memorable travel destination. Easily reached by train and plane from Shanghai and Suzhou, join us on one of our Hangzhou tours and experience a laidback and unassuming real experience of China.

Hangzhou has been one of the most popular tourist destinations in China for several decades because of the breath-taking view of the West Lake. You can also learn the history of Hangzhou by admiring the music and light show Enduring Memories of Hangzhou, which is performed on the West Lake.

Hangzhou is also renowned for the green tea. Our partners in the Meijiawu Tea Village offer you the opportunity to pick tea by yourself, and then they will make tea for you in their house. The fragrance of the tea will let you feel closer to Hangzhou.
Tour Information

There are two international airports: Shanghai Hongqiao International Airport and Shanghai Pudong International Airport. The two airports are located in the west and east of Shanghai respectively. One can easily get to the Congress venue by taxi, subway or hotel limousine.

- **From Shanghai Hongqiao International Airport to Venue Hotel:**
  By taxi: about 23KM and 1 hour, about 150 RMB
  By subway: take Line 2 from Airport and get off at Lujiazui Station

- **From Shanghai Pudong International Airport to Venue Hotel:**
  By taxi: about 45KM and 1 hour, about 200 RMB
  By subway: take Line 2 from Airport and get off at Lujiazui Station

For pick-up service from the venue hotel, please contact: +86 21 6882 8888

**Taxi or Mobile Phone APP Services**

The DiDi APP is like UBER, widely used in China. Download it from your app store and enjoy easy taxi service.
Useful Information

Mobile Phone:
Your mobile phone can be used in China. Please make sure that your SIM card has access to international roaming before you come to China, and there is sufficient balance in your account. Shanghai already has the most advanced 5G network in the world. If you want to experience 5G, please confirm that your operator has registered this service in China. China is one of the regions with the best cell phone signal coverage in the world. It can keep cell phone signals flowing in most subways, underground tunnels and elevators.

Currency:
Only RMB is accepted for consumption in China. You can find foreign exchange points at the airport to exchange RMB. VISA credit card can be used in most places of consumption. Please check with the waiter before consumption to confirm that they can accept VISA or MasterCard payment.

Tipping:
There is no tipping culture in China. No service staff will ask for tips and you have the right to refuse.

Electricity and Voltage:
The city voltage standard in China is 220V, and the socket is shown in the picture.

Climate:
The average minimum temperature in Shanghai in September is 23 degrees Celsius and the highest temperature is 29 degrees Celsius. It is recommended to wear short sleeves or skirts. Shanghai is hot and humid in summer, please make sure you bring enough clothes for changing. On average, one of every three days in Shanghai is rainy in September.

Emergency Call:
Police 110
Ambulance 120
Fire 119
Citizen Hotline 12345

Smoking Policy:
Smoking is prohibited in public places, such as hotels, shopping malls and restaurants. Please smoke outside where there are smoking signs.

Visa Regulations:
Visa Application instruction can be found in: http://www.icas2020.com/Data/List/Instruction
Chinese Society of Aeronautics and Astronautics (CSAA)

Founded in February 1964, it was named by famous scientist Qian Xuesen (The name he used while in the United States was Hsue-Shen Tsien), who had made important contributions to the missile and space programs of both the United States and China. Prof. Qian once pursued studies under tutoring of Theodore von Kármán.

As the only national social organization in China’s aeronautical community, it is a member of the China’s Association for Science and Technology (CAST) and a full Member Society of the International Council of the Aeronautical Sciences (ICAS) on behalf of the Chinese scientific and technological community.

For over 50 years, CSAA has been committing itself to the development of science and technology, the advancement of aviation industry as well as talents cultivation and awarding. Its mission has been fulfilled through a wide range of activities implemented by its headquarters as well as its branches. There are 36 technical committees, gathering experts and carrying out professional seminars. 12 work committees steer its business in academic exchange, international cooperation, talents recommendation, science popularization, education and training, science & technology consulting, achievements awarding, aerospace engineering education accreditation, publishing, conference and exhibition, etc. 7 member stations located in member condensed area were established to better serve its members. In addition, there are 20 local societies of aeronautics and astronautics all over China.
CSAA now has more than 200 corporate and 100,000 individual members. It has developed cooperation with its counterparts in the U.S., Russia, U.K., Japan, Korea, Australia, Czech, Switzerland and Israel.

MoU Signing with CzAeS

MoU Signing with AIAA

CSAA sponsors a series of publications.