PPNW 2019

第22届自然水体物理过程国际协作组会议

22nd International Workshop on Physical Processes in Natural Waters

# 会 议 手 册
# Booklet

## PPNW 2019

(September 9th to 14th, 2019)

三峡大学 & 湖北工业大学

China Three Gorges University & Hubei University of Technology

中国·宜昌 Yichang, China

# CONTENTS

# *1. Preface*

On behalf of the local organizing committee, we are honored and delighted to welcome you to the 22nd International Workshop on Physical Processes in Natural Waters (PPNW) in Yichang, China. The workshop is co-hosted by China Three Gorges University and Hubei University of Technology.

The PPNW workshop focus on the physics of inland and coastal water bodies and their interactions with the physical and biogeochemical processes that drive water quality and ecosystem functioning. PPNW is an open workshop, actively seeking to expand contact and collaboration with neighboring fields, such as physical oceanography, atmospheric sciences, and engineering. The 22nd workshop in Yichang will pay special attention to the physics and functioning of freshwaters in light of global environmental change (eutrophication and climate change). We invite abstracts on topics addressing such changes in the context of physical-biogeochemical interactions, biogeochemical cycles, greenhouse gases and general limnology. With 60 to 80 participants and a small number of invited speakers, the PPNW meetings are characterized by their active workshop atmosphere and a comfortable time frame for presentations and discussion.

We sincerely wish this meeting a complete success, and all attendees of PPNW 2019 an enjoyable scientific gathering in Yichang, China!

Prof. Weijun He
President of China Three Gorges University

Prof. Defu Liu
President of Hubei University of Technology

## *2. International Steering Committee*

- **Chairman -** Bertram Boehrer, Helmholtz Center for Environmental Studies, Germany
- Josef Ackerman, University of Guelph, Canada
- Hrund Andradóttir, University of Iceland, Iceland
- Lars Bengtsson, Lund University, Sweden
- Damien Bouffard, Swiss Federal Institute, Swiss
- Lee Bryant, University of Bass, UK
- Xavier Castamitjana, University of Girona, Spain
- Giuseppe Ciraolo, University of Palermo, Italy
- Nikolai Filatov, Karelian Research Center, Russian Academy of Science
- Andrew Folkard, Lancaster University, UK
- GeorgiyKirillin, Leibniz-Institute of Freshwater Ecology and Inland Fisheries, Germany
- Charles Lemckert, University of Canberra, Australia
- Madis-Jaak Lilover, Marine Systems Institute, Estonia
- Andreas Lorke, University of Koblenz landau, Germany
- Daniel McGinnis, University of Geneva, Switzerland
- Francisco Rueda, University of Granada, Spain
- Geoffrey Schladow, University of California-Davis, US
- Adolf Stips, European Commission, Italy
- Arkady Terzhevik, Karelian Research Center, Russian Academy of Science
- Marco Toffolon, University of Trento, Italy
- Lars Umlauf, Leibniz Institute for Baltic Sea Research, Germany
- Timo Vesala, University of Helsinki, Finland
- Danielle J. Wain, Great Lakes Research Center, US
- Alfred Wüest, Ecole polytechnique federale DE lausanne, Switzerland
- Ram Yerubandi, Canada Centre for Inland Waters, Canada

## *3. Local Organizing Committee*

- Defu Liu, President, Hubei University of Technology (HBUT)
- Bin Tian, Deputy Secretary, China Three Gorges University (CTGU)
- Hui Peng, Dean of College of Hydraulic & Environmental Engineering, CTGU
- Henglin Xiao, Dean of School of Civil Engineering, Architecture and Environment, HBUT
- Shangbin Xiao, College of Hydraulic & Environmental Engineering, CTGU
- Congfeng Wang, College of Hydraulic & Environmental Engineering, CTGU
- Daobin Ji, College of Hydraulic & Environmental Engineering, CTGU
- Zhengjian Yang, College of Hydraulic & Environmental Engineering, CTGU
- Jun Ma, School of Civil Engineering, Architecture and Environment, HBUT
- Cilai Tang, College of Hydraulic & Environmental Engineering, CTGU
- Dongfang Tian, College of Hydraulic & Environmental Engineering, CTGU
- Linxu Song, College of Hydraulic & Environmental Engineering, CTGU
- Zhongyong Yang, College of Hydraulic & Environmental Engineering, CTGU
- Min Chen, College of Hydraulic & Environmental Engineering, CTGU
- Manchun Kang, College of Hydraulic & Environmental Engineering, CTGU
- Qingqing Su, College of Hydraulic & Environmental Engineering, CTGU
- Yujie Cui, College of Hydraulic & Environmental Engineering, CTGU
- Lei Wang, College of Hydraulic & Environmental Engineering, CTGU
- Xiaojuan Guo, College of Hydraulic & Environmental Engineering, CTGU
- Jia Liu, College of Hydraulic & Environmental Engineering, CTGU
- Hui Xu, College of Hydraulic & Environmental Engineering, CTGU
- Ye Yuan, College of Hydraulic & Environmental Engineering, CTGU

## *4. Program Overview*

Participants are requested to attend, dine and tour with conference name tags.

Workshop Room: 1st Meeting Room (3rd Floor) Poster and Coffee Break: 4th Meeting Room (3rd Floor)

Breakfast, Lunch, Dinner, Buffet: Juhe Hall (2rd Floor) Mid-Autumn Festival Dinner: Backyard of the Hotel

| Date | Time | Agenda |
|---|---|---|
| **Monday, 9 September** | 08:00-18:00 | Registration (Lobby)<br>Poster set-up (4th Meeting Room on the 3rd Floor) |
| **Tuesday, 10 September** | 08:30-09:00 | Opening Remarks |
| | 09:00-09:30 | Group Picture and Coffee Break |
| | 09:30-10:15 | *Keynote: Hongwei Fang* |
| | 10:15-10:45 | 1 Talk |
| | 10:45-11:30 | *Keynote: Xinghui Xia* |
| | 11:30-12:00 | 1 Talk |
| | 12:00-14:00 | Lunch Break |
| | 14:00-15:00 | 2 Talks |
| | 15:00-15:40 | 2 minutes Poster Teasers |
| | 15:40-16:30 | Poster Session and Coffee Break |
| | 16:30-17:30 | 2 Talks |
| | 17:30-19:30 | Dinner |
| **Wednesday, 11 September** | 08:30-09:15 | *Keynote: Bertram Boehrer* |
| | 09:15-10:15 | 2 Talks |
| | 10:15-10:45 | Coffee Break |
| | 10:45-12:15 | 3 Talks |
| | 12:15-14:00 | Lunch Break |
| | 14:00-15:30 | 3 Talks |
| | 15:30-16:00 | Coffee Break |
| | 16:00-17:30 | 3 Talks |
| | 17:30-19:00 | Buffet |
| **Thursday, 12 September** | 08:30-09:15 | *Keynote: Marco Toffolon* |
| | 09:15-10:15 | 2 Talks |
| | 10:15-10:45 | Coffee Break |
| | 10:45-11:45 | 2 Talks |
| | 11:45-14:00 | Lunch Break |
| | 14:00-17:30 | China Three Gorges Dam Tour |
| | 17:30-19:00 | Buffet |
| **Friday, 13 September** | 08:30-09:15 | *Keynote : Zhiyu Liu* |
| | 09:15-10:15 | 2 Talks |
| | 10:15-10:45 | Coffee Break |
| | 10:45-11:45 | 2 Talks |
| | 11:45-14:00 | Lunch Break |
| | 14:00-15:30 | 3 Talks |
| | 15:30-16:00 | Coffee Break |
| | 16:00-17:00 | 2 Talks |
| | 17:00-17:30 | Poster Awards and Closing Remarks |
| | 18:30-23:00 | Mid-Autumn Festival Dinner |
| **Saturday, 14 September** | 08:00-12:00 | Yangtze River Rare Fish Conservation Center Tour |
| | 12:00-14:00 | Lunch Break |
| | 14:00 - | Back to Yichang |

## *5. Detailed Program*

Day 1 Tuesday, 10 September, Interactions between Hydrodynamics and Biology

| 08:30 - 09:45 | Session 1: Opening Remarks | Speaker | Moderator |
|---|---|---|---|
| **08:30 - 08:40** | Address by China Three Gorges Corporation | Prof. Huichao Dai | Prof. Defu Liu |
| **08:40 - 08:50** | Address by China Three Gorges University | Prof. Bin Tian | |
| **08:50 - 09:00** | Address by Chair of PPNW Committee | Prof. Bertram Boehrer | |
| **09:00 - 09:30** | Group Picture and Coffee Break | | |

| 09:30 - 12:00 | Session 2: Academic Talks | Moderator |
|---|---|---|
| **09:30 - 10:15** | ***Keynote : Hongwei Fang***<br>*Zoobenthos response for natural physical process of flow and sediment transport——One of research on Eco-Fluvial Dynamics* | Prof. Defu Liu |
| **10:15 - 10:45** | M. Amadori, M. Toffolon<br>*Modelling the effects of different operational scenarios of hypolimnetic withdrawal on water quality dynamics in a lake* | |
| **10:45 - 11:30** | ***Keynote: Xinghui Xia***<br>*Enhanced nitrogen loss from rivers caused by nitrogen transformation at the suspended sediment-water interface in overlying water* | |
| **11:30 - 12:00** | B. Rabe, A. Gallego, J. Wolf<br>*Coupled bio-physical modelling of Scottish waters-model integration and connectivity results* | |

| 12:00 - 14:00 | Lunch Break |
|---|---|

| 14:00 - 17:30 | Session 3: Academic Talks | Moderator |
|---|---|---|
| **14:00 - 14:30** | Defu Liu, Zhengjian Yang, Daobin Ji, Jun Ma<br>*Mechanism of algal blooms and its controlling methods in some tributaries of Three Gorges Reservoir* | Prof. Bertram Boehrer |
| **14:30 - 15:00** | Jia Wang, Eric Anderson, Haoguo Hu, Ayumi Fujisaki-Manome, James Kessler, and Philip Chu<br>*Great Lakes Coastal Forecast System (GLCFS) of ice-hydrodynamics using GLIM and FVCOM models* | |
| **15:00 - 15:40** | 2 minutes Poster Teasers | |
| **15:40 - 16:30** | Poster Session and Coffee Break | |
| **16:30 - 17:00** | Xingqiang Wu, Christian Noss, Tiantian Yang, Christoph Bors, Liu Liu, Andreas Lorke<br>*Novel insights into Microcystis scum formation: Effect of small-scale turbulence and role of the air-water interface* | Dr. Jia Wang |
| **17:00 - 17:30** | Xiangzhen Kong, Qing Zhan, Bertram Boehrer, Karsten Rinke, Chenxi Mi<br>*High frequency data provides new insights into nitrogen retention in reservoirs* | |

| 17:30 - 19:30 | Welcome Dinner |
|---|---|

Day 1 Tuesday, 10 September - Poster Presentations

| |
|---|
| David Birt, Jun Zang, Lee Bryant, Emily Slavin, Danielle Wain<br>*Modelling the failure of bubble plumes to maintain a well-mixed water column in a British reservoir during a heatwave* |
| F. Breton, A. Lorke, J. Jan, J. Borovec<br>*An experiment for evaluating nutrient release rates from artificial sediments under transitional flows* |
| Xiaowei Cao, Peng Lu, Matti Leppäranta, Lauri Arvola, Jussi Huotari, Xiaohong Shi, Guoyu Li, Zhijun Li<br>*Spectral Albedo and Light Transmittance of Freshwater Ice and Snow in Lake Wuliangsuhai, Inner Mongolia* |
| Min Chen, Linglei Zhang, Jia Li, Hongwei Wang<br>*Identifying the impact of hydrodynamic processes on algae bloom in a reservoir located insouthwestern China* |
| Xiaojuan Guo, Zhengjian Yang, Shangbin Xiao, Defu Liu, Daobin Ji<br>*Nitrogen Loss by Denitrification in Cascade Reservoirs in Lancang River* |
| Cheng-I Hsieh<br>*Surface Resistance and Evapotranspiration Estimation by Penman-Monteith and non-parametric methods* |
| W. Huang, Z. Zhang, Z. Li, M. Leppärant, L. Arvola, X. Shi<br>*Dissolved oxygen dynamics under lake ice in a large shallow lake* |
| Yanan Huang, Yiping Li, Daobin Ji, Amechi S. Nwankwegu, Hans W. Paerl, Zhengjian Yang, etc.<br>*Temporal and spatial variation characteristics of nutrient limitation of phytoplankton growth in Xiangxi Bay of the Three Gorges Reservoir, China* |
| M. Ishikawa, A. Lorke<br>*Hydrodynamics and mixing mechanisms in Passaúna reservoir: The importance of lateral flow paths for the thermal regime* |
| Zeyu Jiang, Heqin Cheng, Kai Hua, Tian Shi, Ming Tang, Lizhi Teng, Ge Yan<br>*Study on scour along the north bank of Hengsha Island in the Yangtze Estuary* |
| Jia Liu, Shangbin Xiao, Zhengjian Yang, Jun Ma<br>*Distribution of dissolved methane in Xiangxi River at low water level in Three Gorges Reservoir* |
| X.X. Lu, Lin. Lin<br>*Vertical Diffusion of Carbon Dioxide Interrupted by Internal Flow: A Case Study in a Reservoir in the upper Mekong River* |
| Lei Ren, Michael Hartnett<br>*Investigations into surface circulation of a complex coastal water body using model and High Frequency radars* |
| Dongsheng Su, Xiuqing Hu, Lijuan Wen, Shihua Lyu, Xiaoqing Gao, Lin Zhao, Zhaoguo Li, etc.<br>*Numerical study on the response of the largest lake in China to climate change* |
| T. Vesala, K.-M. Erkkilä, D. Franz, I. Mammarella, A. Ojala, P. Uotila, A. Vähä, M. Aurela, etc.<br>*Water-air-continuum measurement campaign on the gas exchange over the river in Northern Finland* |
| Ying Xi, Hailin Tian, Yingping Huang<br>*PAHs distribution characteristics and its correlation with soil physicochemical properties in Xiangxi Basin Bank Zone* |
| You Xu, Zhengjian Yang, Jun Ma, Daobin Ji, Defu Liu<br>*Effect of different waterbodies on continuity of river water temperature: a temperature line hypothesis in river* |
| Tiantian Yang, Shanshan Feng, ,Chunbo Wang, BangdingXiao, XingqiangWu<br>*The use of a LISST-200X laser particle sizer for in-situ estimates of size-specific Microcystis colonies biovolume and density dynamic during Microcystis domination in Lake* |
| Li Zeng, Feng Liu, Yihong Wu<br>*Distribution of gyrotactic micro-organisms in the horizontal shear flow past a vertical circular cylinder* |
| Xin Zhang, Georgiy Kirillin<br>*Changing pattern of water level trends in Eurasian endorheic lakes as a response to the recent climate variability* |
| Lei Zhang, Jicheng Zhong<br>*Eutrophication enhancing methane emission from lake: a case study in Lake Chaohu, China* |

Day 2 Wednesday, 11 September, Running Waters, Gas Exchange, and Bubbles

| 08:30 - 12:15 | Session 4: Academic Talks | Moderator |
|---|---|---|
| **08:30 - 09:15** | ***Keynote: Bertram Boehrer***<br>*Lake Kivu gas measurements updated: methane, carbon dioxide and gas pressure* | Prof. Victor Stepanenko |
| **09:15 - 09:45** | A. Lorke, L. Liu, Z.J. Yang, K. Delwiche, L.H. Long, J. Liu, S.B. Xiao, D.F. Liu, C.F. Wang, Bodmer, L.I. Steinle<br>*Spatial and temporal variability of methane emission from cascading reservoirs at the Upper Mekong River* | |
| **09:45 - 10:15** | Lin Lin, Lu Xi Xi<br>*Impacts of reservoir eutrophication on water-air carbon emissions in China: Data synthesis* | |
| **10:15 - 10:45** | Coffee Break | |
| **10:45 - 11:15** | I. Repina, K. Barskov, A. Artamonov, V. Stepanenko<br>*Gas exchange in the river-atmosphere system from the experimental data on the Ob and Lena river* | Prof. Uwe Spank |
| **11:15 - 11:45** | Shangbin Xiao, W. Wang, D. Lei, M. Chen, G. Chen, Z. Wang, L. Liu, F. Hu, J. Li, Y. Wang, D. Yan, W. Zhang, A. Lorke<br>*A simple novel device for measuring dissolved methane concentration in water* | |
| **11:45 - 12:15** | K. Huynh, B. Runkle, M. Reba, M. Johnson, E. Variano<br>*Automated measurements of night-time stirring in diverse wetlands using a custom underwater camera* | |

| 12:15 - 14:00 | Lunch Break |
|---|---|

| 14:00 - 17:30 | Session 5: Academic Talks | Moderator |
|---|---|---|
| **14:00 - 14:30** | Uwe Spank, Markus Hehn, Philipp Keller, Matthias Koschorreck, Christian Bernhofer<br>*Do our evaporation models overestimate the evaporation of large water bodies?* | Prof. Madis-Jaak Lilover |
| **14:30 - 15:00** | Zhiyuan Wang, Qiuwen Chen<br>*Challenges of harmful algal bloom mitigation and forecasting* | |
| **15:00 - 15:30** | V.M. Stepanenko, M.G. Grechushnikova, A.Yu. Artamonov, I.A. Repina<br>*Numerical simulation of greenhouse gases in an artificial reservoir* | |
| **15:30 - 16:00** | Coffee Break | |
| **16:00 -16:30** | Feng Liu, Li Zeng, Yihong Wu<br>*Density currents induce algal blooms by gyrotactic trapping* | Prof. Irina Repina |
| **16:30 - 17:00** | A. Vähä, M. Aurela, K.-M. Erkkilä, S. Guseva, A. Lorke, A. Lindroth, S. MacIntyre, J. Melack, A. Ojala, M. Skogberg, T. Vesala, etc.<br>*$CO_2$ and $CH_4$ fluxes over a boreal river measured with eddy covariance* | |
| **17:00 - 17:30** | Gongqin Wang, Liwei Zhang, Junfeng Wang, Xinghui Xia<br>*Nitrogen removal rates in a frigid high-altitude river estimated by measuring dissolved $N_2$ and $N_2O$* | |

| 17:30 - 19:00 | Dinner |
|---|---|

Day 3 Thursday, 12 September, Lake Response to Climate Change and Other Anthropogenic Impacts

| 08:30 - 11:45 | Session 6: Academic Talks | Moderator |
|---|---|---|
| **08:30 - 09:15** | ***Keynote: Marco Toffolon***<br>*Wind-driven steady circulation in lakes: implications for mixing and transport processes* | Prof. Timo Vesala |
| **09:15 - 09:45** | Huayang Cai, Marco Toffolon, Sebastiano Piccolroaz, and Zhiwei Li<br>*Identifying the long-term evolution of thermal dynamics in China's largest freshwater lake, Poyang Lake* | |
| **09:45 - 10:15** | Chenxi Mi, Amir Sadeghian, Karl-Erich Lindenschmidt, Karsten Rinke<br>*Effects of different withdrawal elevations and climate warming on the winter inversed stratification of a multi-purpose reservoir* | |
| **10:15 - 10:45** | Coffee Break | |
| **10:45 - 11:15** | Heqin Cheng<br>*Anthropogenic effect and control in the coastal system from the Yangtze River to the East China Sea* | Prof. Marco Toffolon |
| **11:15 - 11:45** | M. Leppäranta, L. Wen<br>*Ice climatology in Eurasian lakes across latitude and altitude* | |

| 11:45 - 14:00 | Lunch Break |
|---|---|

| 14:00 - 17:30 | Session 7: Tour of the Three Gorges Dam |
|---|---|

| 17:30-19:00 | Dinner |
|---|---|

Day 4 Friday, 13 September, Small to Large-Scale Mixing: Role of Internal Waves and Convection

| 08:30 - 11:45 | Session 8: Academic Talks | Moderator |
|---|---|---|
| **08:30 - 09:15** | ***Keynote: Zhiyu Liu***<br>*On Quantifying Small-Scale Turbulence in the Ocean* | Prof. Alfred Wüest |
| **09:15 - 09:45** | M-J. Lilover, T. Liblik, G. Väli, I. Suhhova, U. Lips, F. Buschmann, J. Laanemets<br>*Impact of dredging on circulation and environmental parameters in Lake Viljandi revisited* | |
| **09:45 - 10:15** | I. Mammarella, A. Vähä, M. Aurela, A. Cortes, K-M. Erkkilä, S. Guseva, A. Lorke, A. Lindroth, S. MacIntyre, J. M. Melack, P. Uotila, T. Vesala<br>*Evaluating the bulk transfer approach for sensible and latent heat exchange over a river during the KITEX field campaign* | |
| **10:15 - 10:45** | Coffee Break | |
| **10:45 - 11:15** | Guojing Li, Dongxiao Wang, Jisyi Pan<br>*Influence of the upper mixed layer depth variation on Langmuir turbulence characteristics* | Prof. Zhiyu Liu |
| **11:15 - 11:45** | D.M. Robb, R. Pieters, G.A. Lawrence<br>*Glacial inflows and stratification in a hydroelectric reservoir* | |
| **11:45 - 14:00** | **Lunch Break** | |
| **14:00 - 17:30** | **Session 9: Academic Talks** | **Moderator** |
| **14:00 - 14:30** | Alfred Wüest, T. Sommer, and M. Schmid<br>*Effects of double diffusion on heat and salt in Lake Kivu* | Prof. Andreas Lorke |
| **14:30 - 15:00** | Stefano Simoncelli, Georgiy Kirillin, Aleksandr P. Tolomeev, Hans-Peter Grossart<br>*Measuring the in-situ particulate flux and sedimentation rate using a low-cost underwater particle tracking velocimetry* | |
| **15:00 - 15:30** | L.H. Long, D.B. Ji, Z.Y. Yang, H.Q. Cheng, Z.J Yang, D.F. Liu, L. Liu, A. Lorke<br>*Tributary bay oscillations generated by diurnal discharge regulation in Three Gorges Reservoir* | |
| **15:30 - 16:00** | Coffee Break | |
| **16:00 - 16:30** | N. Deering, N. Hutley, D. Gale, A. Grinham, S. Albert, B. Gibbes<br>*Implementation of real-time monitoring to improve forecasting of lake dynamics* | Prof. Shangbin Xiao |
| **16:30 - 17:00** | Lijuan Wen, S. Lyu, Z. Li, L. Zhao, D. Su, J. Du<br>*The warming freshwater lake and saline lake in the Tibetan Plateau* | |
| **17:00 - 17:30** | Poster Awards and Closing Remarks | Prof. Bertram Boehrer |
| **18:30 - 23:00** | **Mid-Autumn Festival Barbecue** | |

Day 5 Saturday, 14 September, Tour of the Yangtze River Rare Fish Conservation Center

| | Session 10 |
|---|---|
| **08:00 - 12:00** | Yangtze River Rare Fish Conservation Center Tour |
| **12:00 - 14:00** | Lunch |
| **14:00 -** | Back to Yichang |

## *6. Transportation*

### a. Registration & Workshop location：

Hotel: Yichang Three Gorges Project Hotel
酒店：宜昌市三峡坝区三峡工程大酒店
Address: Jiangxia Ave. & Hualing Rd. Yiling District, Yichang, China (Figure 1)
地址：宜昌市夷陵区三峡坝区江峡大道与华林路交叉口
The hotel rooms have been reserved for you. After your registration in the hotel, you may order your room at the front desk.


Figure 1. Location of Yichang Three Gorges Project Hotel

### b. Pick-up arrangement

You should choose one of the following three options to register in the hotel:

**(1) Pick-up at the airport/railway station**

**(2) Pick-up at the reception center of China Three Gorges University（CTGU）**

**(3) Self-help tour**

Here are the details of these three options respectively.

**(1) Pick-up at the airport/railway station, September 9th, all day long**

Upon arrival at Three Gorges Airport, or Yichang East Railway Station, you will be received by our committee staff, who will arrange the shuttle to the hotel for you.

Contact information is listed below:

- **Contact at Three Gorges Airport:**

  Min Chen, Cell: +86 13886712753, Email: 31587718@qq.com

- **Contact at Yichang East Railway Station:**

  Manchun Kang, Cell: +86 18507206440, Email: kmcspring@gmail.com

**(2) Pick-up at the reception center of CTGU, September 9th, 08:00 – 18:00**

If you are not showing up at the airport or railway station, you may claim your arrival at the Reception Center of CTGU (Figure 2), no later than 18:00 on September 9th. We will arrange the shuttle from the Reception Center to the Hotel. Here we recommend the taxi routes to the Reception Center, from Yichang East Railway Station (Figure 3), and from Three Gorges Airport (Figure 4), respectively.

Contact at Reception Center of CTGU:

Lianghong Long, Cell: +86 15872577710, Email: 893310859@qq.com

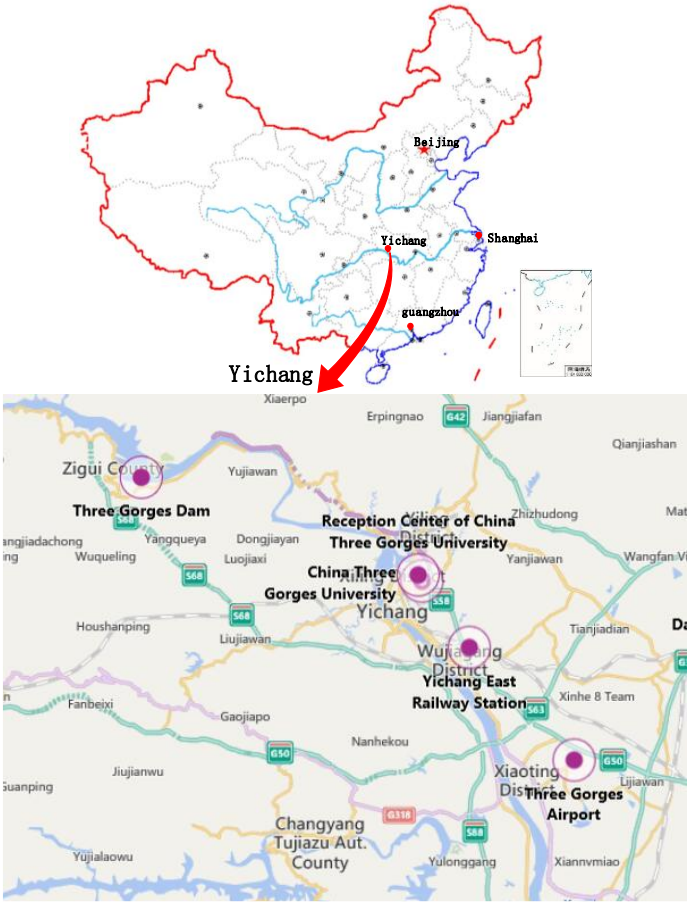



Figure 2. Location of China Three Gorges University

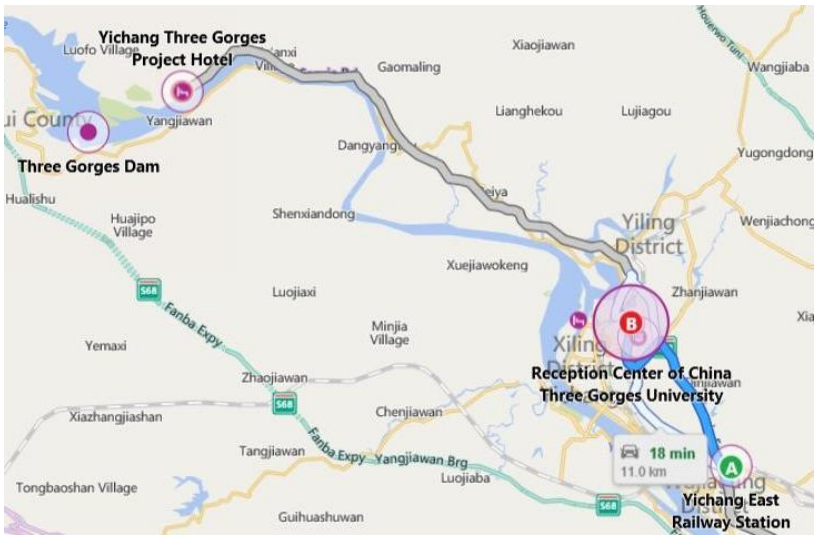



Figure 3. Yichang East Railway Station – Reception Center

- **Taxi routes to <u>Reception Center</u> of China Three Gorges University**
  - From Yichang East Railway Station

    Duration: about 30 minutes

    Cost: about 40 RMB

  - From Three Gorges Airport

    Duration: about 45 minutes

    Cost: about 150 RMB

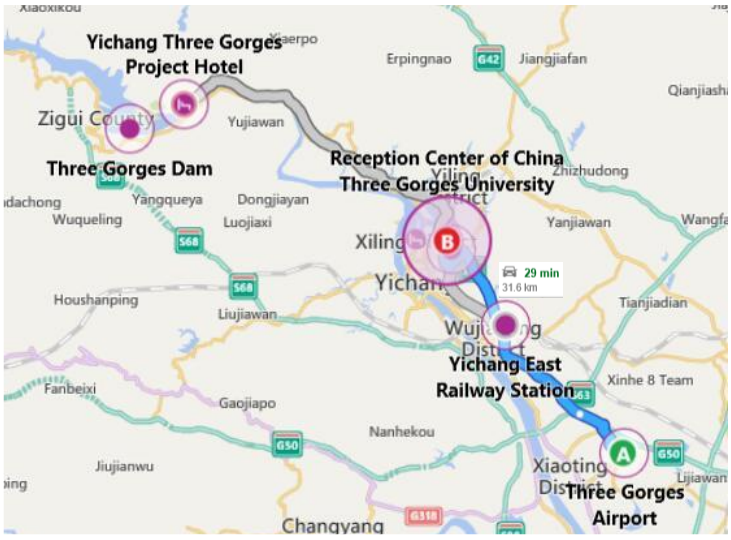



Figure 4. Three Gorges Airport – Reception Center

**(3) Self-help tour, September 9th, 08:00 – 18:00**

If you want go to the Hotel directly, refer to Figure 5 and Figure 6 (from Yichang East Railway Station, and from Three Gorges Airport, respectively).

- **Taxi routes to Hotel**
  - From Yichang East Railway Station

    Duration: about 60 minutes

    Cost: about 200 RMB


Figure 5. Yichang East Railway Station – Hotel

  - From Three Gorges Airport

    Duration: about 90 minutes

    Cost: about 300 RMB


Figure 6. Three Gorges Airport – Hotel

## *7. General Assembly Contacts*

Jun Ma, Cell: +86 13164679309, Email: majun150@hotmail.com

Min Chen, Cell: +86 13886712753, Email: 31587718@qq.com

## *8. Reminders*

### a. Trip Feedback

- Please provide your trip feedback (https://jinshuju.net/f/BFjt3i) no later than September 9th.

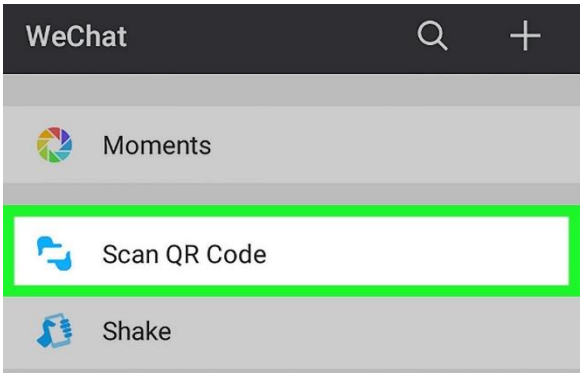
  If you have other plans and requests on your schedule, or any questions, please contact Dr. Jun Ma (Cell: +86 13164679309, Email: majun150@hotmail.com).

### b. WeChat Communication Group

WeChat is a popular free messaging service supporting 20 different languages, available on mobile with IOS 9.0 or Android 4.4 and above. For better communication throughout the upcoming PPNW workshop in China, you are requested to sign up a WeChat account and join the WeChat group for this workshop. It only takes a few minutes to achieve this by the following steps, and your kind cooperation is highly appreciated!

Once you are signing up on WeChat, tap the "Discover" tab at the bottom of your screen.


Then tap "Scan QR Code", your phone's camera will open.




Hold your camera over the QR code (shown below) to scan it. Once the camera recognizes the code, WeChat will open its content or destination.



Tap “Add” and send a friend request, indicating you are a participant of PPNW.

Congratulations! You are in our group! You will receive the most updated notifications concerning our workshop.

## 9. *List of Participants*

| No. | First Name | Last Name | Affiliation | Email | Note |
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## *10. Introduction of Yichang, China*

### a. Yichang

Yichang is a prefecture-level city located in western Hubei province, China. It is the second largest city in the province after the capital, Wuhan. The Three Gorges Dam is located within its administrative area, in Yiling District.

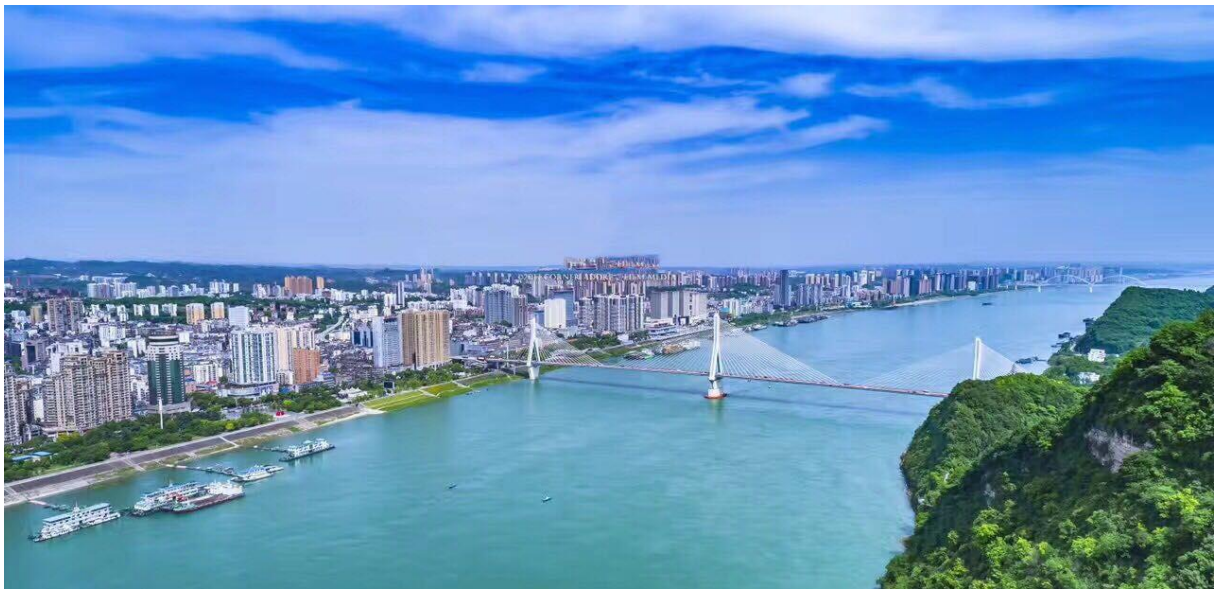

Figure 7. Yichang

Yichang prefecture has abundant water resources and it is lauded as the largest hydroelectric base in the world, indeed it is a bright pearl shining on the Yangtze River. The river runs through the city center and the Gezhouba Water Conservancy Project. Benefiting from these projects, it has become the largest hydroelectric resource center in China. In Addition, the tourism centered on the Three Gorges has made the city more famous and more prosperous. Xiling Gorge which is located near the city is an important part of the “Three Gorges Gallery”. The Three Gorges Dam Project is one of the great wonders of modern human history and it has become a tourist hot spot of the world. Every year, millions of visitors gather here to witness this great man made project.

Apart from the Three Gorges, the abundant natural resources and historical sites of the city are also attractive. Mountains, waterfalls, caves, stone forests and pools form picturesque scenes. There are many natural reserves in or around the city, including Chaibuxi National Forest Park and Houhe Natural Reserve. As an ancient city, Yichang is the site of some important historical relics such as Qu Yuan's Hometown, Zhaojun Residence and Ancient Battle Relics of Three Kingdom Period.

**b. China Three Gorges Project**

The Three Gorges Project is a hydroelectric gravity dam that spans the Yangtze River by the town of Sandouping, in Yiling District, Yichang, Hubei province, China. The Three Gorges Dam has been the world's largest power station in terms of installed capacity (22,500 MW) since 2012. As well as producing electricity, the dam is intended to increase the Yangtze River's shipping capacity and reduce the potential for floods downstream by providing flood storage space. China regards the project as monumental as well as a success socially and economically, with the design of state-of-the-art large turbines, and a move toward limiting greenhouse gas emissions.

Figure 8. Three Gorges Dam

The Three Gorges Dam Tourist Area is currently open to tourists and there are three spots: Tanziling, a 185 viewing platform, and Jieliu Memorial Hall. As the dam construction survey point, Tanziling shares the best location to see panoramic views of the Three Gorges project. Not only you can enjoy the powerful and splendid Three Gorges Dam, but also watch the precipice of "Yangtze River gorge IV" Two-way lock (the five stages ship locks). Standing at the 185 viewing platform, you can feel the height of the dam and view the surface of water in the impounding reservoir. Looking at the foot of the magnificent, distant and calm river, you will be astonished by the static and dynamic beauty rhyming each other. Jieliu Memorial Park is composed by performances square, display halls, slide shows and more scenic sites. Facing the dam and mountains behind, Memorial Park is the best place to taking photos with the dam, which can’t miss out.

Figure 9. Three Gorges Dam Tourist Area

### c. Zigui, Qu Yuan’s Hometown

Qu Yuan was a patriotic poet in the Warring States Period (476 B.C.-221 B.C.). When building the Three Gorges Dam, many historical sites related to him were moved to a higher place and a cultural tourism zone was established, namely Qu Yuan's Hometown. Covering an area of 82 acres, it is located in Zigui County, about 660 yards (600 meters) from the Three Gorges Dam. You can fully and clearly view the giant project from Qu Yuan’s Hometown Scenic Area.

Figure 10. Quyuan Hometown Cultural Tourism Area

The major scenic spots inside the scenic area include Qu Yuan’s Memorial and local folk houses in the traditional style. Qu Yuan’s Memorial is composed of a memorial archway, a bronze statue of Qu Yuan, Qu Yuan’s Tomb, a display house, and a corridor. Entering the Memorial through the memorial archway, you will see a big statue of Qu Yuan where people can worship. Qu Yuan’s Tomb, which is actually a cenotaph, occupies 145 square yards (120 square meters). In front of the tomb, there are two big stone lions from the Ming Dynasty (1368-1644). If you look inside the tomb gate, you can see a passageway and the coffin that hangs above a giant lotus-shaped stone base. The display house exhibits Qu’s portraits, works and historical relics discovered in Zigui County.

Figure 11. Qu Yuan Memorial

# 会

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# 手

# 册

# 目　录

## 1. 会议简介

“自然水体物理过程国际协作组（Physical Processes in Natural Waters Workshop，简称 PPNW）”是以关注自然水体水流、水质、水生物的国际知名研究团队自由组合成立的非官方学术组织，涉及河流动力学、湖沼学、水生生物学、温室气体、数值模拟等研究方向，现任主席为 Bertram Boehrer 教授。协作组发起于 1996 年，每年举办一次年会以交流当前相关研究方向的最新进展，截止 2018 年，已成功举办 21 次。2019 年会由三峡大学和湖北工业大学共同承办，会议主题为“内陆与海岸水体物理及其与生物地球化学耦合过程（Physics of inland and coastal water bodies and their interactions with the physical and biogeochemical processes）”，是协作组第一次在亚洲国家举办的年会。

**会议主办方**：PPNW 委员会

**会议承办方**：三峡大学、湖北工业大学

**会议时间**：2019 年 9 月 9 日～14 日（9 月 9 日报到）

**会议地点**：湖北宜昌（三峡坝区三峡工程大酒店）

## 2. 会议学术委员会

**主席:**

Bertram Boehrer，教授，赫姆霍尔兹环境研究中心，德国

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## 3. 会议组织委员会

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## 4. 会议议程（请参会人员凭代表证参会、就餐、乘车和考察）

| 日　期 | 时　间 | 内　容 | 地　点 |
|---|---|---|---|
| 9 月 9 日<br>星期一 | 08:00-18:00 | 注册 | 三峡工程大酒店<br>一楼大堂 |
| 9 月 10 日<br>星期二 | 08:30-09:00 | 开幕式 | 三楼 1 会议室 |
| | 09:00-09:30 | 合影、茶歇 | 酒店大门口 |
| | 09:30-10:15 | 主旨报告 1 | 三楼 1 会议室 |
| | 10:15-10:45 | 1 个大会报告 | |
| | 10:45-11:30 | 主旨报告 2 | |
| | 11:30-12:00 | 1 个大会报告 | |
| | 12:00-14:00 | 自助餐、休息 | 二楼聚鹤厅 |
| | 14:00-15:00 | 2 个大会报告 | 三楼 1 会议室 |
| | 15:00-15:40 | 海报宣讲（2 分钟/人） | 三楼 1 会议室 |
| | 15:40-16:30 | 海报交流、茶歇 | 三楼 4 会议室 |
| | 16:30-17:30 | 2 个大会报告 | 三楼 1 会议室 |
| | 17:30-19:30 | 欢迎晚宴 | 二楼聚鹤厅 |
| 9 月 11 日<br>星期三 | 08:30-09:15 | 主旨报告 3 | 三楼 1 会议室 |
| | 09:15-10:15 | 2 个大会报告 | |
| | 10:15-10:45 | 茶歇 | 三楼 4 会议室 |
| | 10:45-12:15 | 3 个大会报告 | 三楼 1 会议室 |
| | 12:15-14:00 | 自助餐、休息 | 二楼聚鹤厅 |
| | 14:00-15:30 | 3 个大会报告 | 三楼 1 会议室 |
| | 15:30-16:00 | 茶歇 | 三楼 4 会议室 |
| | 16:00-17:30 | 3 个大会报告 | 三楼 1 会议室 |
| | 17:30-19:00 | 自助餐 | 二楼聚鹤厅 |
| 9 月 12 日<br>星期四 | 08:30-09:15 | 主旨报告 4 | 三楼 1 会议室 |
| | 09:15-10:15 | 2 个大会报告 | |
| | 10:15-10:45 | 茶歇 | 三楼 4 会议室 |
| | 10:45-11:45 | 2 个大会报告 | 三楼 1 会议室 |
| | 11:45-14:00 | 自助餐、休息 | 二楼聚鹤厅 |
| | 14:00-17:30 | 三峡大坝考察 | 三峡大坝 |
| | 17:30-19:00 | 自助餐 | 二楼聚鹤厅 |
| 9 月 13 日<br>星期五 | 08:30-09:15 | 主旨报告 5 | 三楼 1 会议室 |
| | 09:15-10:15 | 2 个大会报告 | |
| | 10:15-10:45 | 茶歇 | 三楼 4 会议室 |
| | 10:45-11:45 | 2 个大会报告 | 三楼 1 会议室 |
| | 11:45-14:00 | 自助餐、休息 | 二楼聚鹤厅 |
| | 14:00-15:30 | 3 个大会报告 | 三楼 1 会议室 |
| | 15:30-16:00 | 茶歇 | 三楼 4 会议室 |
| | 16:00-17:00 | 2 个大会报告 | 三楼 1 会议室 |
| | 17:00-17:30 | 颁奖、闭幕式 | |
| | 18:30-23:00 | 中秋晚宴 | 酒店后广场 |
| 9 月 14 日<br>星期六 | 08:00-12:00 | 长江珍稀鱼类保育中心考察 | 酒店一楼大堂 |
| | 12:00-14:00 | 自助餐 | 二楼聚鹤厅 |
| | 14:00 以后 | 乘坐大巴返回宜昌市区后返程 | 酒店一楼大堂 |

## 5. 大会报告安排

### （1） 第一天：水动力与水生物耦合关系研究（时间：9 月 10 日，地点：三楼 1 会议室）

### 第一部分：开幕式

| 时间 | 内容 | 发言人 | 主持人 |
|---|---|---|---|
| **08:30 - 08:40** | 中国长江三峡集团领导致辞 | 戴会超 教授 | 刘德富 教授 |
| **08:40 - 08:50** | 三峡大学校领导致欢迎词 | 田 斌 教授 | |
| **08:50 - 09:00** | PPNW 委员会主席 Bertram Boehrer 致辞 | Bertram Boehrer 教授 | |
| **09:00 - 09:30** | **合影（酒店正门）、茶歇（三楼 4 会议室）** | | |

### 第二部分：学术报告

| 时间 | 报告类型 | 报告题目及报告人 | 主持人 |
|---|---|---|---|
| **09:30 - 10:15** | 主旨报告 | 题目：*Zoobenthos response for natural physical process of flow and sediment transport——One of research on Eco-Fluvial Dynamics*<br>报告人：方红卫 教授（清华大学，中国） | 刘德富 教授 |
| **10:15 - 10:45** | 大会报告 | 题目：*Modelling the effects of different operational scenarios of hypolimnetic withdrawal on water quality dynamics in a lake*<br>报告人：Marina Amadori 博士（特伦托大学，意大利） | |
| **10:45 - 11:30** | 主旨报告 | 题目：*Enhanced nitrogen loss from rivers caused by nitrogen transformation at the suspended sediment-water interface in overlying water*<br>报告人：夏星辉 教授（北京师范大学，中国） | |
| **11:30 - 12:00** | 大会报告 | 题目：*Coupled bio-physical modelling of scottish waters-model integration and connectivity results*<br>报告人：Berit Rabe 博士（苏格兰海洋科学研究所，英国） | |
| **12:00 - 14:00** | **自助午餐（二楼聚鹤厅）** | | |
| **14:00 - 14:30** | 大会报告 | 题目：*Mechanism of algal blooms and its controlling methods in some tributaries of Three Gorges Reservoir*<br>报告人：刘德富 教授（湖北工业大学，中国） | Bertram Boehrer 教授 |
| **14:30 - 15:00** | | 题目：*Great Lakes Coastal Forecast System (GLCFS) of ice-hydrodynamics using GLIM and FVCOM models*<br>报告人：Jia Wang 教授（国家海洋和大气管理局，美国） | |
| **15:00 - 15:40** | 每人 2 分钟的海报介绍 | | |
| **15:40 - 16:30** | **海报交流和茶歇（三楼 4 会议室）** | | |
| **16:30 - 17:00** | 大会报告 | 题目：*Novel insights into Microcystis scum formation: Effect of small-scale turbulence and role of the air-water interface*<br>报告人：吴幸强 教授（中国科学院水生生物研究所，中国） | Jia Wang 教授 |
| **17:00 - 17:30** | | 题目：*High frequency data provides new insights into nitrogen retention in reservoirs*<br>报告人：孔祥臻 教授（亥姆霍兹环境研究中心，德国） | |
| **17:30 - 19:30** | **欢迎晚宴（二楼聚鹤厅）** | | |

**（2） 第二天：界面气体交换过程（时间：9 月 11 日，地点：三楼 1 会议室）**

| 时间 | 报告类型 | 报告题目及报告人 | 主持人 |
|---|---|---|---|
| **08:30 - 09:15** | 主旨报告 | 题目：*Lake Kivu gas measurements updated: methane, carbon dioxide and gas pressure*<br>报告人：Bertram Boehrer 教授（亥姆霍兹环境研究中心，德国） | Victor Stepanenko 教授 |
| **09:15 - 09:45** | 大会报告 | 题目：*Spatial and temporal variability of methane emission from cascading reservoirs at the Upper Mekong River*<br>报告人：Andreas Lorke 教授（科布伦茨–兰道大学环境科学研究所，德国） | |
| **09:45 - 10:15** | | 题目：*Impacts of reservoir eutrophication on water-air carbon emissions in China: Data synthesis*<br>报告人：Lin Lin 博士（新加坡国立大学，新加坡） | |
| **10:15 - 10:45** | **茶歇（三楼 4 会议室）** | | |
| **10:45 - 11:15** | 大会报告 | 题目：*Gas exchange in the river-atmosphere system from the experimental data on the Ob and Lena river*<br>报告人：Irina Repina 教授（俄罗斯科学院奥布霍夫大气物理研究所，俄罗斯） | Uwe Spank 教授 |
| **11:15 - 11:45** | | 题目：*A simple novel device for measuring dissolved methane concentration in water*<br>报告人：肖尚斌 教授（三峡大学，中国） | |
| **11:45 - 12:15** | | 题目：*Automated measurements of night-time stirring in diverse wetlands using a custom underwater camera*<br>报告人：Kimberly Huynh 博士（加利福尼亚大学伯克利分校，美国） | |
| **12:15 - 14:00** | **自助午餐（二楼聚鹤厅）** | | |
| **14:00 - 14:30** | 大会报告 | 题目：*Do our evaporation models overestimate the evaporation of large water bodies?*<br>报告人: Uwe Spank 教授（德累斯顿工业大学水文气象研究所，德国） | Madis-Jaak Lilover 教授 |
| **14:30 - 15:00** | 大会报告 | 题目：*Challenges of harmful algal blooms mitigation and forecasting*<br>报告人：王智源 博士（南京水利科学研究院，中国） | |
| **15:00 - 15:30** | | 题目：*Numerical simulation of greenhouse gases in an artificial reservoir*<br>报告人：Victor Stepanenko 教授（罗蒙诺索夫莫斯科国立大学，俄罗斯） | |
| **15:30 - 16:00** | **茶歇（三楼 4 会议室）** | | |
| **16:00 - 16:30** | 大会报告 | 题目：*Density currents induce algal blooms by gyrotactic trapping*<br>报告人：刘丰 博士（中国水利水电科学研究院，中国） | Irina Repina 教授 |
| **16:30 - 17:00** | | 题目：*$CO_2$ and $CH_4$ fluxes over a boreal river measured with eddy covariance*<br>报告人：Aki Vähä 博士（赫尔辛基大学，芬兰） | |
| **17:00 - 17:30** | | 题目：*Nitrogen removal rates in a frigid high-altitude river estimated by measuring dissolved $N_2$ and $N_2O$*<br>报告人：王功芹 博士（北京师范大学，中国） | |
| **17:30 - 19:00** | **自助晚餐（二楼聚鹤厅）** | | |

**（3） 第三天：气候变化和人类活动对水生态系统的影响（时间：9 月 12 日，地点：三楼 1 会议室）**

**第一部分：学术报告**

| 时间 | 报告类型 | 报告题目及报告人 | 主持人 |
|---|---|---|---|
| **08:30 - 09:15** | 主旨报告 | 题目：*Wind-driven steady circulation in lakes: implications for mixing and transport processes*<br>报告人：Marco Toffolon 教授（特伦托大学，意大利） | Timo Vesala 教授 |
| **09:15 - 09:45** | 大会报告 | 题目：*Identifying the long-term evolution of thermal dynamics in China's largest freshwater lake, Poyang Lake*<br>报告人：蔡华阳 教授（中山大学，中国） | |
| **09:45 - 10:15** | | 题目：*Effects of different withdrawal elevations and climate warming on the winter inversed stratification of a multi-purpose reservoir*<br>报告人：宓辰羲 博士（亥姆霍兹环境研究中心，德国） | |
| **10:15 - 10:45** | **茶歇（三楼 4 会议室）** | | |
| **10:45 - 11:15** | 大会报告 | 题目：*Anthropogenic effect and control in the coastal system from the Yangtze River to the East China Sea*<br>报告人：程和琴 教授（华东师范大学，中国） | Marco Toffolon 教授 |
| **11:15 - 11:45** | | 题目：*Ice climatology in Eurasian lakes across latitude and altitude*<br>报告人：Matti Leppäranta 教授（赫尔辛基大学，芬兰） | |
| **11:45 - 14:00** | **自助午餐（二楼聚鹤厅）** | | |

**第二部分：三峡大坝考察**

| 时间 | 活动内容 |
|---|---|
| **14:00 - 17:30** | 三峡大坝考察（14:00 酒店一楼大堂集合出发） |
| **17:30 - 19:00** | **自助晚餐（二楼聚鹤厅）** |

**（4） 第四天：复杂水动力过程及其环境效应（时间：9 月 13 日，地点：三楼 1 会议室）**

| 时间 | 报告类型 | 报告题目及报告人 | 主持人 |
|---|---|---|---|
| **08:30 - 09:15** | 主旨报告 | 题目：*On Quantifying Small-Scale Turbulence in the Ocean*<br>报告人：刘志宇 教授（厦门大学，中国） | Alfred Wüest 教授 |
| **09:15 - 09:45** | 大会报告 | 题目：*Impact of dredging on circulation and environmental parameters in Lake Viljandi revisited*<br>报告人：Madis-Jaak Lilover 博士（塔林科技大学，爱沙尼亚） | |
| **09:45 - 10:15** | | 题目：*Evaluating the bulk transfer approach for sensible and latent heat exchange over a river during the KITEX field campaign*<br>报告人：Ivan Mammarella 博士（赫尔辛基大学，芬兰） | |
| **10:15 - 10:45** | **茶歇（三楼 4 会议室）** | | |
| **10:45 - 11:15** | 大会报告 | 题目：*Influence of the upper mixed layer depth variation on Langmuir turbulence characteristics*<br>报告人：李国敬 博士（中科院南海海洋研究所，中国） | Zhiyu Liu 教授 |
| **11:15 - 11:45** | | 题目：*Glacial inflows and stratification in a hydroelectric reservoir*<br>报告人：Daniel Robb 博士（不列颠哥伦比亚大学，加拿大） | |
| **11:45 - 14:00** | **自助午餐（二楼聚鹤厅）** | | |
| **14:00 - 14:30** | 大会报告 | 题目：*Effects of double diffusion on heat and salt in Lake Kivu*<br>报告人：Alfred Wüest 教授（洛桑科尔理工学院，瑞士） | Andreas Lorke 教授 |
| **14:30 - 15:00** | | 题目：*Measuring the in-situ particulate flux and sedimentation rate using a low-cost underwater particle tracking velocimetry*<br>报告人：Stefano Simoncelli 博士（莱布尼茨 - 淡水生态与内陆渔业研究所，德国） | |
| **15:00 - 15:30** | | 题目：*Tributary bay oscillations generated by diurnal discharge regulation in Three Gorges Reservoir*<br>报告人：龙良红 博士（科布伦茨-兰道大学环境科学研究所，德国） | |
| **15:30 - 16:00** | **茶歇（三楼 4 会议室）** | | |
| **16:00 - 16:30** | 大会报告 | 题目：*Implementation of real-time monitoring to improve forecasting of lake dynamics*<br>报告人：Nathaniel Deering 博士（昆士兰大学，澳大利亚） | 肖尚斌 教授 |
| **16:30 - 17:00** | | 题目：*The warming freshwater lake and saline lake in the Tibetan Plateau*<br>报告人：文丽娟 博士（中科院西北生态环境资源研究院，中国） | |
| **17:00 - 17:30** | **颁奖、闭幕式（三楼 1 会议室）** | | Bertram Boehrer 教授 |
| **18:30 - 23:00** | **中秋晚宴（酒店后广场）** | | |

**（5） 第五天：长江珍稀鱼类保育中心考察（时间：9 月 14 日）**

| 时　间 | 内　容 |
| --- | --- |
| **08:00 - 12:00** | 长江珍稀鱼类保育中心考察（08:00 酒店一楼大堂集合） |
| **12:00 - 14:00** | 自助午餐（二楼聚鹤厅） |
| **14:00 以后** | 乘坐大巴返回宜昌市区后返程 |

## 6. 会议交通安排

**（1） 会议地址：**

中国湖北省宜昌市三峡坝区三峡工程大酒店（具体位置见图 1）。


图 1 中国湖北省宜昌市三峡坝区三峡工程大酒店

**（2） 会务组接/送机（车）安排**

**① 会务组接/送机（车）**

会务组将于 9 月 9 日全天在宜昌三峡机场、宜昌东站设有专门会议接待点，**各位参会嘉宾下飞机/火车后可直接到相应接待点处报到**（或联系相应接待点负责人），会务组将集中安排车辆送至三峡坝区三峡工程大酒店注册、入住。需接站嘉宾请填写行程反馈表（详见会议注意事项）。

- **三峡机场接待点负责人：**

陈　敏，电话：13886712753，邮件：31587718@qq.com；

- **宜昌东站接待点负责人：**

康满春，电话：18507206440，邮件：kmcspring@gmail.com；

**② 自助前往路线**

会务组于 9 月 9 日 08:00-18:00 在三峡大学接待中心设有临时接待点，**不需在三峡机场及宜昌东站接送的嘉宾**可在 9 月 9 日 18:00 前自由前往三峡大学接待中心（中国湖北省宜昌市西陵区大学路 8 号三峡大学接待中心），会务组将安排专车集中送至三峡坝区三峡工程大酒店注册、入住；也可自助驾车直接至三峡坝区三峡工程大酒店注册、入住。


图 2　三峡大学接待中心临时接待点

- **三峡大学接待中心接待点负责人：**

  龙良红，电话：15872577710。

- **自助乘车路线**

➢ 宜昌东站——三峡大学接待中心（图 3）：乘出租车至三峡大学接待中心，大约 30 分钟车程，约 40 元。

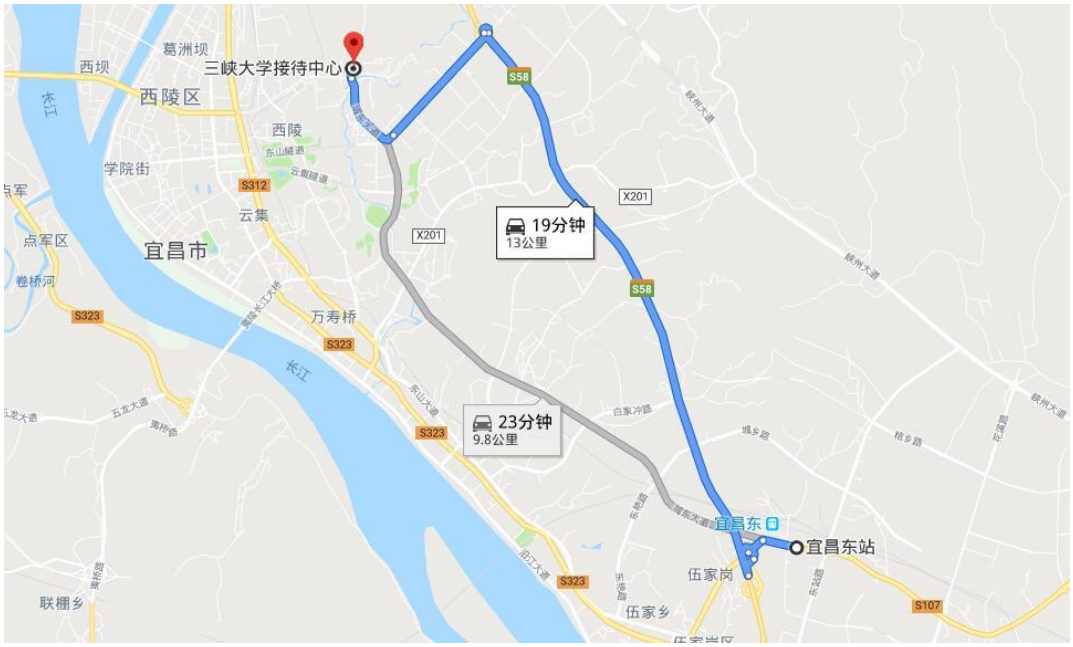


图 3 宜昌东站——三峡大学接待中心

➢ 宜昌东站——三峡工程大酒店（图 4）：乘出租车至三峡坝区三峡工程大酒店，大约 1 小时车程，约 200 元。

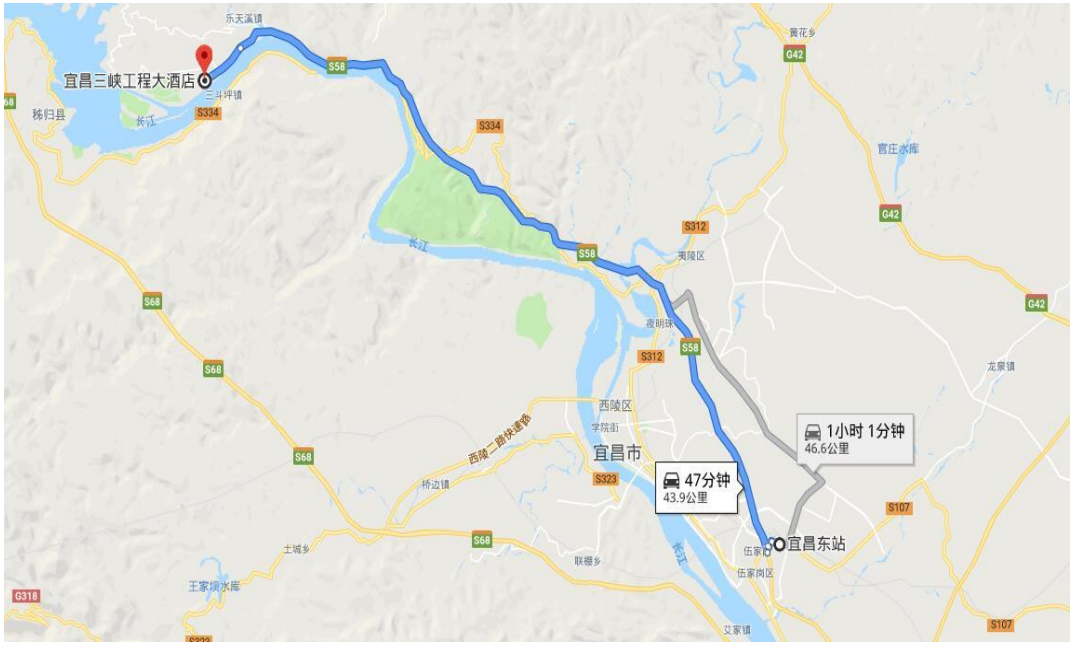


图 4 宜昌东站——三峡工程大酒店

- 三峡机场——三峡大学接待中心（图 5）：乘出租车至三峡大学接待中心，大约 45 分钟车程，约 150 元。

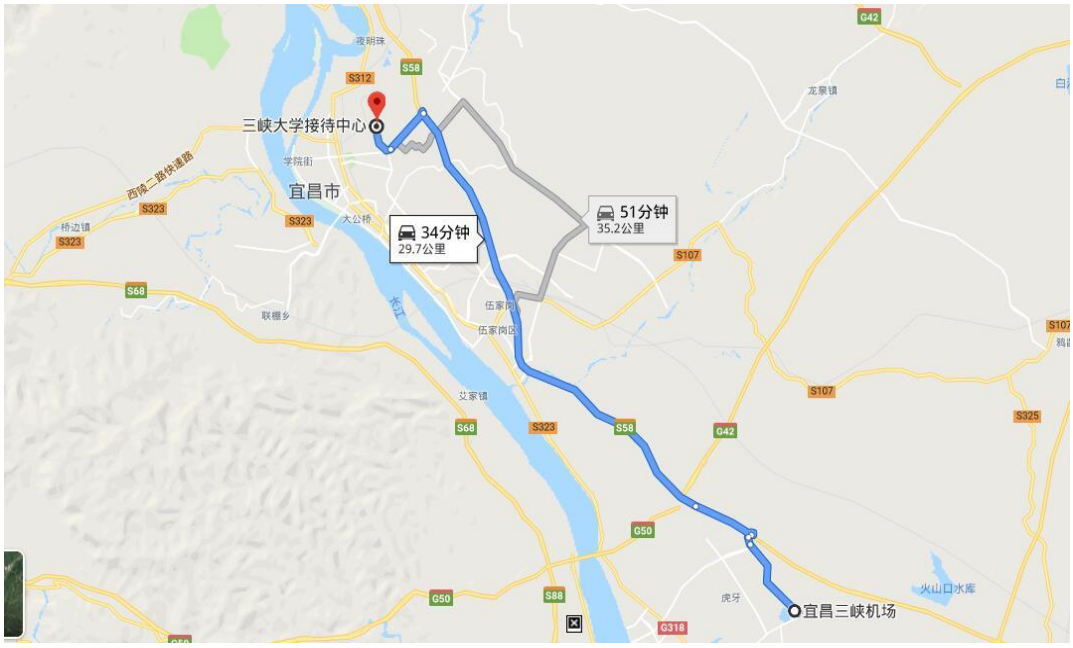


图 5 三峡机场——三峡大学接待中心

- 三峡机场——三峡工程大酒店（图 6）：乘出租车至三峡坝区三峡工程大酒店，大约 1 个小时 30 分钟车程，约 300 元。

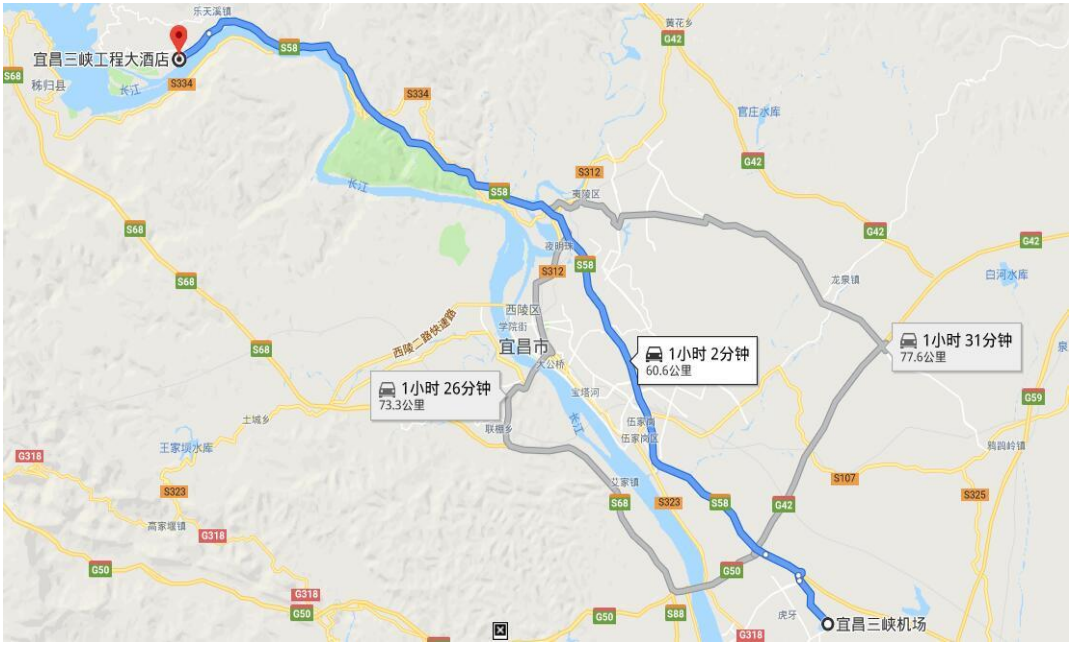


图 6 三峡机场——三峡工程大酒店

## 7. 会务联系人

会务：马　骏，电话：13164679309，邮箱：majun150@hotmail.com

接送：杨正健，电话：18627835988，邮箱：656637841@qq.com

注册：宋林旭，电话：13972607937，邮箱：280825327@qq.com

会场：刘　佳，电话：15587909793，邮箱：771441839@qq.com

酒店：王　蕾，电话：15872707257，邮箱：398514822@qq.com

车辆：纪道斌，电话：13487264294，邮箱：394816707@qq.com

## 8. 注意事项

### （1） 接送行程反馈表

请在 9 月 9 日之前登陆 https://jinshuju.net/f/BFjt3i 并填写完整行程信息后提交，或直接将行程信息反馈给马骏（电话：13164679309，邮箱：majun150@hotmail.com）。

### （2） 会议联系微信群

为方便各位嘉宾之间沟通，同时会务组更好发布相关会议通知及注意事项，会务组创建了 PPNW2019 会议微信群，请各位嘉宾通过手机微信扫描下列二维码加入微信群。

**方法 1：**通过手机微信 APP 扫描下列二维码加入微信群。


**方法 2：**在手机微信 APP 扫描下列陈敏（Doris）二维码，并备注 PPNW 会议，然后加入 PPNW2019 会议微信群。

## 9. 主要参会人信息

| 序号 | 姓　名 | 单　位 | 邮　箱 | 备　注 |
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| 4 | 张　鑫 | 北京师范大学，中国 | xzhang0828@mail.bnu.edu.cn | |
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| 26 | Andreas Lorke | 科布伦茨-兰道大学环境科学研究所，德国 | lorke@uni-landau.de | |

| 序号 | 姓　名 | 单　位 | 邮　箱 | 备　注 |
|---|---|---|---|---|
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| 29 | Victor Stepanenko | 罗蒙诺索夫莫斯科国立大学，俄罗斯 | vstepanenkomeister@gmail.com | |
| 30 | Alfred Wüest | 洛桑科尔理工学院，瑞士 | alfred.wueest@eawag.ch | |
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## 10. 中国宜昌介绍

### （1） 中国宜昌

宜昌，古称“夷陵”，湖北省地级市。位于湖北省西南部、长江上中游分界处，建制历史逾两千年。“宜昌”之名始于东晋，市的建制始于解放初，于 1992 年设立地级市。宜昌市地理环境复杂多样，地形比较复杂，高低相差悬殊；位于中亚热带与北亚热带的过渡地带，属亚热带季风性湿润气候。全市总面积 21227 平方千米，辖五区、三市、五县，常住人口 413.56 万人。宜昌盛产柑桔，且历史悠久，屈原的《桔颂》，证明至少两千多年前，宜昌就已栽培柑桔。

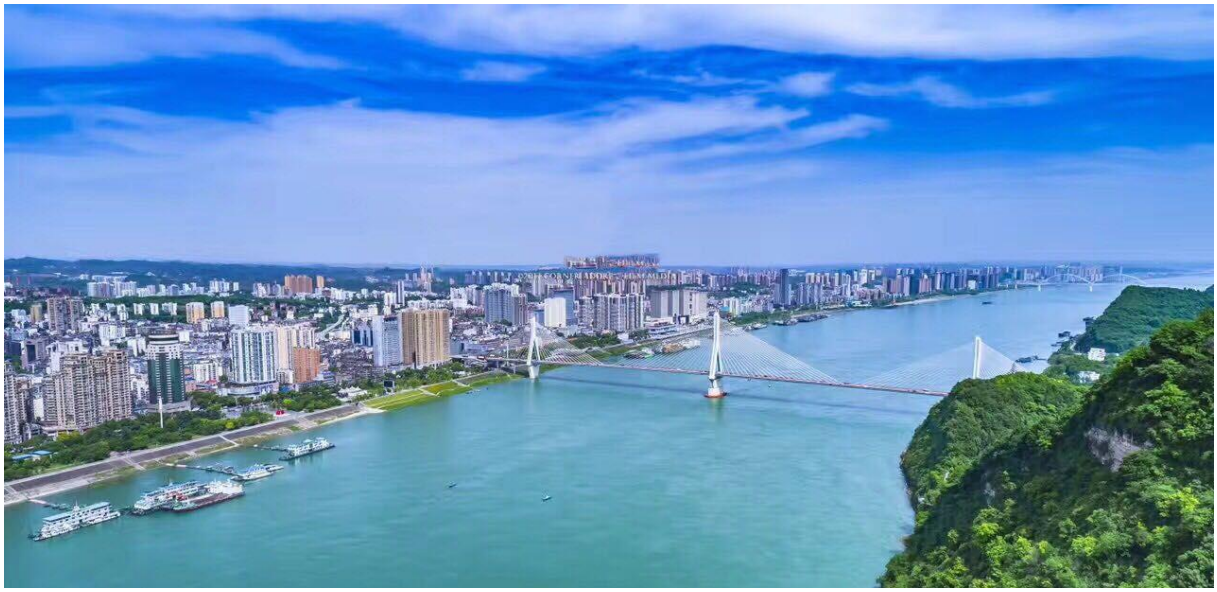

图 7 宜昌江景

宜昌曾经是楚文化和巴文化发展的地望。被誉为“世界四大文化名人”之一的屈原，被称为“中国古代四大美人”的王昭君都出生在古宜昌境内，境内还有屈原祠、昭君村、读书洞、娘娘井等众多的历史文化遗迹。宜昌还以“三国故地”而著称，古典名著《三国演义》中有三十六个故事发生在这里。这里还是埋葬关公正身的“五阳”之地，建有关帝陵。同时也是关公文化的考察研究之地。

宜昌水运源远流长，河流众多，有着天然的航运条件，自古江河便为宜昌对外交流的主要通道。三峡大坝建成后，宜昌黄金水道成为一条连接重庆、湖北的水上高速公路，昔日的川鄂咽喉，成为承东启西，国家东、西部交通的重要枢纽和通道。

### （2） 三峡水利枢纽

三峡大坝，世界第一大的水电工程，位于西陵峡中段的湖北省宜昌市境内的三斗坪，距下游葛洲坝水利枢纽工程 38 公里。三峡大坝工程包括主体建筑物工程及导流工程两部分，工程总投资为 954.6 亿元人民币。全线浇筑达到设计高程 185 米，是世界上规模最大的混凝土重力坝。三峡工程是迄今世界上综合效益最大的水利枢纽，在发挥巨大的防洪效益和航运效益外，其 1820 万千瓦的装机容量为世界第一，847 亿千瓦时的年发电量居世界第二（仅次于伊泰普水电站，其为 948.6 亿度），三峡大坝荣获世界纪录协会世

界最大的水利枢纽工程世界纪录。

图 8 三峡大坝

三峡大坝旅游区占 15.28 平方公里，登上 5A 级旅游景区坛子岭观景点你能鸟瞰三峡工程全貌，体会毛主席诗句“截断巫山云雨，高峡出平湖”的豪迈情怀；站在 185 平台上向下俯看，感受中华民族的伟大与自豪；走进近坝观景点，你能零距离感受雄伟壮丽的大坝；登上坝顶你能直面雷霆万钧的泄洪景观；来到截流纪念园欣赏人与自然的完美结合，仿佛置身于“山水相连，天人合一”的人间美景。

图 9 三峡大坝全景

**（3） 秭归屈原故里**

秭归屈原故里文化旅游区，为国家 5A 级旅游景区，全国重点文物保护单位，位于宜昌市秭归县凤凰山，与三峡大坝连为一体，是正面观三峡大坝、副坝、高峡平湖的最佳位置。

图 10 屈原故里

屈原故里景区主要内容包括以屈原祠为主的屈原纪念馆，以新滩古民居、峡江石刻、峡江古桥等为重点的三峡古民居区，以及屈原文化艺术中心、南北两个出入口区、滨水景观带等配套景点。

图 11 屈原纪念馆