



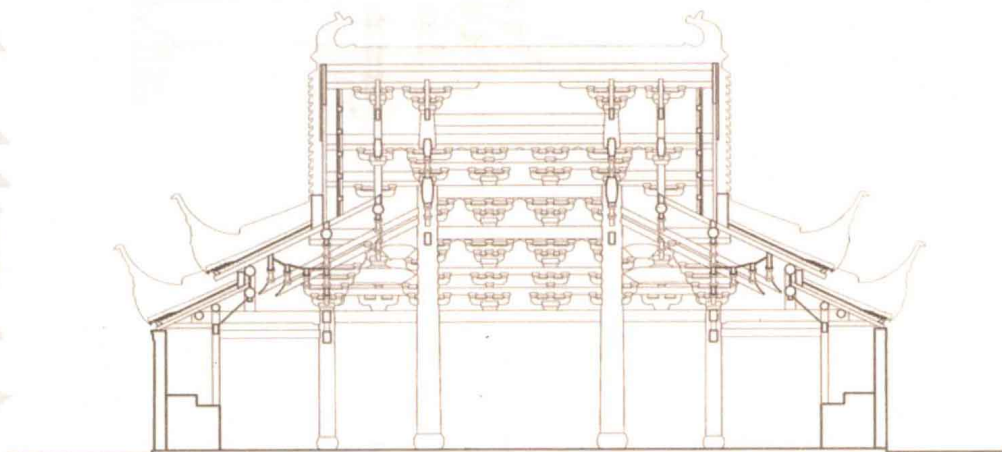
Architectural Culture  
South of the Yangtze



# Wood Construction South of the Yangtze

LIU Jie

江南木构



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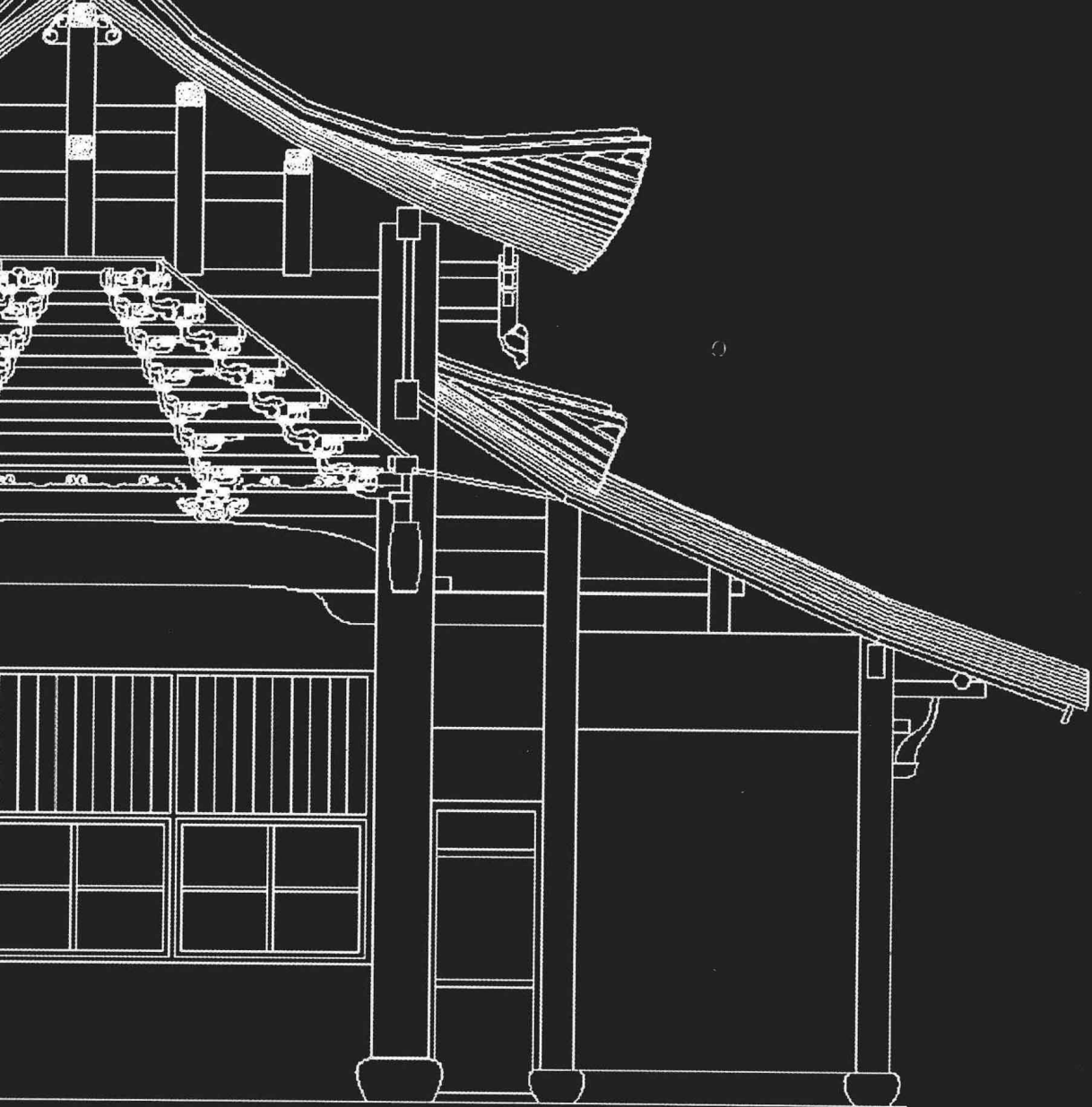
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Wood Construction

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# Wood Construction South of the Yangtze



# Preface

The content of this book comes from my doctorate thesis “A Study of the Origins and Development of Wooden Architecture South of the Yangtze,” written when I was a student at Tongji University. After defending my thesis, some friends, including the friend of a publisher urged me to publish it. However, I knew full well that large portions of it were not ready to be published, and after careful consideration, I put the idea aside for the time being.

In the spring of 2005, I met the editor in chief of Shanghai Jiao Tong University Press, Mr. ZHANG Tianwei. I was introduced to the editor through a friend who wanted me to help the chief editor design and publish a series on architectural culture. Mr. ZHANG knew I had written a book—*Taishun*—four years before that was published by Sanlian Bookstores. Initially, the Press’ first thought was to publish something similar to Sanlian Bookstore about “*Local China*.” Later, through Mr. ZHANG and deep discussion with the editor GUAN Xinchao, we decided that this series would be different from the previous one. Although “*Local China*” was published ten years ago, it led the Chinese domestic market for illustrated works. Today, however, I figure the market for publishers and the situation of readers, compared to the past, has changed considerably; it’s hard for purely photographic books to approach their past brilliance. I hope this series, based on academic research, will inspire readers to enjoy and pay closer attention to the architectural culture surrounding them. My research focused on the region south of the Yangtze, including Shanghai, which is exactly in the center, and the area near the ancient border of the countries Wu and Yue in East Tang Village, Zhejiang Province, next to Shanghai. Naturally this series is called “Architectural Culture South of the Yangtze.”

Once we were sure of the series’ content, the next step was to carefully select the author and theme. Regarding the question of

the author, Mr. ZHANG and the head of the editing department hoped that I would take up the post. The chief editor usually doubles as the writer. This is a common practice in academic writing. However, in recent years I had been busy in the south with my research on covered bridges, and I was teaching in Jiao Tong University Architecture Department. I had too much work and no time to do more research. After continued exchanges with the editing department, they knew the subject of my doctoral dissertation was on south of the Yangtze, therefore, it would be possible to pull ideas from it and turn it into a book. I had always thought I would make changes to the dissertation and then consider publishing it; I never thought to publish it so soon. But I couldn't decline the editing department again, and accepted their proposal.

This is the origin of "Wood Construction South of the Yangtze." My thesis had close to 400,000 Chinese characters in it, and from it I pulled out a number of ideas. After cutting it down and also making some additions it had 140,000 Chinese characters. The process of extracting and polishing ideas led to the combination and revision of a lot of materials. In general though, I added more than I took away. In spite of these changes, however, my previous concerns have still not been dispelled, apart from lacking maturity, I'm sure it still contains a number of errors. And in this regard, I hope my readers won't hesitate to correct me.

I would like to thank the two instructors who guided my research south of the Yangtze—Professor YANG Hongxun from the Archaeological Institute of Science and Technology, and Professor LU Bingjie of Tongji University's School of Architecture in Shanghai. It was their advice which led me to the field of traditional architectural research south of the Yangtze. Thanks to everyone who helped me during the writing of my doctoral thesis, CHEN Zhihua and GUO Daiheng from Tsinghua University, SHEN Weiping from Shanghai Jiao Tong University, HANG Kai from Beijing University, SHEN Fuxi, CHANG Qing and LU Chenhai from Tongji University, WU Qingzhou from South China University of Technology, TAN Yufeng, YU Chenghai, CHEN Ping from Shanghai Ground Cultural Relics Management Office, CAO Jin from Canton Archaeological

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Thanks to the National Natural Science Foundation Committee which subsidized this book as part of the research program on the "Origins and Construction of Wooden Architecture in Southern China."

Finally, thanks to my architecture students from Shanghai Jiao Tong University! My postgraduate students ZHU Yi and KONG Lei who rescanned the illustrations in the book and oversaw its remapping, and to YAO Rui, ZHU Zhenyu, HUANG Nan, ZHENG Yangquan, YU Yang, and BAO Lipei.

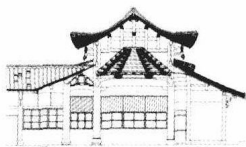
LIU Jie

May 5, 2008, Shanghai, Wuyi Garden

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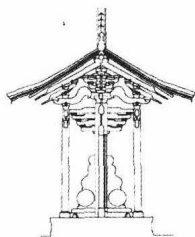
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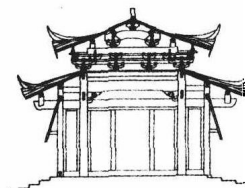
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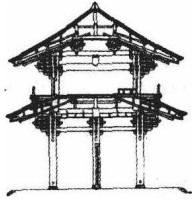
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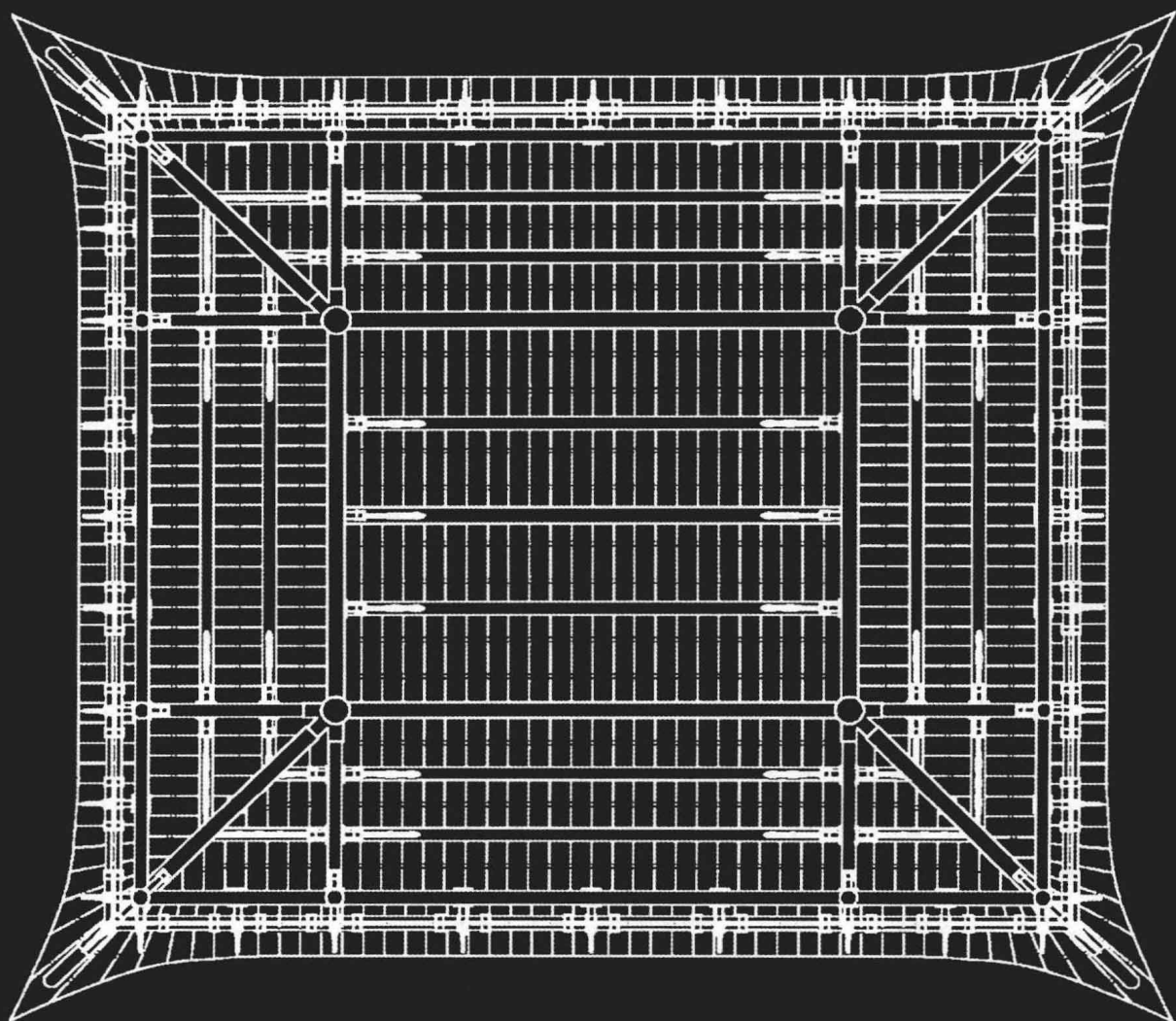


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# Chapter I

## Introduction



# Chapter I : Introduction

Wondrous south of the Yangtze  
Scenery long ago etched in heart  
River ripples red at sunrise  
Their shade unmatched by fire  
Rivers flowing in spring  
Water green as if blue  
Who does not yearn for South of the Yangtze?

This Tang Dynasty poem makes people looking at the south of the Yangtze dumb and drunk with desire. The beauty south of the Yangtze is never empty nor vague. Neither is its architectural culture.

Four-hundred eighty temples of the Southern Dynasty  
How many high towers cloaked in mist and rain?

The many forms of architecture that have emerged in history are all technological achievements. In the south of the Yangtze, this is especially so. As is known, traditional Chinese architecture is mostly composed of wood. Wood construction technology constituted the heart of traditional structural design. And undoubtedly, the wooden structures south of the Yangtze have assured its place in the development of China's architectural technology.

The progress of China's architectural technology has been largely the result of wood construction technology south of the Yangtze. Unfortunately, traditionally, the cultural contributions of the south have been neglected. At the very least this omission occurs in China's early history. And this applies to China's architectural history as well. The many editions and publications of *Chinese Architectural History* gradually were regarded as historical documents on architecture describing the heritage of wooden architecture in every period since the mid-Tang Dynasty. Combined with classical texts, these works have formed our the development

and history of ancient Chinese architecture. This format was perhaps demanded by historical circumstances. However because of the great advances in archeology in contemporary China, the time has come to carefully reconsider the origin and development of Chinese ancient architecture. Scholars should especially study the wood construction south of the Yangtze to understand the development of architectural technology in the region and in the whole country.

This book primarily aims to discuss the overall picture of wooden architectural technology in the south, which served as the essential component of the architectural tradition south of the Yangtze. This subject is rich with material and examples, including elaborately built Taoist and Buddhist temples, shrines, ancestral halls and palaces. Of course it also includes residential buildings, workshops and bridges. By concentrating on the overall source and development of wood construction in the south, this book will also deal with questions related to the origin of similar wood building technology in the north.

## 1. The Definition of “South of the Yangtze” and Its Geographical Environment

### (1) The Definition of “South of the Yangtze”

From ancient times to the present, Chinese people's understanding of what constitutes “South of the Yangtze” has changed many times. “South of the Yangtze” in this book actually refers to the areas in the south through which the author traveled and did his research. Most of these areas overlap with the present day conception of “South of the Yangtze,” but there are a few cases which are not commonly associated with the region.

Professor ZHOU Zhenhe from the Institute of Chinese Historical Geography at Fudan University wrote an article called “*Explaining South of the Yangtze*,” in which he performed textual research on the different regional representations of “South of the Yangtze” in historical sequence. In his book *Zen Temple Architecture South of the Yangtze*, Professor ZHANG Qingshi from the School of Architecture of Southeast University also gave a detailed explanation of “South of the Yangtze.” Combining

the findings of these two scholars, a general history of the region is summarized as follows.

In the Qin and the Han Dynasties, “South of the Yangtze” (or Jiangnan in Chinese, which literary means south of the river) referred to the land south of the middle portion of the Yangtze River, which at present includes southern Hubei and Hunan Provinces. As a result the Han Dynasty county of Yidao County (present-day Yidu County in Hubei Province) was renamed Jiangnan during WANG Mang’s political reign. At that time, southern Anhui Province and southern Jiangsu Province (currently considered part of “South of the Yangtze” ) were referred to as Jiangdong (the area east of the Yangtze River). In the late Eastern Han Dynasty, SUN Ce invaded and established the Kingdom of Wu in the area of Jiangdong. The region has been referred to as Wu ever since. It was the custom in ancient times for people to call the two banks of the Yangtze River the left and right banks when they faced the river’s source. For this reason, Jiangdong was also called Jiangzuo (the area left of the Yangtze River). Compared with the pre-Qin and Qin Dynasties, the “South of the Yangtze” in the Han Dynasty was more extensive, including Yuzhang Shire, Danyang Shire and even northern Kuaiji Shire (which collectively form present-day Jiangxi, Anhui and southern Jiangsu Provinces).

It was not until the Tang Dynasty that a reliable definition of “South of the Yangtze” emerged. Under the Taizong Reign of Emperor LI Shimin, China was divided into ten administrative districts, among which Jiangnan, which extended from Hunan Province in the west to the ocean in the east, was defined entirely as the area south of the Yangtze River, an area which ever since the Qin and the Han Dynasties has most closely resembles its namesake of Jiangnan, or “south of the river.” The ten regional districts in the Tang Dynasty were in fact geographic regions heavily based on the natural contours of mountain valley rivers. Because of the vast size of the region, the Xuanzong Reign of the Tang Dynasty further divided Jiangnan into three districts, Western Jiangnan, Eastern Jiangnan, and Middle Qian. In the late Tang Dynasty, the region of West Jiangnan was further divided into two parts, with the western district named Hunan, and the eastern portion keeping the name of West Jiangnan, or Jiangxi for short. This is the origin of present-day Hunan and Jiangxi Provinces.

During the period of the two Song Dynasties, the area of southern

Jiangsu Province to the east of Zhenjiang and the whole Zhejiang Province were referred to as the “Two Zhe Circuit.” This area formed the heart of “South of the Yangtze” and also constituted, in the most narrow sense, the scope of the south of the Yangtze. In the Southern Song Dynasty, the Two Zhe Circuit was at the forefront of the nation’s economic development, especially the region’s states of Su, Hu, Chang and Xiu. There was a saying at that time “When Su and Hu have a good harvest, the entire country has enough.” HAN Yu, a poet in the Tang Dynasty, once said, “Eighty or ninety percent of taxes paid by the entire country comes from the south of the Yangtze,” a quote further expanded on by QIU Jun, a great scholar of the Ming Dynasty as “At present, nine tenths of taxes paid by the south of the Yangtze comes from the Two Zhe Circuit, and out of this amount nine tenths is from the region’s five shire of Su, Song, Chang, Jia and Hu.” Actually, the “five shires” here should refer to the five prefectures made up of the present-day cities of Changzhou and Suzhou in Jiangsu Province, Jiaxing and Huzhou in Zhejiang Province, and the Shanghai Municipality, cities which together occupy the entire Taihu Lake basin. Together they constitute the most common understanding of what “South of the Yangtze” is today.

Of course the prefectures of Zhenjiang and Hangzhou, located between the five prefectures mentioned above and the rest of the Two Zhe Circuit, should also be considered part of “South of the Yangtze.” In addition, Yangzhou, located north of the Yangtze River, was often categorized as part of “South of the Yangtze” in ancient times before the Qing Dynasty. This is clearly expressed in the famous poem *A Message to HAN Cho the Yangzhou Magistrate* by DU Mu, a poet in the Tang Dynasty:

Faint green mountains and waters stretch afar,  
At autumn’s end south of the Yangtze plants and trees wilt,  
Above Yangzhou’s twenty-four bridges the moon is bright.  
At what spot is a girl, white as jade, asked to play flute?

The contemporary “South of the Yangtze” can also be defined according to a broad and narrow definition. In broad terms, it includes the regions in Jiangsu and Anhui Provinces south of the Yangtze (called Su’nan and Wan’nan respectively) as well as the whole of Zhejiang Province.



In a narrow sense, it refers to the plains in the northeast of the range, including the areas of Suzhou, Wuxi and Changzhou in Jiangsu Province, the areas of Hangzhou, Jiaxing Huzhou in Zhejiang Province and Shanghai municipality. However, the “South of the Yangtze” in this book covers the southeastern geographical part of the region which is mostly included in the above-mentioned narrow-sensed “South of the Yangtze” as well as northern Fujian Province. This area corresponds to the bounds of the Wu and Yue Kingdoms during the Spring and Autumn, and Warring States Periods. To be more exact, the area described in this book can be demarcated by a geographic historical definition—that of the territory covered by the Wu-Yue Kingdom in the period of the Five Dynasties. In its prosperity, the Wu-Yue Kingdom consisted of thirteen states, including Su, Xiu (currently Jiaxing), Hu, Hang, Yue (currently Shaoxing), Ming (currently Ningbo), Mu (currently Jiande), Wu (currently Jinhua), Qu, Tai, Chu (currently Lishui), Wen and Fu. This book’s focus will not exceed the scope of the thirteen city-states mentioned above except for a few locations which serve as convenient examples, and which still fit within the broad-sense of the “South of the Yangtze.”

## (2) The Natural Environment of the “South of the Yangtze”

The “South of the Yangtze” is made up of relatively flat-land in the north and mountainous terrain in the south. The north, located in the plain along the Yangtze River and Taihu Lake basin, is covered densely with waterways and is known for a comfortable natural environment. The south, made up of hilly terrain, is crisscrossed with many steep slopes and rough paths.

The north of the “South of the Yangtze,” is a plain region surrounding Taihu Lake and has an altitude of three to five meters above sea level. It abounds in rivers and lakes with distinctive four seasons, abundant sunlight and rain, high quality fertile soil and rich natural resources, all of which provided a substantial foundation for the area’s urban and rural development. There are some low mountains with altitudes of 200 to 300 meters to the west of the plain, such as Ningzhen Mountain, Mount Mao. To the east of the plain between Jiangyin and Changshu on the south bank of the Yangtze River stands the Yellow Mountain, Yushan Mountain, Lingyan Mountain surrounding Taihu Lake, Tianping Mountain, Mount