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27-28.9.2023
香港故宮文化博物館
Hong Kong Palace Museum

三星堆與青銅時代的中國
國際研討會

Sanxingdui and Bronze Age China
International Symposium

四川廣漢三星堆遺址的考古發掘揭示了中國長江上游，尤其是成都平原地區高度發達的古代文明。香港故宮文化博物館於 2023 年 9 月 27 至 28 日舉辦「三星堆與青銅時代的中國」國際研討會，邀請海內外知名專家學者，圍繞三星堆遺址最新考古發現和青銅時代中國的社會、文化以及技術等課題，展開學術研討。這次研討會，是配合特別展覽「凝視三星堆——四川考古新發現」而舉行。

Archaeological excavations at Sanxingdui in Guanghan, Sichuan province have revealed evidence of an advanced ancient culture in the upper Yangtze River valley and in particular the Chengdu Plain. The Hong Kong Palace Museum hosts the “Sanxingdui and Bronze Age China” International Symposium from 27 to 28 September 2023, in conjunction with its special exhibition “Gazing at Sanxingdui: New Archaeological Discoveries in Sichuan”. Leading Chinese and overseas scholars present the latest archaeological discoveries and research on Sanxingdui and engage in dialogue on the social, cultural, and technological developments of Bronze Age China.



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研討會日程 Symposium Programme

第一天 Day 1 27.09.2023 星期三 Wednesday

10:00 am–10:10 am 歡迎辭 Welcome Speech

吳志華博士 Dr Louis NG

香港故宮文化博物館館長

Museum Director, Hong Kong Palace Museum

致辭 Speech

王毅 WANG Yi

四川省文化和旅遊廳副廳長、四川省文物局局長

Deputy Director, Sichuan Provincial Department of Culture and Tourism, and

Director, Sichuan Provincial Cultural Heritage Administration

第一節：三星堆考古新發現

Panel 1: New Archaeological Discoveries at Sanxingdui

主持人 Moderator :

焦天龍 Tianlong JIAO

香港故宮文化博物館首席研究員

Head Curator, Hong Kong Palace Museum

10:10 am–10:35 am

三星堆遺址的考古新發現與新認識

New Discoveries and Insights into Sanxingdui

雷雨 LEI Yu

四川省文物考古研究院研究員、四川廣漢三星堆博物館館長

Research Fellow, Sichuan Provincial Institute of Cultural Relics and Archaeology;

Director, Sanxingdui Museum

10:35 am–11:00 am

三星堆遺址祭祀區考古工作及主要收穫

Excavations and Major Finds in the Sacrificial Area at Sanxingdui

冉宏林 RAN Honglin

四川省文物考古研究院研究員、三星堆考古研究所所長、

四川廣漢三星堆博物館副館長

Research Fellow, Sichuan Provincial Institute of Cultural Relics and Archaeology (SPICRA);

Director, Sanxingdui Cultural Relics and Archaeological Research Institute, SPICRA;

Deputy Director, Sanxingdui Museum

11:00 am–11:25 am

三星堆遺址祭祀區新發現：三號坑

New Archaeological Finds in the Sacrificial Area at Sanxingdui: Pit No. 3

徐斐宏 XU Feihong

上海大學文化遺產與訊息管理學院考古學與博物館學系講師

Lecturer, Department of Archaeology and Museology, School of Cultural Heritage and

Information Management, Shanghai University

11:25 am–11:40 am

小休 Break

11:40 am–12:05 pm

三星堆遺址祭祀區新發現：五、六及七號坑

New Archaeological Finds in the Sacrificial Area at Sanxingdui:

Pits Nos. 5, 6, and 7

黎海超 LI Haichao

四川大學考古文博學院教授

Professor, School of Archaeology and Museology, Sichuan University

12:05 pm–12:30 pm

三星堆遺址祭祀區新發現：八號坑

New Archaeological Finds in the Sacrificial Area at Sanxingdui: Pit No. 8

趙昊 ZHAO Hao

北京大學考古文博學院副教授

Associate Professor, School of Archaeology and Museology, Peking University

12:30 pm–1:00 pm

學術討論 Panel Discussion

第二節：青銅技術考古研究

Panel 2: Archaeology of Bronze Metallurgy

- 主持人 Moderator：梅建軍 Jianjun MEI
劍橋李約瑟研究所所長
Director, Needham Research Institute, Cambridge
- 2:30 pm–2:50 pm **定義三星堆青銅鑄造技術的特徵**
Defining Features of Bronze Fabrication at Sanxingdui
許傑 Jay XU
舊金山亞洲藝術博物館館長
Director, Asian Art Museum of San Francisco
- 2:50 pm–3:10 pm **關於三星堆祭祀坑出土幾件銅尊改制現象的初探**
A Preliminary Study of the Reworking Phenomenon of a Few Bronze Zun-vessels Excavated from the Sanxingdui Sacrificial Pits
朱亞蓉 ZHU Yarong
四川廣漢三星堆博物館副研究員、副館長
Associate Research Fellow and Deputy Director, Sanxingdui Museum
- 3:10 pm–3:30 pm **表裏統一：鑄接工藝與三星堆青銅容器的南方屬性及相關問題**
Casting Techniques and the Southern Connection and Related Issues of Sanxingdui Bronzes
蘇榮譽 SU Rongyu
中國科學院科技史研究所退休教授
Professor Emeritus, Institute of History of Science and Technology,
Chinese Academy of Sciences
- 3:30 pm–3:45 pm **小休 Break**
- 3:45 pm–4:05 pm **三隻青銅獸、三維技術、三星堆**
Three Bronze Animals, 3D Technology, and Sanxingdui
李建深 LI Kin Sum
香港浸會大學歷史系副教授
Associate Professor, Department of History, Hong Kong Baptist University
- 4:05 pm–4:30 pm **學術討論 Panel Discussion**

第三節：四川考古及跨區域交流

Panel 3: Sichuan Archaeology and Transregional Connections

- 主持人 Moderator： 許傑 Jay XU
舊金山亞洲藝術博物館館長
Director, Asian Art Museum of San Francisco
- 9:00 am–9:20 am 2005–2011年成都平原考古調查成果整合與解讀
Integration and Interpretation of the Results of the Chengdu Plain
Archaeological Survey, 2005–2011
傅羅文 Rowan FLAD
哈佛大學人類學系 John E. Hudson 考古學教授
John E. Hudson Professor of Archaeology, Department of Anthropology,
Harvard University
- 9:20 am–9:40 am 三星堆區域文明的興起：一個構想
Thoughts on the Rise of the Regional Civilisation of Sanxingdui
施勁松 SHI Jinsong
中國社會科學院考古研究所研究員
Research Fellow, Institute of Archaeology, Chinese Academy of Social Sciences
- 9:40 am–10:00 am 以玉見銅——三星堆青銅文化側面觀
Understanding Bronze through Jade: New Perspectives on
Sanxingdui Bronzes
王方 WANG Fang
四川成都金沙遺址博物館研究館員、副館長
Research Fellow and Deputy Director, Jinsha Site Museum
- 10:00 am–10:20 am 三星堆銅器與商代的冶金網絡
Sanxingdui Bronzes and Metallurgical Networks in the Shang Dynasty
梅建軍 Jianjun MEI
劍橋李約瑟研究所所長
Director, Needham Research Institute, Cambridge
- 10:20 am–10:40 am 青銅化與三星堆文化的形成
“Bronzisation” and the Formation of Sanxingdui Culture
焦天龍 Tianlong JIAO
香港故宮文化博物館首席研究員
Head Curator, Hong Kong Palace Museum
- 10:40 am–11:00 am 學術討論 Panel Discussion
- 11:00 am–11:20 am 小休 Break

第四節：圖像與信仰

Panel 4: Iconography and Beliefs

- 主持人 Moderator： 傅羅文 Rowan FLAD
哈佛大學人類學系John E. Hudson考古學教授
John E. Hudson Professor of Archaeology,
Department of Anthropology, Harvard University
- 11:20 am–11:40 am **三星堆的人與神——基於三星堆神廟內部場景復原的推論**
Humans and Deities at Sanxingdui: Interpretations Based on the Restoration Work on the Sanxingdui Temple
孫華 SUN Hua
北京大學考古文博學院教授及文化遺產保護研究中心主任
Professor, School of Archaeology and Museology, and
Director, Centre for Cultural Heritage Protection and Research, Peking University
- 11:40 am–12:00 pm **三星堆神壇上的獠牙神像**
On the Deity with Tusks on Sanxingdui Altars
王仁湘 WANG Renxiang
中國社會科學院考古研究所研究員
Research Fellow, Institute of Archaeology, Chinese Academy of Social Sciences
- 12:00 pm–12:20 pm **三星堆與金沙的金器：光明、空間與裝飾系統**
Goldwork from Sanxingdui and Jinsha: Light, Space, and an Ornamental System
王聖雨 WANG Shengyu
香港故宮文化博物館助理研究員
Assistant Curator, Hong Kong Palace Museum
- 12:20 pm–12:40 pm **三星堆青銅器中的商代裝飾紋樣系統**
The Shang Dynasty Ornamental System in Sanxingdui Bronzes
黃煒均 Raphael WONG
香港故宮文化博物館副研究員
Associate Curator, Hong Kong Palace Museum
- 12:40 pm–1:00 pm **學術討論 Panel Discussion**
- 1:00 pm–1:30 pm **總結 Closing Remarks**
焦天龍 Tianlong JIAO
香港故宮文化博物館首席研究員
Head Curator, Hong Kong Palace Museum

節目如有更改，恕不另行通知。

The programme is subject to change without prior notice.

演講者 Speaker



雷雨 LEI Yu

四川省文物考古研究院研究員、
四川廣漢三星堆博物館館長
Research Fellow, Sichuan Provincial Institute of
Cultural Relics and Archaeology;
Director, Sanxingdui Museum

雷雨畢業於北京大學歷史系考古專業。現任四川省文物考古研究院研究員、三星堆博物館館長、中國考古學會新石器時代考古專業委員會委員、文化部優秀專家和四川省人大代表等。他主持四川廣漢三星堆遺址、什邡桂圓橋遺址、什邡城關墓地等新石器時代至戰國時期古蜀文化遺址、墓葬，以及越南義立遺址的發掘、整理和報告編寫工作。目前正主持《三星堆——1980–2005年發掘報告》編寫工作。

Lei Yu graduated from Peking University's Department of History, majoring in archaeology. He is currently a research fellow of Sichuan Provincial Institute of Cultural Relics and Archaeology (SPICRA) and Director of the Sanxingdui Museum. He also holds roles as a member of the Neolithic Archaeological Professional Committee of the Chinese Archaeological Society, an Outstanding Expert of the Ministry of Culture, and National People's Congress Deputy of Sichuan Province, among others. He leads the excavation, organisation, and editorial of project reports for various archaeological sites in Sichuan, including Sanxingdui, the Guiyuanqiao site in Shifang county, the remains and tombs of the Shu culture in Shifang Chengguan, other sites from the Neolithic age to the Warring States period, and the Nahia Lap archaeological site in Vietnam. He is currently supervising the editorial of *Excavation Report of Sanxingdui, 1980–2005*.

三星堆遺址的考古新發現與新認識 New Discoveries and Insights into Sanxingdui

2012年至2014年，四川省文物考古研究院在三星堆遺址馬牧河北岸的青關山土臺揭露出三座超大型紅燒土建築基址，最大的一座建築面積逾1,000平方米，是中國南方至今為止發現的面積最大的商代單體建築基址，不少學者認為青關山土臺為三星堆遺址的宮殿台。

2019年10月以來，四川省文物考古研究院等四十多家單位對三星堆遺址馬牧河南岸一、二號坑所在區域進行細緻的考古勘探與發掘，最終確認了三星堆遺址祭祀區的存在，其分佈形狀大致為西北東南走向的長方形，面積約13,000平方米，祭祀區內的遺存均與祭祀活動有關，其中最重要的為八個器物坑。新發現的六個坑共出土17,000多件珍貴文物，年代集中在距今3,200年至3,000年，除了五號坑和六號坑屬祭祀坑外，其餘六個坑均為祭祀器物掩埋坑。

宮殿區與祭祀區均位於三星堆古城以內，一北一南，隔河相望，這種「人神分居」的城市佈局，與時代稍晚的成都金沙遺址如出一轍，因而有學者認為其反映的是古蜀文明極具地域特色的城市規劃理念。

From 2012 to 2014, SPICRA excavated three large-scale architectural foundations made of red burnt clay at the Qingguanshan mound on the north bank of Mamu River at Sanxingdui. The largest covers over 1,000 square metres and is the largest singular architectural base from the Shang dynasty excavated to date. Many scholars believe that the Qingguanshan mound is the foundation for the palace at Sanxingdui.

Since October 2019, over forty institutions including SPICRA have conducted excavations on the south bank of the river, where pits nos. 1 and 2 are located, and confirmed the existence of the sacrificial area at Sanxingdui. This rectangular area, with a northwest-southeast orientation, covers 13,000 square metres. Remains in the sacrificial area are all related to sacrificial rituals, with eight artefact pits being the most important discoveries. Over 17,000 pieces of valuable relics, mostly from 3,200 to 3,000 years ago, have been excavated from the six newly discovered pits. Except pits nos. 5 and 6, which are sacrificial pits, all six other pits are burial pits for sacrificial objects.

The palace area and the sacrificial area are both located inside the ancient city of Sanxingdui, facing each other, on the northern and southern sides of the river, respectively. This urban layout, representing the “separation of humans and gods”, is identical to that of the Jinsha site in Chengdu from a slightly later period. Some scholars therefore believe it reflects the urban planning concepts of the ancient Shu civilisation, which was typical of the region.

演講者 Speaker



冉宏林 RAN Honglin

四川省文物考古研究院研究員、三星堆考古研究所所長、

四川廣漢三星堆博物館副館長

Research Fellow,

Sichuan Provincial Institute of Cultural Relics and Archaeology (SPICRA);

Director, Sanxingdui Cultural Relics and Archaeological Research Institute, SPICRA;

Deputy Director, Sanxingdui Museum

冉宏林畢業於北京大學考古文博學院，獲歷史學博士學位。現為三星堆考古研究所所長、三星堆博物館副館長，主要從事三星堆遺址考古工作和研究。他主持三星堆遺址真武宮城牆、青關山土台、三星堆祭祀區、月亮灣大型建築區等多個地點的考古發掘。在《考古學報》、《考古》和《四川文物》等刊物上發表《試論「巴蜀青銅器」的族屬》、《再論三星堆祭祀坑的分期》和《三星堆城址廢棄年代再考》等論文五十餘篇。

Ran Honglin graduated from the School of Archaeology and Museology at Peking University with a PhD in history. He is currently Director of Sanxingdui Cultural Relics and Archaeological Research Institute, Sichuan Provincial Institute of Cultural Relics and Archaeology (SPICRA) and Deputy Director of the Sanxingdui Museum, with responsibility for archaeological work and research on the Sanxingdui site. He has overseen the excavation of various locations at Sanxingdui, including the walls of Zhenwu Temple, the Qingguanshan mound, the Sanxingdui sacrificial area, and the architectural area at Yueliangwan. He has published over fifty papers, including “On the Ethnography of Ba-Shu Bronzes”, “Further Discussion on the Phasing of the Sanxingdui Sacrificial Pits”, and “Further Studies on the Period of Abandonment of the Sanxingdui Cities”, in journals such as *Acta Archaeologica Sinica*, *Archaeology*, and *Sichuan Cultural Relics*.

三星堆遺址祭祀區考古工作及主要收穫 Excavations and Major Finds in the Sacrificial Area at Sanxingdui

自2019年10月以來，四川省文物考古研究院等四十多家單位對三星堆遺址祭祀區進行了細緻的考古勘探與發掘，最終確認祭祀區的分佈形狀大致呈西北—東南走向的長方形，面積約13,000平方米，祭祀區內的遺存均與祭祀活動有關，其中最重要的為八個器物坑。新發現的六個坑共出土17,000多件珍貴文物，年代集中在距今3,200年至3,000年，除了五號坑和六號坑屬於祭祀坑外，其餘六個坑均為祭祀器物掩埋坑。

Since October 2019, more than forty institutions including SPICRA have been involved in detailed archaeological investigations and excavations of the sacrificial area at Sanxingdui. They were eventually able to confirm that the sacrificial area is roughly in the shape of a rectangle aligned northwest to southeast and covers an area of about 13,000 square metres. All the finds in the sacrificial area are related to sacrificial activities. The most important discoveries are the eight pits themselves. More than 17,000 precious cultural relics have been unearthed from the six most recently discovered pits, which are dated to 3,200–3,000 years ago. Pits nos. 5 and 6 are sacrificial pits, while the other pits, including the two that were first discovered in 1986, are burial pits for sacrificial objects.

演講者 Speaker



徐斐宏 XU Feihong

上海大學文化遺產與訊息管理學院考古學與博物館學系講師
Lecturer, Department of Archaeology and Museology,
School of Cultural Heritage and Information Management,
Shanghai University

徐斐宏現為上海大學文化遺產與訊息管理學院講師，博士就讀於北京大學考古文博學院，曾為北京大學博士後，他主要的研究方向為漢唐考古，曾在陝西周公廟遺址、吉林山城下高句麗墓地、河南龍門石窟香山寺遺址、山東崗上遺址、四川三星堆遺址等處參加考古發掘工作，主編考古報告《武昌隋唐墓》，發表論文十餘篇。

Xu Feihong is a lecturer in the Department of Archaeology and Museology of the School of Cultural Heritage and Information Management at Shanghai University. He earned his PhD from the School of Archaeology and Museology at Peking University and was a post-doctoral fellow at Peking University. His research focuses on the archaeology of the Han to the Tang periods and he has participated in archaeological excavations of the Zhougong Temple site in Shaanxi province, the Shangchengxia Goguryeo cemetery in Jilin province, the Xiangshan Temple site at the Longmen Grottoes in Henan province, the Gangshang site in Shandong province, and the Sanxingdui site in Sichuan province. He edited the archaeological report *The Sui and Tang Tombs of Wuchang* and has published more than a dozen papers.

三星堆遺址祭祀區新發現：三號坑 New Archaeological Finds in the Sacrificial Area at Sanxingdui: Pit No. 3

2021年1月至10月，四川省文物考古研究院與上海大學合作發掘了三星堆遺址祭祀區三號坑。三號坑平面近長方形，長5.8米、寬2.14–2.77米，開口面積14.05平方米。三號坑堆積可分為填土層、灰燼層與遺物埋藏層。據初步統計，三號坑共提取文物2,693件 / 片，其中相對完整器物1,321件。遺物埋藏層出土了大部分遺物，包括銅器755件、金器51件、玉器195件、石器2件、象牙102根、骨角器7件。三號坑出土遺物中不乏頂尊跪坐人像、青銅神壇、巨型青銅面具、神樹紋玉琮等引人矚目的罕見文物。通過文物綴合，可知二、三、八號坑應同時形成，為分析祭祀區諸坑的性質、內涵等問題奠定了基礎。三號坑作為三星堆遺址祭祀區新發現的重要組成部分，為深化古蜀文明研究、進一步闡釋中華文明多元一體的形成歷程提供了極為寶貴的材料。

From January to October 2021, the Sichuan Provincial Institute of Cultural Relics and Archaeology and Shanghai University cooperated on excavations of pit no. 3 in the sacrificial area of the Sanxingdui site. The plane shape of pit no. 3 is nearly rectangular, with a length of 5.8 metres, a width of 2.14–2.77 metres, and an area of 14.05 square metres. The fill can be divided into a fill layer, an ash layer, and a burial layer. According to preliminary statistics, a total of 2,693 artefacts were extracted from pit no. 3, of which 1,321 were relatively well preserved. Most of the artefacts, including 755 bronze wares, 51 gold wares, 195 jade wares, two stone wares, 102 elephant tusks, and seven bone wares, were unearthed from the burial layer. There are many rare and eye-catching objects among these artefacts, such as a bronze kneeling figure bearing a *zun*-vessel on its head, a bronze altar, a giant bronze mask, and a jade *cong*-tube with sacred tree patterns. The configuration of the artefacts allows us to determine that pits nos. 2, 3, and 8 would have been formed around the same time. This can lay a foundation for analysing the nature and significance of the pits in the sacrificial area. As an important part of the newly discovered sacrificial area at Sanxingdui, pit no. 3 provides invaluable materials for deepening the study of the ancient Shu civilisation and further explaining the formation of the pluralistic unity of Chinese civilisation.

演講者 Speaker



黎海超 LI Haichao

四川大學考古文博學院教授
Professor,
School of Archaeology and Museology,
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黎海超現為四川大學考古文博學院教授、四川大學國家級考古學實驗教學中心文物分析實驗室主任、國家社科基金重大招標項目首席專家、三星堆遺址五、六及七號祭祀坑發掘負責人。於北京大學獲博士學位，牛津大學聯合培養博士，哈佛大學訪問學者。研究方向主要為商周考古、科技考古。他近年來主要借助多學科手段開展三星堆文化的相關研究。在重要學術期刊發表論文三十餘篇，出版專著兩部，主持國家社科基金重大招標項目等。

Li Haichao is a professor at the School of Archaeology and Museology of Sichuan University and Director of the Relics Analysis Laboratory of the university's National Archaeological Experimental Teaching Centre. He is a principal expert and project leader for several major projects under The National Social Science Fund of China, as well as person-in-charge of the excavation of sacrificial pits nos. 5, 6, and 7 at the Sanxingdui site. He obtained his PhD from Peking University in a joint PhD programme with the University of Oxford, and is also a visiting scholar at Harvard University. His research focuses on the archaeology of the Shang and Zhou dynasties and scientific archaeology. In recent years, he has adopted a multidisciplinary approach to his research on the Sanxingdui culture. He has published over thirty papers in major academic journals and authored two monographs.

三星堆遺址祭祀區新發現：五、六及七號坑 New Archaeological Finds in the Sacrificial Area at Sanxingdui: Pits Nos. 5, 6, and 7

自2020年至今，三星堆遺址五、六及七號坑已出土青銅、金、玉、象牙等各類材質的文物數千件。目前七號坑已經完成現場發掘，五、六號坑則完成整體切割，正在開展實驗室考古清理。三坑各具特點，五、六號坑年代略晚，更具祭祀特徵。其中五號坑是尺寸最小的祭祀坑，遺物極其細碎，以金器、象牙器、珠飾等為代表。六號坑埋藏形態極為特殊，西側埋藏一件完全炭化的木箱，東側僅為填土。七號坑器物似經有意揀選，以殘件和小件器物為主，大型器物以龜背形網格狀器為代表，造型獨特，前所未見。三坑的考古發現為理解三星堆祭祀坑性質、年代等關鍵問題提供了重要資料。

Since 2020, thousands of bronze, gold, and jade artefacts and elephant tusks have been unearthed from pits nos. 5, 6, and 7 at the Sanxingdui site. Thus far, the excavation of pit no. 7 has been completed and relics from the other two have been taken out and moved into the laboratory for further work. Pits nos. 5 and 6 were discovered to be later in date than no. 7 and show more features connected with sacrifice. Pit no. 5, the smallest, contained extremely fragmentised artefacts such as gold, ivory, and beads. Pit no. 6 is even more unusual with a completely carbonised wood box buried in the west and only soil in the east. The artefacts in pit no. 7, most of which are small artefacts and fragments, appear to have been selected deliberately, and the largest find is an unprecedented turtle-shell-shaped bronze grid enclosing a jade plaque. The new discoveries in these three pits provide us with important clues as to the date and nature of the sacrificial pits at Sanxingdui.

演講者 Speaker



趙昊 ZHAO Hao

北京大學考古文博學院副教授
Associate Professor,
School of Archaeology and Museology,
Peking University

趙昊現為北京大學考古文博學院副教授。獲斯坦福大學考古學博士學位。主要研究領域為商周考古、手工業考古。他曾先後參與陝西周原雲塘西周制骨作坊遺址、河南滎陽官莊東周鑄銅遺址、甘肅禮縣大堡子山早期秦文化遺址等重要考古遺址的田野發掘、整理和研究工作。2021年2月至今，帶領北京大學考古隊參與四川廣漢三星堆遺址發掘工作，主要負責其中八號祭祀坑的田野發掘與研究工作。

Zhao Hao is an associate professor at the School of Archaeology and Museology of Peking University. He obtained his PhD in archaeology from University of Stanford. His research focuses on the archaeology of the Shang and Zhou periods and of handicrafts. He has participated in excavation, editorial, and research at significant archaeological sites, including the Western Zhou bone craft workshops at Yuntang village, Zhouyuan, Shaanxi province, the Eastern Zhou copper casting site at Guanzhuang village, Xingyang, Henan province, and the early Qin site at Dabaozi Mountain, Li county, Gansu province. Since February 2021, he has been leading an archaeological team from Peking University on excavations at the Sanxingdui site, overseeing the field excavation of and research on sacrificial pit no. 8.

三星堆遺址祭祀區新發現：八號坑 New Archaeological Finds in the Sacrificial Area at Sanxingdui: Pit No. 8

2020至2022年，北京大學考古文博學院與四川省文物考古研究院聯合完成了廣漢三星堆遺址祭祀區八號坑的發掘工作。八號坑內的堆積總體可以分為填土層、灰燼層、間隔層、象牙層和器物埋藏層共五層。它們是由儀式活動中的不同階段的人類活動導致的，這些活動看似混亂但也具有明顯的儀式性和組織性。在八號坑內出土了超過8,000件各類文物，涵蓋金、銅、玉、石、陶等多種類型。發掘過程中，通過對坑內堆積形成過程的埋藏學分析，對更全面認識三星堆祭祀活動中的人類行為過程有了新的認識。其中發現的倒立撐壘頂尊神像、多級青銅神壇、裙裝立人像、豬鼻龍形管狀器等一批前所未見的新器物。

Between 2020 and 2022, the School of Archaeology and Museology of Peking University and the Sichuan Provincial Institute of Cultural Relics and Archaeology jointly completed the excavation of pit no. 8 in the sacrificial area of the Sanxingdui site. The deposits in the pit can generally be divided into five layers: the fill, ash, interval, ivory, and artefact layers. They represent different phases of human activity within the ritual activities that initially appear chaotic but are in fact clearly ritualistic and organised. Through analysis of the formation of the piles in the pits, the excavation has led to a new understanding of human behaviour during ritual activities at Sanxingdui. More importantly, over 8,000 artefacts of various types, including gold, bronze, jade, stone, and pottery, have been recovered from pit no. 8. These artefacts include several new and previously unseen masterpieces, such as a deity doing a handstand and balancing a *ding*-vessel on its head, a multi-stage bronze altar, a skirted standing figure, and a pig-nosed dragon-shaped tubular object.

演講者 Speaker



許傑 Jay XU

舊金山亞洲藝術博物館館長
Director,
Asian Art Museum of San Francisco

許傑現為舊金山亞洲藝術博物館館長、美國人文與科學院院士、普林斯頓大學中國藝術考古博士，歷任芝加哥藝術博物館亞洲藝術部和地中海地區古代藝術部聯席主席（2003—2008）和西雅圖藝術博物館中國藝術部主任（1996—2003）等。他的學術研究以先秦考古和商周青銅器為主，尤其側重三星堆文明。研究、撰述、教學領域並包括中國書畫、陶瓷、中國藝術收藏史、當代藝術、中國博物館發展史和21世紀博物館運作和博物館學。

Jay Xu is Director of the Asian Art Museum of San Francisco, a fellow of the American Academy of Arts and Sciences, and the holder of a doctoral degree in Chinese art and archaeology obtained from Princeton University. He previously chaired the Departments of Asian and Ancient Art at the Art Institute of Chicago (2003–2008) and headed the Department of Chinese Art at the Seattle Art Museum (1996–2003), among others. His academic research focuses on pre-Qin archaeology and bronze artefacts in the Shang and Zhou dynasties, especially the Sanxingdui civilisation. His areas of scholarship, authorship, and teaching include Chinese paintings, ceramics, the history of art collection in China, contemporary art, the history of museums in China, museum operations in the 21st century, and museology.

定義三星堆青銅鑄造技術的特徵

Defining Features of Bronze Fabrication at Sanxingdui

三星堆文明最為獨特的面貌，無疑體現在前所未見、匪夷所思的青銅立體造像。本次講座旨在討論用以鑄造這些神奇作品的工藝技術，具體物件包括從造型相對簡單的人頭像、人面具，到體量巨大、形象複雜的大型雕塑等一系列造像，以及2019年以來新發掘的若干標本。通過詳細的描述和對比，揭示鑄造的實際過程和具體手段，進而歸納為定義三星堆青銅製造技術的兩大主要特徵：一以貫之的簡單鑄型偏好和製作同類器物時靈活多變的方法應用。講座最後將指出這些特徵背後的原因，以期達到知其所以然的效果。

This presentation discusses the bronze casting techniques at Sanxingdui responsible for the unprecedented, fantastic three-dimensional bronze images that characterise the Sanxingdui civilisation. Several images ranging from relatively simple human-like heads to monumental sculptures, including examples from the latest excavations since 2019, will be described and compared in detail to gain an understanding of how they were fabricated, and the approaches manifested in their fabrication. This exercise leads to the recognition of two defining features of the Sanxingdui foundry practice: the “simple-mould mentality” and the flexibility in making similar objects using different techniques. An explanation of the reasons for those two features will also be offered.

演講者 Speaker



朱亞蓉 ZHU Yarong

四川廣漢三星堆博物館副研究員、副館長
Associate Research Fellow and Deputy Director,
Sanxingdui Museum

朱亞蓉現為三星堆博物館副館長、副研究員。主要研究方向為文物研究及陳列展覽策劃。曾主持三星堆博物館基本陳列提升改造、三星堆博物館文物保護與修復館、三星堆博物館新館基本陳列及多個重要臨時展覽項目。她負責編輯《三星堆研究》叢書，合作出版《三星堆：古蜀王國的神秘面具》、《走進三星堆》、《三星堆青銅容器研究》等專著，發表多篇學術研究文章。

Zhu Yarong is Deputy Director and an associate research fellow of the Sanxingdui Museum. Her research focuses on relics studies and exhibition planning. She has led the enhancement and revamp of the Sanxingdui Museum's permanent displays, the establishment of the museum's Cultural Relics Protection and Restoration Hall, the curatorial of the permanent displays in the museum's new exhibition hall, and the planning of major temporary exhibitions. She has edited the *Sanxingdui Research* series, jointly published books including *The Sanxingdui Site: The Mystical Mask on the Ancient Shu Kingdom*, *Sanxingdui Culture*, and *Study on Sanxingdui Bronze Vessels*, and authored many more academic papers.

關於三星堆祭祀坑出土幾件銅尊改制現象的初探

A Preliminary Study of the Reworking Phenomenon of a Few Bronze *Zun*-vessels Excavated from the Sanxingdui Sacrificial Pits

銅尊是商文化中的典型器物，在中原和長江中游地區廣泛出土。三星堆祭祀坑出土了數量眾多、造型各異的青銅尊。本文通過頂尊跪坐人像（K3:26）、銅尊（K3:18）、神獸器蓋及殘尊（K8⑨:777）等三件器物上存在的改制現象的分析，結合對三星堆不同類型銅器泥芯的化學特徵比對成果，溯源三星堆青銅容器的鑄造地、探討三星堆青銅器的造型思想、鑄造工藝特點。三星堆青銅尊上的改制現象及三星堆銅尊有別於其他區域文明的獨特的造型及用途，反映了三星堆青銅文化相容並包、融匯創新的特徵。

Bronze *zun* (ritual wine vessels) are typical artefacts from the Shang culture, often excavated in central China and along the middle course of the Yangtze River. Numerous bronze *zun*-vessels of different forms have been excavated from the Sanxingdui sacrificial pits. This paper analyses the phenomenon of reworking, exemplified in three artefacts – a statue of kneeling man supporting a *zun* on his head (K3:26), a bronze *zun* (K3:18), and a lid with sacred beast with remains of a *zun* (K8⑨:777) – comparing them with the chemical characteristics of clay moulds of different types of bronze artefacts discovered in Sanxingdui, to trace the places of casting for Sanxingdui bronzeware and to explore the thoughts underlying the forms and crafts applied in casting. The reworking phenomenon on Sanxingdui bronze *zun*-vessels and their unique forms and usages, distinct from other regional civilisations, reflects the embracing and innovative nature of Sanxingdui bronze culture.

演講者 Speaker



蘇榮譽 SU Rongyu

中國科學院科技史研究所退休教授
Professor Emeritus,
Institute of History of Science and Technology,
Chinese Academy of Sciences

蘇榮譽為西安交通大學機械系學士、中國科學技術大學自然科學史理學碩士。他長期工作於中國科學院自然科學史研究所，研究古代金屬技術與藝術，任教授、博士生導師。他創立中國科學院文物科技與傳統工藝研究中心，並出任首任主任。他於柏林工業大學、圖賓根大學、華盛頓史密森學會弗利爾－賽克勒藝術館、法蘭克福大學、大英博物館等開展研究和講學。他先後出版專著、發表文章百餘種。

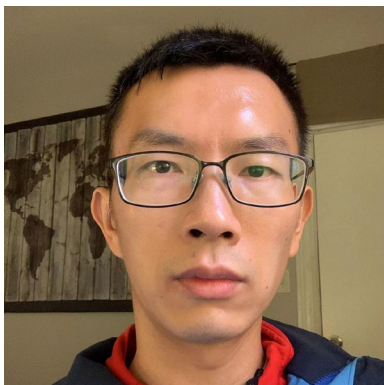
Su Rongyu received his Bachelor of Engineering from Xi'an Jiaotong University and his master's degree in the history of natural sciences from the University of Science and Technology of China. He served for many years at the Institute for the History of Natural Sciences of the Chinese Academy of Sciences as a professor and doctoral advisor, focusing on ancient metal technology and art. He founded the Research Centre for Cultural Relics Technology and Traditional Crafts and served as its inaugural director. He has conducted research and lectured at the Technical University of Berlin, the University of Tübingen, the Freer Gallery of Art and Arthur M. Sackler Gallery under the Smithsonian Institution, Goethe University Frankfurt, and the British Museum, among others. He has published over one hundred monographs and journal articles.

表裏統一：鑄接工藝與三星堆青銅容器的南方屬性及相關問題 Casting Techniques and the Southern Connection and Related Issues of Sanxingdui Bronzes

二里頭文化是中原青銅時代的開始階段，肇建了獨特的青銅技術和藝術體系，即以泥範塊範法鑄造造型極為別致的青銅容器，並以鑄接的方式實現器物大型化和複雜化。在早商的二里崗階段，文化向長江流域擴展，出現了一些具地方技術風格的青銅器，鑄鉚式後鑄即出現在黃陂盤龍城，隨即發展成為一種頗為獨特的工藝，鑄造了一大批南方風格青銅器。三星堆青銅尊和壘的肩部犧首附飾，幾乎都是以鑄鉚式後鑄成形的，但需要認真考察器物內壁才能確認。本文分析這些工藝因素並與湖南、湖北、安徽、陝西諸地出土器物相對照，確認三星堆青銅容器的南方風格屬性。同時，也與鄭州商城和殷墟青銅器相比較，指出南方風格青銅器的年代應早於殷墟、鑄造於南方鑄銅工廠。殷墟的鑄鉚式鑄接器物是南方工廠鑄工被遷入殷墟的產品，南方工藝風格在殷墟的衰退反映了當地鑄工與外來鑄工的衝突，是技術選擇的結果。

The Erlitou culture is the earliest Bronze Age culture in the Central Plains. It established a unique system of bronze metallurgy and art, namely, the clay piece-mould casting technology to produce bronze vessels and soldering for the construction of large and complex objects. During the Erligang phase of the early Shang period, the Erlitou culture spread to the Yangtze River valley, leading to the emergence of bronze wares with local technical styles including the “cast-rivet casting on” method developed in Panlongcheng, Huangpi in Hubei province. This special technique gave birth to a large group of southern-style bronzes. The animal-head decorations on the shoulders of the Sanxingdui bronze *zun*- and *lei*-vessels were also cast on using the cast-rivet technique, although close observation of the interior of the objects is still necessary to confirm this. This paper analyses craft practices, compares objects from Hunan, Hubei, Anhui, and Shaanxi provinces, and argues for the southern-style nature of the Sanxingdui bronze vessels. In addition, through comparisons with finds at the Shang city at Zhengzhou and the Yinxu site, it proposes that southern-style bronzes preceded Yinxu products and were probably cast in workshops in southern regions. The similarity in techniques used to cast Yinxu bronzes may have been the result of casters immigrating from the south; meanwhile, the decline of the southern style reflects the conflict in between local and external casters, in other words, the result of technical selection.

演講者 Speaker



李建深 LI Kin Sum

香港浸會大學歷史系副教授
Associate Professor,
Department of History,
Hong Kong Baptist University

李建深現為香港浸會大學歷史系副教授。2015年在美國普林斯頓大學取得藝術與考古學博士學位。過往於香港中文大學取得翻譯系學士、東亞研究系哲學碩士學位。他專門研究古代世界大規模生產的歷史，並嘗試結合現代科技研究古代的工業藝術品。現時埋首於古代中國藝術史的書和文章的寫作，即將出版關於戰國時期銅鏡生產的專書，過往文章散見於 *T'oung Pao*、*Archives of Asian Art*、*Early China*、*Journal of Chinese History*、*East Asian Science, Technology, and Medicine* 等期刊。

Li Kin Sum received his PhD in art and archaeology from Princeton University in 2015. He is currently an associate professor in the Department of History at Hong Kong Baptist University. He obtained his BA in translation and MPhil in East Asian studies from The Chinese University of Hong Kong. His research focuses on the history of mass production in the ancient world, and he attempts to combine modern scientific technology with ancient industrial art. He is working on articles and a book manuscript on the arts of ancient China and will publish a monograph on bronze mirrors in the Warring States period. His articles have appeared in journals such as *T'oung Pao*, *Archives of Asian Art*, *Early China*, *Journal of Chinese History*, and *East Asian Science, Technology, and Medicine*.

演講內容摘要 Presentation Abstract

三隻青銅獸、三維技術、三星堆

Three Bronze Animals, 3D Technology, and Sanxingdui

此報告展示了三維掃描技術在青銅器研究中的潛力。首先，我們會探索在中國青銅工業歷史中，對於具有複雜器型的複製青銅器，如何用三維技術進行研究。我們會利用美國弗利爾美術館（今史密森尼學國立亞洲藝術博物館）、舊金山亞洲藝術博物館和大英博物館的三隻青銅獸，展示其中的複製技術。它們能證明一模一樣的青銅器是如何生產出來，也證明它們如何共用同一個修飾完備的模。總結來說，我們可利用三維掃描、X射線成像、CT掃描，乃至金屬成分分析技術去探討青銅工業中的分範鑄造、垫片、泥核、範塊組合的技術。或者，在不久的將來，待三星堆青銅器的運用類似進路的相關研究公佈後，我們還可得到更多啟示。

This presentation examines the research potential of applying 3D scanning technology to the study of bronzes. It first demonstrates how we can use this technology in the study of the earliest examples of replicating bronze objects of complex structure in the history of the bronze industry in China. It uses three bronze animals from the Freer Gallery (National Museum of Asian Art, Smithsonian Institution), Asian Art Museum of San Francisco, and British Museum as examples to illustrate these complex techniques. It goes on to provide evidence to define identical bronzes and prove that the three quadrupeds shared the same decorative model. In summary, the application of section-mould casting, spacers, clay cores, and mould section assemblages in producing bronzes can be examined using 3D scanning, x-ray photography, computerised tomography (CT) scanning, and metallographic and composition analysis. Perhaps we may gain more insights when similar studies on the Sanxingdui bronzes are revealed to the public.

演講者 Speaker



傅羅文 Rowan FLAD

哈佛大學人類學系John E. Hudson 考古學教授
John E. Hudson Professor of Archaeology,
Department of Anthropology,
Harvard University

傅羅文現為哈佛大學人類學系John E. Hudson考古學教授，主要研究方向為中國新石器時代晚期及青銅時代複雜社會的出現與發展。他曾於四川盆地東部一個產鹽遺址進行發掘工作，近期完成在成都地區的區域性調查，主要探究史前的聚落模式和社會演化。最新研究集中新石器至青銅時代的甘肅南部地區。目前的研究及書寫項目聚焦社會複雜性的不同面向，包括專門化生產與科技、價值觀的人類學研究、墓葬分析、考古景觀、地域互動、文化傳播，以及動植物馴化等。

Rowan Flad is John E. Hudson Professor of Archaeology at Harvard University. His research focuses on the emergence and development of complex society during the late Neolithic period and the Bronze Age in China. He has conducted excavations at a salt production site in the eastern Sichuan Basin and has recently completed a regional survey in the Chengdu region focusing on prehistoric settlement patterns and social evolution. His new research is focused on the late Neolithic and early Bronze Age in southern Gansu province. His current research and writing projects focus on several aspects of social complexity, including specialised production and technology, the anthropology of value, mortuary analysis, archaeological landscapes, interregional interaction, cultural transmission, and animal and plant domestication.

2005–2011年成都平原考古調查成果整合與解讀 Integration and Interpretation of the Results of the Chengdu Plain Archaeological Survey, 2005–2011

成都平原考古調查（2005–2011）是一個中國與北美學院的合作項目，旨在探究包括郫縣古城鎮與溫江魚鳧村在內史前寶墩文化的古城遺址由新石器時代到漢代的地貌變遷。是次演講將討論這項調查所覆蓋區域在三個不同時期的發現：新石器時代、青銅器時代和漢代。從成都平原考古調查收集的資料可以辨識過往未知的寶墩遺址類型，有助辨識寶墩中央地方古城的向心引力，這種力量到了青銅器時代開始漸漸消失。這些地方的人類活動範圍呈現出不對稱的密度，反映了這一帶在史前與早期歷史時代的聚落已經漸漸穩定下來。調查資料顯示，地貌到了漢代出現變化，特別是因為人口增長，出現了城鎮、墓穴、腹地；但地貌重塑繼續採用了林盤聚落模式的萌芽版本，這個聚落模式一直延續至二十世紀。我們的證據顯示，林盤聚落模式可追溯至青銅器時代，由更早寶墩時期聚居中央地方的聚落模式發展而成。

The Chengdu Plain Archaeological Survey (2005–2011) (CPAS) was a collaborative project involving institutions from China and North America aimed at understanding the dynamics of landscape change from the Neolithic to the Han period in the region around the prehistoric Baodun Culture walled sites of Gucheng in Pi county and Yufu village in Wenjiang. This presentation discusses the pattern of finds across the survey zone for three chronological periods: the Neolithic, the Bronze Age and the Han. The data collected by CPAS have identified previously unknown Baodun site types and enabled us to identify a centripetal attraction of walled Baodun central places, which then diminishes starting in the Bronze Age. We propose that places that have groups of activity areas with asymmetric density measures reflect settlement areas that become increasingly stable as the landscape was infilled during prehistoric and early historical eras. In the Han period the CPAS data suggest that there was a reshaping of the landscape, with towns, tombs, and hinterlands, particularly as populations grew, but this reshaping continued to employ a nascent version of the Linpan settlement pattern that persisted into the 20th century. Our evidence suggests that this Linpan system has its roots in the Bronze Age and developed out of the earlier central place-focused settlement patterns of the Baodun period.

演講者 Speaker



施勁松 SHI Jinsong

中國社會科學院考古研究所研究員
Research Fellow,
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施勁松曾先後於四川大學和中國社會科學院研究生院研讀考古學，1996年獲歷史學博士學位，同年任職於中國社會科學院考古研究所，現為二級研究員。他的研究方向為商周考古學，主要研究領域為長江流域青銅時代的文化與社會。2023年出版新作《區域文明與溝通的意義：成都平原青銅時代的考古學建構》（文物出版社）。

Shi Jinsong studied archaeology at Sichuan University and the Graduate School of the Chinese Academy of Social Sciences (CASS). He began working at the Institute of Archaeology at CASS in 1996 after receiving his PhD. He is currently a research professor. His research interests include Shang and Zhou archaeology, mainly focusing on the culture and society of the Bronze Age in the Yangtze River region. In 2023 he published a new monograph, *Regional Civilization and Significance of Communication: An Archaeological Construction of the Bronze Age in the Chengdu Plain* (Cultural Relics Press).

三星堆區域文明的興起：一個構想

Thoughts on the Rise of the Regional Civilisation of Sanxingdui

成都平原的三星堆文化是中國青銅時代長江上游的一類區域文明。該文化最重要的遺存是三星堆遺址的八個、相當於殷墟晚期的祭祀器物坑。坑內埋藏物有象徵性器物、表現祭祀場景的器物和祭祀用器三大類，表達了太陽崇拜和王權兩個主題。三星堆這一區域中心彙聚了成都平原以外各方的貴重物、資源、技術、觀念、人員。三星堆區域文明何以興起並顯現出獨特樣貌、成都平原何以彙聚各方文化因素？原因除成都平原位於文化交流通道的十字路口外，更重要的是三星堆一帶可能存在一個觀象授時、溝通自然、獲取神秘力量的知識中心和神性中心。

The Sanxingdui culture in the Chengdu Plain is a regional civilisation in the upper reaches of the Yangtze River that thrived during China's Bronze Age. The most important remains of the Sanxingdui culture are eight pits of sacrificial relics that were used during what is equivalent to the late Yin Ruins period. Three types of relics are buried in the pits: symbolic artefacts, artefacts that represent sacrificial rituals, and artefacts used in such rituals. They exemplify the two themes of sun worship and the royal sovereign. Sanxingdui, as a regional centre, gathered valuables, resources, technologies, ideas, and people from different places beyond the Chengdu Plain. What contributed to the rise of the Sanxingdui regional civilisation and the region's unique landscape? How and why was the Chengdu Plain able to gather elements from so many different cultures? Apart from its advantageous position at the junction of cultural exchange routes, a more important reason was the possible existence of a knowledge and divinity centre in the Sanxingdui area for astronomical observation, communication with nature, and the acquisition of mysterious powers.

演講者 Speaker



王方 WANG Fang

四川成都金沙遺址博物館研究館員、副館長
Research Fellow and Deputy Director,
Jinsha Site Museum

王方現為成都金沙遺址博物館副館長、研究館員，四川省有突出貢獻優秀專家、四川省文物局專家庫成員。她主要從事考古發掘、博物館管理、展覽策劃及文物研究等工作。全程參與金沙遺址的發掘、研究、建設和陳列展示等工作；擔任主創和總策劃設計的一百多項國內外精品文物展覽。她參與完成數十項國家級、省部級科研課題，主持編撰出版五十多部專業書籍，專業刊物發表論文八十多篇。

Wang Fang is Deputy Director and a research fellow of the Jinsha Site Museum in Chengdu, an Excellent Specialist with Outstanding Contributions of Sichuan Province, and an Expert Member of the Sichuan Provincial Institute of Cultural Relics and Archaeology. She works on archaeological excavation, museum management, exhibition curation, and relics research. She participated throughout the excavation and research of the Jinsha site and the establishment and display of the site's museum and has led more than one hundred exhibitions of cultural relics in China and overseas. She has been involved in several dozen national and provincial level research projects, headed the editorial of over fifty books, and published over eighty articles in professional journals.

以玉見銅——三星堆青銅文化側面觀 Understanding Bronze through Jade: New Perspectives on Sanxingdui Bronzes

在廣漢三星堆遺址中出土了數量眾多、造型奇絕的青銅器。其中特別以一部分青銅像設類器物，如青銅人頭像、青銅神面像等最富特色與個性。這些青銅雕像與金器、玉器及象牙等其他珍貴物品共同構架出了古蜀文化的華美篇章，彰顯出青銅器在古蜀王國祭祀活動的重要地位，也為研究中國青銅文明的發展提供了極其重要的實物資料。但這些像設類青銅器造型源於何處？真是從天而降的「外星人」嗎？還是另有其發展演變的淵源？本講題將圍繞三星堆青銅雕像類器物，展開與長江中游以石家河為代表的玉文化的對比，進而論述長江流域早期文化之間的文化淵源及其發展。

Vast quantities of fantastic bronze objects have been unearthed at the Sanxingdui site in Guanghan, Sichuan province. The most characteristic of these are figural bronzes including human heads and masks. These cast bronzes, together with other precious discoveries such as goldwork, jades, and elephant tusks, constitute a remarkable manifestation of the ancient Shu culture. They speak to the importance of bronze objects in the sacrifices of the ancient Shu kingdom and provide essential research material and evidence for the development of the Bronze Age culture in China. What were the origins of these bronze figures? Were they indeed aliens? Are there any other potential traces to aid our investigations? This presentation focuses on the Sanxingdui bronze figures, makes a comparative study of the jade culture of the mid-Yangtze River valley represented by the Shijiahe culture, and further discusses the origins and development of early cultures along the Yangtze River.

演講者 Speaker



梅建軍 Jianjun MEI

劍橋李約瑟研究所所長
Director,
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梅建軍現為英國劍橋李約瑟研究所所長、劍橋大學麥克唐納考古研究所研究員、邱吉爾學院院士、北京科技大學客座教授、德國考古研究院通訊院士、國際冶金史大會執委會主席、*Advances in Archaeomaterials* 主編，以及《考古》、《考古學報》、《西域研究》、《自然科學史研究》、*Journal of Archaeological Science*、*Archaeometry* 等期刊編委。他主要從事中國冶金技術史、中外科技交流史的研究，出版專著兩部，發表學術論文百餘篇。

Jianjun Mei is Director of the Needham Research Institute in Cambridge, UK. He holds concurrent positions as Director of Research at the McDonald Institute for Archaeological Research, University of Cambridge; Fellow of Churchill College, University of Cambridge; Visiting Professor of the University of Science and Technology Beijing; Corresponding Member of the German Archaeological Institute; Chairman of the Executive Committee of the International Conference on the History of Metallurgy; and Editor-in-Chief of the editorial board for *Advances in Archaeomaterials*. He has also served as a member of the editorial board for journals such as *Archaeology*, *Acta Archaeologica Sinica*, *The Western Regions Studies*, *Studies in the History of Natural Sciences*, *Journal of Archaeological Science*, and *Archaeometry*. His primary research interests are the history of metallurgical technology in China and the history of scientific and technological exchanges between China and other countries. He has published two monographs and more than one hundred academic papers.

三星堆銅器與商代的冶金網絡

Sanxingdui Bronzes and Metallurgical Networks in the Shang Dynasty

自1986年發現以來，學者們已對三星堆青銅器展開了很多深入的研究工作，包括科學分析研究，揭示出其在製作工藝和材料方面的一系列特徵。隨著這些特徵的揭示，三星堆青銅器與周鄰地區青銅文化的關係成為困擾學術界的一個關鍵問題。已有不少學者對此發表過自己的見解，有人認為其與中原地區或長江中下游地區的冶金傳統關係密切，也有人更強調其本土或當地的文化特徵。本文將首先綜述前人對三星堆青銅器所做的科學分析研究，尤其是近年來所取得的最新研究成果，而後探討商代青銅冶金的區域性特徵和不同區域間的技術聯繫與文化互動，最後考察三星堆銅器在商代冶金網絡中所處的位置，指出基於本土宗教或觀念體系的區域性冶金技術創新是導致三星堆青銅器出現和繁榮的動因。

Since the discovery of the Sanxingdui bronzes in 1986, scholars have carried out extensive and in-depth research work on them, including scientific analyses, revealing a series of characteristics of manufacturing technology and materials. With the revelation of these characteristics, the relationship between the Sanxingdui bronzes and bronze cultures in the surrounding areas has become a key issue that perplexes academic circles. Many scholars have expressed their views on this. Some believe that the Sanxingdui bronzes are closely related to metallurgical traditions in the Central Plain or the middle and lower reaches of the Yangtze River, while others emphasise their local or indigenous cultural characteristics. This paper will first review previous scientific research work on the Sanxingdui bronzes, especially the results obtained in recent years, and will then discuss the regional characteristics of bronze metallurgy in the Shang dynasty and the technical connections and cultural interactions between different regions. Finally, it will examine the position of the Sanxingdui bronzes in the metallurgical networks of the Shang dynasty and point out that the regional metallurgical innovations based on the local religious or ideological systems could have acted as a driving force behind the emergence and prosperity of the Sanxingdui bronzes.

演講者 Speaker



焦天龍 Tianlong JIAO

香港故宮文化博物館首席研究員
Head Curator,
Hong Kong Palace Museum

焦天龍現為香港故宮文化博物館首席研究員。北京大學學士、美國哈佛大學博士。曾任美國丹佛美術博物館亞洲部主任、美國舊金山亞洲美術博物館中國部主任等職，並曾兼任美國夏威夷大學兼職教授、廈門大學講座教授等。研究專長為中國考古與藝術史。曾策劃多項大型展覽、在各地主持考古發掘研究，並且多次在大型國際學術會議上主持論壇。發表專著和合著七本、論文九十餘篇。曾獲美國哈佛大學優秀教學成果獎。

Tianlong Jiao is Head Curator at Hong Kong Palace Museum. He received his Bachelor of Arts degree from Peking University and his PhD from Harvard University. He previously served as Head of Asian Art at the Denver Art Museum and Head of Chinese Art at the Asian Art Museum of San Francisco, as well as Adjunct Professor at the University of Hawai'i and Chair Professor at Xiamen University, among others. His research expertise lies in Chinese archaeology and art history. He has curated many large-scale exhibitions and has led archaeological excavations and research on various sites. He has chaired panels at major academic conferences, authored/co-authored seven monographs and published over ninety papers. He was the recipient of the excellent teaching achievement prize at Harvard University.

青銅化與三星堆文化的形成 “Bronzisation” and the Formation of Sanxingdui Culture

三星堆文化（公元前1800–900年）的形成和發展過程，是認識三星堆文明的關鍵問題之一。三星堆文化的年代範圍正是中國青銅時代的鼎盛時期，也是中原和長江流域社會和文化大變革時期。三星堆文化的出現和變遷，是與這個時代的大環境密切相連的。

「青銅化」的概念提供了一個動態的解釋模式，能夠從多個層面認識三星堆文化的形成過程和變遷。四川盆地的青銅化過程是不同於中原的。青銅器在傳入四川盆地以後，並沒有立刻引起巨大的技術震動。只有到了公元前1300至1200年左右，青銅器才大量地出現在三星堆文化之中。與中原不同的是，這些青銅器絕大多數都是和宗教祭祀有關的器物，而不是中原的禮器和武器。

The emergence and transformation of the Sanxingdui culture are closely connected to social and cultural changes in Bronze Age China. One of the key issues to understand about the Sanxingdui civilisation is the process of its formation. The timespan of the Sanxingdui culture (about 1800–900 BCE) is relatively contemporaneous with the heyday of the Bronze Age in central China, including both the middle and lower reaches of the Yellow River and Yangtze River regions, a period when societies underwent tremendous changes.

The concept of “bronzisation” provides a dynamic framework for understanding the formation and transformation process of Sanxingdui culture. The introduction of bronze metallurgy to the Sichuan Basin did not immediately revolutionise craft practices at Sanxingdui. It was only by around 1200 BCE that a large quantity of bronzes started to appear there. The bronzisation process in the Chengdu Plain had a very strong localised character and was different from that of the Central Plains and other regions in Bronze Age China.

演講者 Speakers



孫華 SUN Hua

北京大學考古文博學院教授及文化遺產保護研究中心主任
Professor, School of Archaeology and Museology, and
Director, Centre for Cultural Heritage Protection and Research, Peking University

孫華現為北京大學考古文博學院教授，北京大學文化遺產保護研究中心主任、《自然與文化遺產研究》雜誌主編。他主要從事中國青銅時代考古、西南地區考古和文化遺產保護的教學與研究，是中國西南地區考古協作的主要宣導者，重點研究四川盆地青銅文化和三星堆文化。早年代表性研究成果有《四川盆地的青銅時代》、《神秘的王國——對三星堆文明的初步理解和解釋》和《中華藝術通史·夏商周卷》（合著）等。

Sun Hua is a professor at the School of Archaeology and Museology and Director of the Centre for Cultural Heritage Protection and Research at Peking University. He also serves as Editor-in-chief of *Study on Natural and Cultural Heritage*. His research and teaching focus on the archaeology of Bronze Age China, the archaeology of China's southwest region, and the protection of cultural heritage. He is a major advocate of archaeological collaborations in China's southwest, specialising in bronze culture and Sanxingdui culture in the Sichuan Basin. Notable publications based on his research findings include: *The Bronze Age of the Sichuan Basin*, *Mystic Kingdom – A Preliminary Understanding and Interpretation of Sanxingdui Culture*, and *The General History of Chinese Art – Xia, Shang and Zhou Dynasties* (co-authored).

三星堆的人與神——基於三星堆神廟內部場景復原的推論 Humans and Deities at Sanxingdui: Interpretations Based on the Restoration Work on the Sanxingdui Temple

三星堆埋藏坑是由於某種突發事件背景下國家神廟像設和陳設器物毀壞後的埋藏，通過這些埋藏坑的埋藏現象和器物關係可以大致復原神廟的內部場景。基於三星堆神廟內部場景的復原推測，可知在三星堆人心目中，大神高居天上，地上的人們與天上的大神無法直接交往，只有通過專業的神職人員，並借助具有特殊力量的神獸，才能到達天地之間的某處神域，將自己貢獻給天上大神的禮物和願望轉交給大神派遣的小神，由它送達到天上的大神那裡。三星堆人的宗教思想很可能是將世界的本原看作是某種「氣」，這種氣分化出了天地日月人神萬物，因而人與神才能通過「氣」發生聯繫。三星堆埋藏坑這些祭祀器物與其說是三星堆人真實祭祀場景的反映，還不如說它們是三星堆人構想的天地人神關係的縮影。

The Sanxingdui burial pits comprise remains of statues and objects, originally displayed in the Sanxingdui national temple and destroyed after some unexpected events. Through the interment of and relationships between objects in these pits, it is possible to reconstruct the original scenes inside the Sanxingdui temple. Based on such reconstructions, we may infer the belief of the Sanxingdui people in a grand gods' dwelling place in the sky and the inability of human beings to communicate directly with them up in heaven. It was only through professional clergymen like shamans and mythical creatures with special powers that human beings could reach a sacred zone between heaven and earth. There, offerings and wishes would be handed to smaller gods sent by the grand gods, so that these gifts and wishes might reach the deities in heaven. In the religious thinking of the people of Sanxingdui, the origin of the cosmos may have been seen as some form of *qi* (energy or vapour), which gave birth to the sky and earth, the sun and moon, humans and gods, and everything else. Men and gods were thus connected through *qi*. Instead of depictions of actual sacrificial rituals, the sacrificial objects from the burial pits can be seen as epitomising the people's interpretation of the relationships between heaven and earth and between humans and gods.

演講者 Speaker



王仁湘 WANG Renxiang

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王仁湘現為中國社會科學院考古研究所研究員，中國社會科學院研究生院教授。他主編、主撰各類著作一百多種，主要學術著作有《史前中國的藝術浪潮》、《中國史前考古論集》、《半窗意象》、《凡世與神界》、《藏王陵》、《飲食與中國文化》、《往古的滋味》、《至味中國》、《束帶矜莊——古代帶鉤與帶扣》、《大仰韶》、《南藩海昏侯》和《三星堆：青銅鑄成的神話》等。

Wang Renxiang is a research fellow at the Institute of Archaeology and a professor at the Graduate School of the Chinese Academy of Social Sciences. He is the chief editor or author of over one hundred publications. Among his major titles are *Tides of Art in Prehistoric China*, *An Anthology of the Archaeology of Prehistoric China*, *Half-Window Imagery*, *Secular World and Spiritual Realm*, *Tombs of the Tibetan Emperors*, *Cuisine and Chinese Culture*, *Ancient Taste*, *Food Culture of China*, *Ancient Belt Hooks and Buckles*, *The Great Yangshao Culture*, *The Marquis of Haihun in the South*, and *Sanxingdui: Bronze-forged Myths*.

三星堆神壇上的獠牙神像

On the Deity with Tusks on Sanxingdui Altars

三星堆的兩座青銅神壇上都出現了獠牙神像，這類神像是「日鳥」的人化藝術形象，所以神壇可以確認為太陽神壇。獠牙神像藝術具有久遠的傳統，根基在距今八千年前的史前文化中。

The two bronze altars unearthed at Sanxingdui both depict gods with sharp teeth. They are believed to represent anthropomorphised sun crows, and therefore the altars can be identified as sun altars. The portrayal of gods with sharp teeth or tusks in art has a long tradition rooted in prehistoric cultures from around 8,000 years ago.

演講者 Speaker



王聖雨 WANG Shengyu

香港故宮文化博物館助理研究員
Assistant Curator,
Hong Kong Palace Museum

王聖雨為英國牛津大學考古學哲學博士，曾多次參與上海博物館和牛津阿什莫林博物館展覽及出版項目，於中國和英國從事田野考古發掘。她參與了香港故宮文化博物館開幕特別展「馳騁天下——馬文化藝術」的策展研究，並擔任多個特別展覽之策展人，其中包括2023年9月開幕的三星堆特展。

Shengyu Wang received her DPhil in archaeology from the University of Oxford. Prior to her current appointment at the Hong Kong Palace Museum, she was involved in exhibitions and catalogue projects at Shanghai Museum and the Ashmolean Museum, Oxford. She has participated in archaeological excavations in China and the UK. At the Hong Kong Palace Museum, she made curatorial contributions to the opening exhibition “Grand Gallop: Art and Culture of the Horse”. She is also co-curating several special exhibitions, including in September 2023 special exhibition on Sanxingdui.

三星堆與金沙的金器：光明、空間與裝飾系統

Goldwork from Sanxingdui and Jinsha: Light, Space, and an Ornamental System

與中國同時代其他遺址出土的金器相比，三星堆和金沙的黃金器物數量多，呈現出很強的地域特徵，且多以箔、片等形式出現。本講座圍繞這些黃金製品展開討論，提出它們並非只是輔助其他器物、在功能上可有可無的表面裝飾，更可被視為由不同圖案、器物構件所組成的裝飾系統的一部分——這個系統應該作為一個整體來研究，其中包括多種材質和工藝，它們共同反映的是當時的視覺和意識形態框架。在三星堆和金沙的裝飾系統中，這些金「飾」其實都構成一種空間性的界域，它們的呈色、形式以及與其他器物的組合都具有不可忽視的社會意義和精神意涵，是社會地位、世俗權力和時人信仰、觀念的表達。

Sanxingdui and Jinsha are two of the largest known deposits of Bronze Age Chinese goldwork. Compared with other contemporaneous sites in China, gold seems to have been of particular importance and unique use at the two sites, and almost all the gold finds are in the form of foil or sheets. This presentation proposes that, rather than merely serving as surface enhancement, goldwork from Sanxingdui and Jinsha was an integral part of an “ornamental system” composed of motifs, multiple components, and individual objects that provide a wealth of social and conceptual information through their materials and techniques, as well as their form, placement, and visual effect. Critical issues of the colour complexities of gold, the physical forms and spatiality of the goldwork, and the metaphorical associations are considered. It is argued that easily neglected material features and a contextual examination of other objects including bronzes and jades help us to better understand why and how gold was used in ritual practices and the cultural expression of worldview in a site-specific context.

演講者 Speaker



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黃煒均為英國牛津大學考古學博士、北山堂學人，研究聚焦公元前一千年中國、西亞以及歐亞草原文化與藝術交流。他曾於香港中文大學文物館及藝術系工作，參與多項展覽及出版項目。現為香港故宮文化博物館副研究員，策劃多個開幕及特別展覽，包括「金彰華彩：香港故宮文化博物館與夢蝶軒藏古代金器」特別展覽等，目前正籌辦未來多個早期中國考古特別展覽。

Raphael Wong is a Bei Shan Tang Foundation Scholar with a DPhil in archaeology from the University of Oxford, focusing on China, West Asia, and the Eurasian Steppe of the first millennium BCE. He previously worked at the Art Museum and in the Department of Fine Arts of The Chinese University of Hong Kong, where he was involved in several exhibition and publication projects. He is the lead curator of a number of opening and special exhibitions at the Hong Kong Palace Museum, including “Radiance: Ancient Gold from the Hong Kong Palace Museum Collection and the Mengdiexuan Collection”, and several upcoming exhibitions on the archaeology of early China.

三星堆青銅器中的商代裝飾紋樣系統 The Shang Dynasty Ornamental System in Sanxingdui Bronzes

三星堆有着具特徵的物質文化，但學者也注意到，個別器物反映與商代的連繫，當中最直接的例子是具有南方風格的青銅禮器。然而，三星堆與商代的連繫似乎比目前認知為深，這觀點更為最新的考古發現所支持。本文將通過仔細分析三星堆及商代遺址所出土青銅器的裝飾紋樣系統，辨識融會於三星堆青銅器中的商代元素，強調審視三星堆與商代聯繫的重要性。

The material culture as seen at Sanxingdui has a distinct character. As some scholars have observed, some objects point to a direct connection with the Shang dynasty. Among these are bronze ritual vessels that have come from the south. Nevertheless, the connection between Sanxingdui and the Shang dynasty seems to be much stronger than generally thought. This argument is supported by the latest archaeological finds at Sanxingdui. By comparing the “ornamental system” of the bronzes at Sanxingdui and that of the Shang dynasty, this paper traces the Shang origins of some of Sanxingdui's bronze designs. It also stresses the importance of re-examining the relationship between the two cultures.

三星堆與青銅時代的中國
國際研討會

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