

PROGRESS AND PREDICAMENTS IN ARCHITECTURASINICA/ATTCAT

Chair:
CHEN Wei 陳薇 (Southeast University)

Executive Committee:
Aurelia CAMPBELL 金田 (Boston College)
Tracy MILLER 梅晨曦 (Vanderbilt University)
ZHUGE Jing 諸葛净 (Southeast University)
ZUO Lala 左拉拉 (NYU Shanghai)

www.architecturasinica.org



An Interactive Resource for the Study of China's Traditional Architecture

- 甲 Dynamic Site Archive
- 乙 Thesaurus of Architectural Terminology
- 丙 Bibliography
- 丁 Epigraphy



The *Architectura Sinica* project was made possible by these institutions and sponsors:





JIN SHRINES, FEILIANG 晉祠飛梁

URI <https://architecturasinica.org/place/000048e>

Contained in Place

- Jin Shrines

Architectural Features

- dāndǒu zhīti

Names

- Flying Bridge (English)
- 飛梁 (Traditional Chinese)
- 飞梁 (Simplified Chinese)
- Fēiliáng (Pinyin)
- Fei-liang (Wade-Giles)
- Spirit Bridge (English)
- 神橋 (Traditional Chinese)
- 神桥 (Simplified Chinese)
- Jinci Fēiliáng (Pinyin)
- 晉祠飛梁 (Traditional Chinese)
- Jinci Yúzhǎo Fēiliáng (Pinyin)
- 晉祠魚沼飛梁 (Traditional Chinese)

Building Information

The name "Flying Bridge" 飛梁 can be traced to the description of the site found in the entry on the Jin River 晉水 in Li Daoyuan's 酈道元. Shuijing zhu 水經注 (6th cen. CE) (Li 2007 rpt., 174). According to the early scholars of Chinese architecture Lin Huiyin (1904-1955) and Liang Sicheng (1901-1972), the present structure is consistent with the construction techniques of the Song dynasty, and should date to the same period as the Sage Mother Hall and Offering Hall. These buildings were later dated to 1038-1087 and 1168, respectively, suggesting the Offering Hall was designed to match the earlier Sage Mother Hall (Miller 2007). Liu Yongde states that restoration of the bridge and Square Fishpond underneath it (Yuzhao 魚沼) in 1953 revealed the cavity for the spring directly underneath the Sage Mother Hall. The structure was such to suggest that they were built at the same time (Liu Yongde 1958, 34). Details on this bridge and "flying bridges" more generally can be found in Miller 2007, 143-144.¹

Date

ca. 1000-1125

Dynasty

Northern Song 960 - 1127²


Concept: open-source, integrated research tool for the study of Traditional Chinese Architecture

- Geolocated entries documenting early Chinese historic architecture, with illustrations
- Pictorial thesaurus of the technical terminology used to describe the buildings and sites
- Bibliography of sources for both building history and terminology

DĀNDǒU ZHĪTÌ 單料雙替

URI <https://architecturasinica.org/keyword/k000263>

TEI/XML



dan-dou zhi-ti (11th cen. CE), Yuzhao Feiliang, Jinci 單料只替 - 晉祠魚沼飛梁 (photo: Zhuge J. 趙韞華)

Terms

- dandou zhiti (Pinyin without tones)¹
- 單料雙替 (Traditional Chinese)
- 单斗只替 (Simplified Chinese)
- dāndǒu zhīti (Pinyin)²
- tan-tou chih-ti (Wade-Giles)

Note

Dandou zhiti is a type of bracket set (dougong 科枋) without bracket arms projecting from the primary building plane (huagong 華拱; Li 2009, 19.9b; 19.11a). As an architectural term, it is only found in Yingzao Fashi 《營造法式》 (1103). It only uses one bearing block (dou 枋) and a timu 替木 to support a purlin or tie beam, linking the pillar, beam, and purlin together (Pan and He 2005, 84). The only surviving example known is in the Feiliang 飛梁 of the Jin Shrines 晉祠 in Taiyuan, Shanxi, thought to date to the 11th century.³

單料雙替是一種不出跳科枋。現今寫作单斗只替 (李 2009, 19.9b; 19.11a), 指仅用一隻枋和一隻替木承托樑、將柱、梁、樑結合起來 (潘和何 2005, 84)。單料雙替作為建築術語觀見於《營造法式》。實物可見太原晉祠北宋的魚沼飛梁。³

Related concepts

單拱 dāngōng

Works Cited

Any information without attribution has been created following the [Syriaca.org editorial guidelines](#).

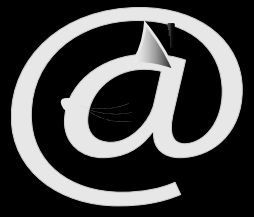
¹ GUO. 2002. *A Visual Dictionary of Chinese Architecture*, 42.

² FU. 2017. *Traditional Chinese Architecture: Twelve Essays*, 357.

³ KROLL. 2016. *A Student's Dictionary of Classical and Medieval Chinese*. ; 李. 2009. 《營造法式》(1103; 故宮藏抄本), 19.9b; 19.11a. ; 潘. 2005. 《《營造法式》解讀》, 84.

ArchitecturaSinica and ATTCAT

- eXist DB of historic buildings and technical terminology
- Entries written in TEI; data discoverable through Xquery
- Text data housed and modified using GitHub
- Bibliographic data housed on Zotero
- Image data currently housed on Flickr; linked with foaf in relation element



ATTCAT Project

Digital encyclopedic dictionary and thesaurus of technical terms used to describe works of Traditional Chinese Architecture

ANNOTATION AND TRANSLATION OF TRADITIONAL CHINESE ARCHITECTURE TERMINOLOGY

- Research focused
- Team based
 - Teaching faculty
 - Architecture history students (undergrad, MA, PhD)
 - Chinese Monument Working Group
 - Buchanan Fellows
- Peer-reviewed through annual workshops
- Digitally published through:
 - ArchitecturaSinica.org
 - [Getty AAT](#)

PROGRESS

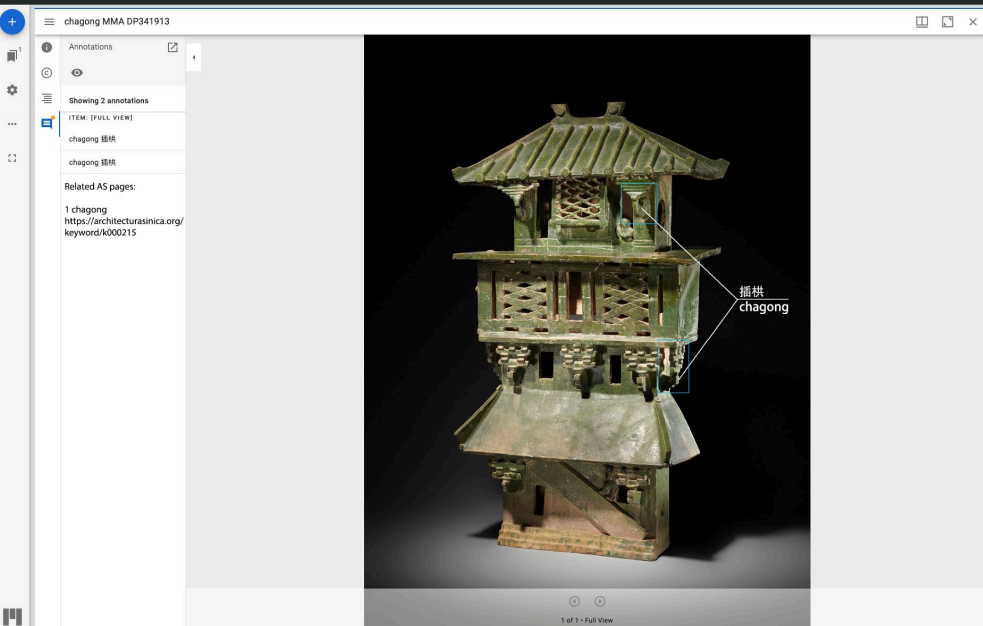
Research Continues:
Thanks to the participation of students, staff, and faculty from
Southeast University, Nanjing; NYU Shanghai, and Vanderbilt
University

| ATTCAT/Getty AAT Publication Terms by Year | 2018 published AS/AAT | 2019 published to AS/AAT | 2020 pandemic | 2021 published AS/AAT | 2022 published to AS/submitted AAT | 2023 publication to AS (in progress) | 2024 tentative | Running Total [published and in production] |
|--|--------------------------|--------------------------|------------------|--------------------------|---------------------------------------|---|----------------------|---|
| | | | | | | | | 155 |
| 1 | 彩畫 cǎihuà | 塔 tā | | 亭 tíng | 敵臺 dítái | 天花 tiānhuā | 卷棚 juǎnpéng | |
| 2 | 槽 cáo | 殿堂 diàntáng | | 檐柱 yánzhù | 剪邊 jiǎnbiān | 平閣 píng'àn | 生起 shēngqǐ | |
| 3 | 鴟尾 chīwěi | 井干 jǐnggàn | | 露台 lùtái | 華廢 huáfěi | 平基 píngqí | 踩 cǎi | |
| 4 | 穿門 chuānmén | 廳堂 tīngtáng | | 上昂 shàng'áng | 出際 chūjiè | 窝铺 wōpù | 翹 qiào | |
| 5 | 鋪作 pūzuò | 馬面 mǎmiàn | | 挑幹 tiāokàn | 墩台 dūntái | 斗科 dòukē | 叉柱造 chāzhùzào | |
| 6 | 堞 dié | 羊馬城 yángmǎchéng | | 平梁 píngliáng | 排山勾滴 páishān gōudī | 溜金斗科 liūjīn dòukē | 纏柱造 chánzhùzào | |
| 7 | 丁袱 dīngfú | 羊馬牆 yángmǎqiáng | | 乳袱 rǔfú | 闌檻鉤窗 lánkǎn gōuchuāng | 挑金斗科 tiāojīn dòukē | 屋脊 wūjǐ | |
| 8 | 地盤 dìpán | 四阿 sì'ē | | 剖牽 pōuqiān | 地棚 dìpéng | 單拱 dāngǒng | 正脊 zhèngjǐ | |
| 9 | 料拱 liàoǒng | 廡殿 wǔdiàn | | 心間 xīnjiān | 小木作 xiǎomùzuò | 重拱 chóngǒng | 博脊 bójǐ | |
| 10 | 袱 fú | 翼形拱 yìxíngǒng | | 歇山 xiēshān | 平坐 píngzuò | 跳 tiào | 垂脊 chuíjǐ | |
| 11 | 扶壁拱 fúbìǒng | 異形拱 yìxíngǒng | | 丹陛 dānbì | 牌坊 páifāng | 巴頭絞項作 bātóu jiǎoxiàngzuò | 角脊 jiǎojǐ | |
| 12 | 角柱 jiǎozhù | 柱礎 zhùchǔ | | 丹墀 dānchí | 牌樓 páilóu | 料口跳 liào kǒu tiào | 餞脊 qiànjǐ | |
| 13 | 闌額 láné | 截間版帳 jiéjiānbǎnzhang | | 硬山 yìngshān | 馳道 chídào | 單料雙替 dāndǒu zhīti | 岔脊 chàjǐ | |
| 14 | 梁 liáng | 崖墓 yámù | | 當心間 dāngxīnjiān | 插拱 chāǒng | 單拱造 dāngǒngzào | 板門 bǎnmén | |
| 15 | 平柱 píngzhù | | | 藻井 zǎojǐng | 丁頭拱 dīngtóuǒng | 瓜子拱 guāzǐǒng | 版門 bǎnmén | |
| 16 | 擡梁 táiliáng | | | 干欄 gānlán | 華拱 huāǒng | 計心造 jìxīnzào | 格子門 gézimén | |
| 17 | 甕城 wèngchéng | | | 假昂 jiǎ'áng | 普拍方 pǔpāifāng | 偷心造 tōuxīnzào | 破子櫺窗 pòzǐlíngchuāng | |
| 18 | 檐額 yán'é | | | 明間 míngjiān | 補間鋪作 bǔjiān pūzuò | 榫卯 sǔnmǎo | 替木 tì mù | |
| 19 | 影作木構 yǐngzuò mùgòu | | | 華表 huábǎo | 耍頭 shuǎtóu | | 雀替 quèti | |
| 20 | 影作 yǐngzuò | | | 側樣 cèyàng | 令拱 lìngǒng | | 鉤欄 gōulán | |
| 21 | 柱 zhù | | | 烏頭門 wūtóumén | 昂形耍頭 ángxíng shuǎtóu | | 串 chuàn | |
| 22 | 昂 áng | | | 檣星門 língxīngmén | 舉折 jǔzhé | | 順脊串 shùnjǐchuàn | |
| 23 | 瓦 wǎ | | | 草架 cǎojià | 舉架 jǔjià | | 順身串 shùnfūchuàn | |
| 24 | 重唇板瓦 chóngchún bǎnwǎ | | | 厦兩頭 xiàliǎngtóu | 祠堂 cí táng | | 順袱串 shùnfúchuàn | |
| 25 | 勾頭 gōutóu* | | | 不厦兩頭 bù xiàliǎngtóu | 平板枋 píngbǎnfāng | | 承椽串 chéngchuānchuàn | |
| 26 | 筒瓦 tǒngwǎ | | | 攢尖 cuánjiān | 樓 lóu | | 徽上明造 chèshàngmíngzào | |
| 27 | 影拱 yǐngǒng | | | 歇山轉角 xiēshān zhuǎnjiǎo | 假山 jiǎshān | | 由額 yóu'é | |
| 28 | 檐柱 yánzhù | | | 大額 dà'é | 平水 píngshuǐ | | 綽幕方 chuòmùfāng | |
| 29 | 彩畫作 cǎihuàzuò | | | 減柱造 jiǎnzhùzào | 滴水 dīshuǐ | | 廊橋 lángqiáo | |
| 30 | 額 é | | | 草架擺驗 cǎojià bǎiyàn | | | 火墻 huǒqiáng | |
| 31 | 額枋 éfāng | | | | | | 永定柱 yǒngdìngzhù | |
| 32 | 方 fāng | | | | | | | |
| 33 | 枋 fāng | | | | | | | |
| | * (AAT in 2022) | | | | | | | |
| Yealy Total | 33 | 14 | 0 | 30 | 29 | 18 | 31 | |

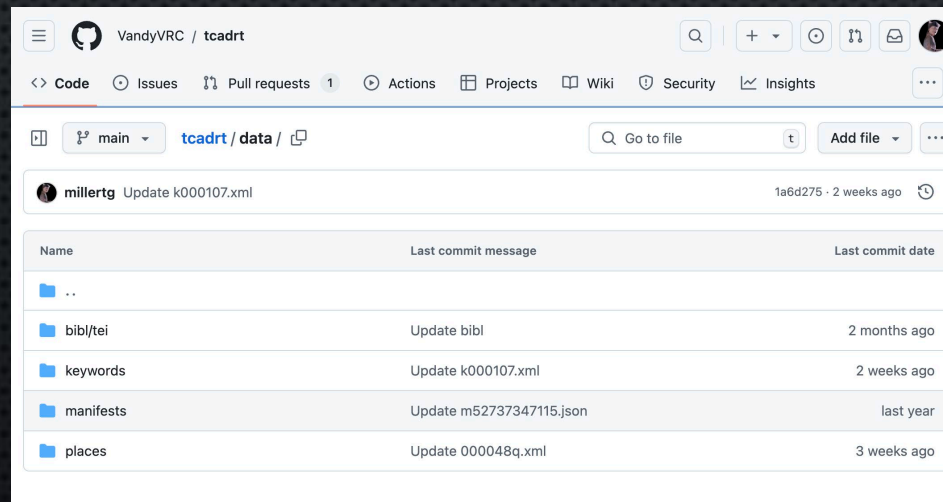
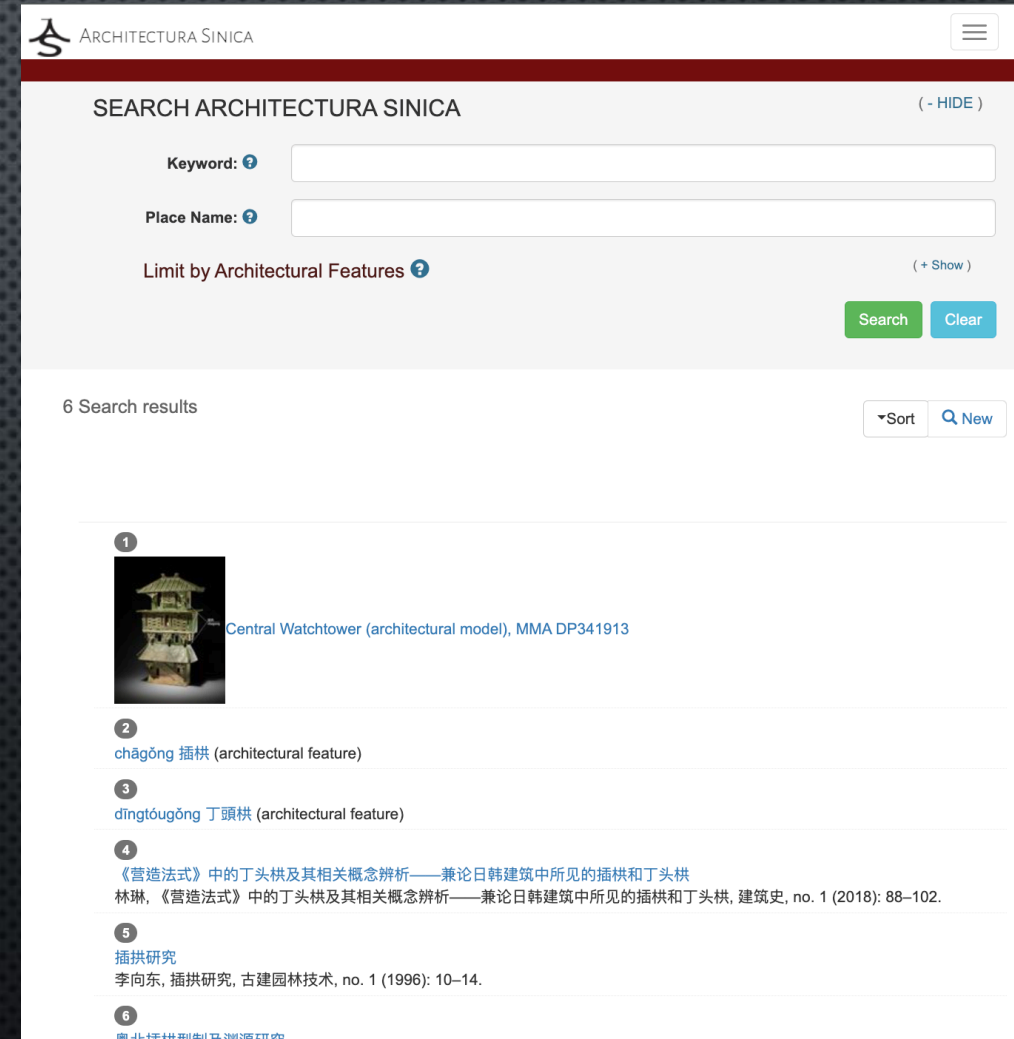
- 106 terms published on ArchitecturaSinica and submitted to the Getty AAT
- 18 more terms published on ArchitecturaSinica; in preparation for submission to the AAT (F24)
- 31 terms submitted for review during ATTCAT 2024

PROGRESS

Hope for consolidating image data: IIIF Manifests and TEI



- XML-TEI documents saved in a IIIF manifest allows for “discoverable” annotations through Xquery
- ArcGIS and IIIF manifests



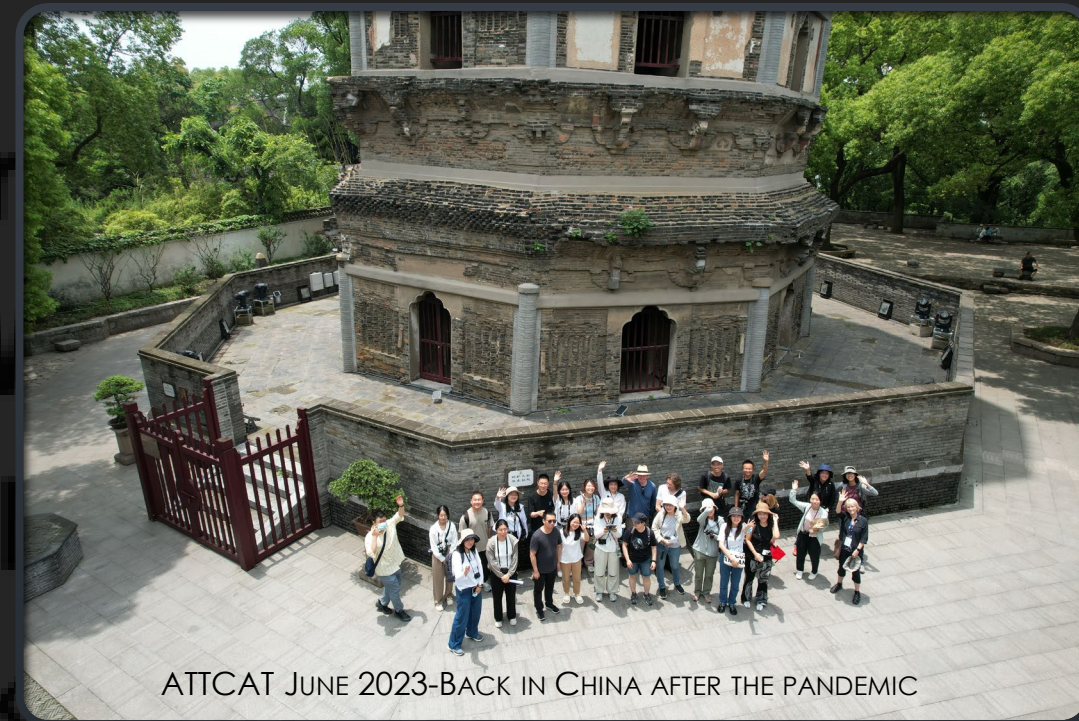
PREDICAMENTS

IMAGES STILL AN ISSUE: FLICKR IMAGES NOT VISIBLE IN THE PRC
SOLUTION(S) (ALL VERY TIME CONSUMING)?:

- AWS S3 BUCKET REPOSITORY WITH IIIF IMAGE VIEWER
- IMAGE METADATA (JSTOR FORUM)
- MANUAL ANNOTATION (PELAGIOS/RECOGITO) FOR SITE ARCHIVE?
- OCR (CHATGPT OR OTHER AI) FOR LABELED DRAWINGS IN ARCHITECTURAL THESAURUS?

OPEN-SOURCE, HUMANITIES, AND THE “RESEARCH”
UNIVERSITY

- EXIST DB: DOES NOT PLAY WELL WITH AWS
- NEW DIRECTIONS WITH AWS
- DH AND THE COLLEGE OF ARTS AND SCIENCE



ATTCAT JUNE 2023-BACK IN CHINA AFTER THE PANDEMIC

THANK YOU FOR YOUR
INTEREST!

(SUGGESTIONS WELCOME)