Thesis Proposal Approval Form (Full version)

Program Doctor of Philosophy Program in Visual Arts and Design

Master Degree ☒ Thesis ☐ Independent Study

Doctoral Degree ☐ Plan 1 ☒ Plan 2

Admission in semester ....1...../...2024.....**Termination in semester** .....3...../...2029.....

Consistent with the strategic issues of graduate research

Strategic Plan .....

Strategy .....

Name-Surname Student ID	Thesis Proposal (in brief)	Additional Information
Mr. Yuan Guokai Student ID 67U74610112	Preservation and Architectural Study of Dong Drum Towers through the Application of Digital Technology: A Case Study of Ma'an Village, Sanjiang County, Guangxi	1. Advisory committee Asst. Prof. Dr.Omsiree Pandamrong Asst. Prof. Dr.Kridtayot Comeming
	Background and significance of the problem China has a long history of over thousands of years of settlement by various ethnic groups. Its profound cultural heritage, combined with abundant natural resources, has driven the independent development of construction practices. In particular, its numerous exquisite wooden structures are widely recognized as aesthetically pleasing architectural works, featuring advanced technical systems and exquisite craftsmanship—ranging from the creations of master artisans to local-level construction projects. The Dong ethnic group in Guangxi Zhuang Autonomous Region is one of China's ethnic groups with a long history. Their settlement patterns are closely linked to the natural environment, and their cultural development has given rise to an interconnected village layout centered on the Drum Tower. The Drum Tower serves as the core gathering place of the village with practical functions: when important information or emergencies need to be communicated to the community, village leaders beat the drum to call people together. Meanwhile, the open space on the ground floor of the Drum Tower is used for building bonfires, where villagers gather to sit around the fire to keep warm, chat, hold meetings, and host banquets. This	2. Student's signature Yuan Guokai. (Mr. Yuan Guokai) 24/9/2025 3. Thesis advisor's signature (Asst. Prof. Dr.Omsiree Pandamrong) 6/10/2025 4. Chairperson of Program's Signature (Asst. Prof. Dr.Kridtayot Comeming) 6/10/2025

Name-Surname Student ID	Thesis Proposal (in brief)	Additional Information
	not only unites the community but also is a well-known practice—where the use of fire inside the wooden structure generates heat and smoke. When properly controlled, this smoke also helps protect the wood from moisture and insect damage, a method observed in the wooden cultural heritage preservation practices of various ethnic groups. Since the adoption of the Convention for the Safeguarding of the Intangible Cultural Heritage by UNESCO in 2003, the organization has consistently emphasized that the safeguarding of intangible cultural heritage (ICH) must be advanced in a living and sustainable manner. Protection efforts should not only preserve traditional knowledge and craftsmanship but also ensure their sustainable reinterpretation in new contexts.In Article 2 of the Convention (General Provisions), the definitions and components of intangible cultural heritage and the scope of “safeguarding” are clearly outlined. China officially joined the Convention in 2004, and since then has developed a national legislative and cataloging system for ICH safeguarding. In 2005, the State Council of China launched the First National List of Intangible Cultural Heritage, which included numerous traditional crafts and vernacular architectures from ethnic minority regions (State Council of China, 2005). This marked the establishment of a state-level, list-based safeguarding system that fostered systematic classification and preservation at local levels. In 2006, the traditional Dong ethnic wooden architecture techniques, including the construction of Drum Towers, were officially included in the first national ICH list under the category of traditional craftsmanship (State Council of China, 2006). The Drum Tower of the Dong ethnic group is one of the most important architectural forms in Guangxi	

Signature _____ Thesis Advisor Date 6 / 10 / 2025

Name-Surname Student ID	Thesis Proposal (in brief)	Additional Information
	Zhuang Autonomous Region and China as a whole. These wooden structures—standing no less than 15 meters tall—are built with clear design logic, sophisticated construction processes, and crafted by woodworkers who possess profound knowledge and advanced high-woodworking skills. As a result, the architecture exhibits both clear design thinking and expressive aesthetics. Furthermore, the proportional calculations of each piece of wood, down to the wooden brackets (Dou-gong), follow a clear logical system rooted in a famous architectural treatise known as Luban Jing. Luban Jing (The Luban Classic) is China's most renowned architectural treatise. Compiled by the legendary woodworker "Luban" (c. 507–444 BC), this document has been copied and printed numerous times throughout Chinese history and disseminated across different regions of the country. This widespread circulation is attributed to the document's unique nature: it covers a broad range of content, including techniques for selecting wood, wood proportioning for different types of buildings, wood joining methods, the characteristics of brackets (Dou-gong), and even rituals to ensure safe construction. The completed buildings, when constructed in accordance with its principles, are functional for users and aligned with the principles of geomancy—part of which is referred to as Fengshuior Huangjiu. The study of the connection between actual wooden architecture and the Luban Jing treatise is part of the broader tradition of East Asian architectural research. This is because the document was spread beyond China's borders to Korea and Japan historically and remains an important part of architectural education even in Western countries today. The Chinese government itself has issued a policy titled the "Rural Revitalization Strategy" to build a "Beautiful China," with key focuses including: creating	

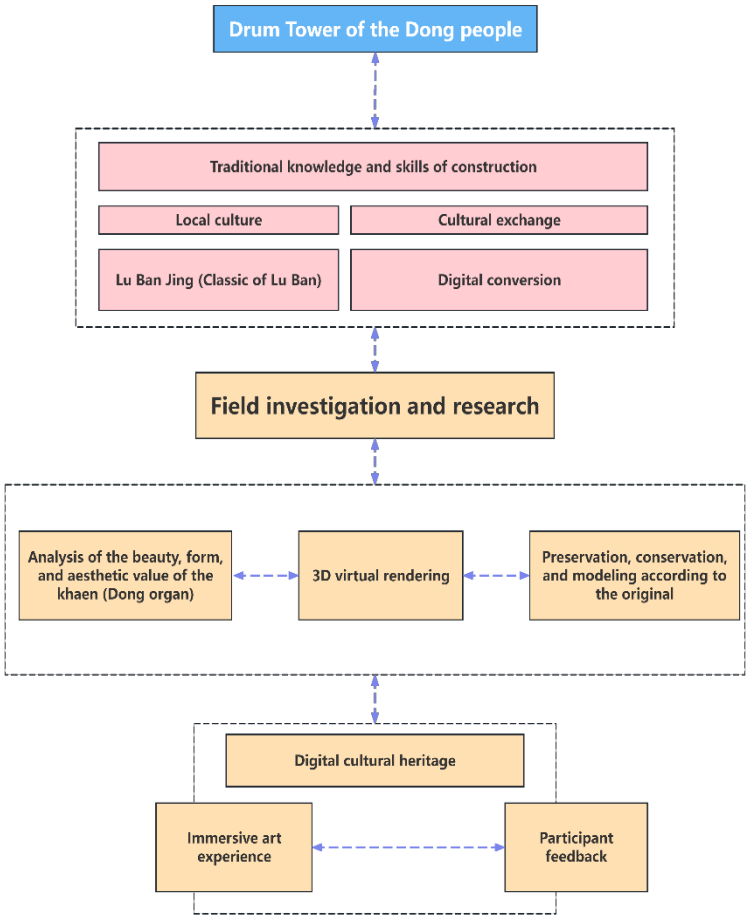
Signature _____ Thesis Advisor Date 6 / 10 / 2025

Name-Surname Student ID	Thesis Proposal (in brief)	Additional Information
	ecologically friendly residential environments, ethical rural traditions, efficient governance, and stable livelihoods. The Ministry of Culture and Tourism has also issued corresponding standards on “Digital Preservation of Intangible Cultural Heritage and Development of Digital Resource Databases,” which specify certain elements for documenting the construction techniques of original buildings. This research thus aligns with the government’s overarching direction to address key questions: at the macro level, it aims to revitalize community architecture and ensure the sustainable preservation of cultural heritage; at the micro level, it meets the academic needs of historical architectural research. This research also aims to present its findings through artistic exhibitions—including physical models that highlight the aesthetic value of the wooden structural design, as well as various forms of digital media. These efforts seek to raise awareness among younger generations about the value of this type of architecture.	
	Research questions 1. How does the aesthetic value of Drum Tower architecture arise from its architectural proportions? 2. Can the craftsmanship of woodworkers be reflected in their selection of materials and efficient use of wood? 3. How are wooden brackets (Dou-gong) applied in different parts of the Drum Tower architecture? 4. What is the relationship between the proportions and construction methods of this Drum Tower architecture and those outlined in the Luban Jing architectural treatise? 5. Can we communicate knowledge about this cultural heritage through new media? If so, how?	

Signature _____ Thesis Advisor Date 6 / 10 / 2025

Name-Surname Student ID	Thesis Proposal (in brief)	Additional Information
	Research objectives 1. To study the proportional systems and construction techniques that define the similarities and differences in the aesthetic value of the 5 selected Drum Towers, as an expression of their architectural identity. 2. To study the relationship between Drum Tower architecture and the Luban Jing treatise, as well as the connection between the Drum Tower's cultural belief system and Dong village communities. 3. To create replica architectural works that reflect the aesthetic value derived from the wooden construction system of the Dong ethnic group's Drum Towers. 4. Raise awareness of Dong village culture through investigation and evaluation. 5. Enable more people to understand Dong culture through immersive art exhibitions.	
	Research hypothesis -	
	Research limitations (if any) 1. The 5 selected Drum Towers share consistent architectural proportional systems and aesthetic values. 2. These Drum Towers have spatial and functional relationships with the community structure of Dong villages. 3. The 5 Drum Towers were constructed by groups of woodworkers who are connected or share inherited knowledge. 4. Their construction systems and proportional designs are meaningfully linked to the concepts in the Luban Jing architectural treatise.	

Signature_____ Thesis Advisor Date 6 / 10 / 2025

Name-Surname Student ID	Thesis Proposal (in brief)	Additional Information
	Research conceptual framework (Please specify the theoretical concept)  	
	Operational definitions 1. Drum Tower: A public wooden structure with distinctive features, serving as the most iconic symbol of Dong villages. Typically located in the center of a village, it functions as a community meeting place for discussions, as well as a venue for rituals and cultural activities. Most Drum Towers are constructed by woodworkers using wooden brackets (Dou-gong) and mortise-and-tenon joints without metal nails. They have multi-tiered, tapering roofs and are built in square, hexagonal, or octagonal floor plans. 2. Timber Construction Craftsmanship: A set of skills and processes used by the Dong people to build Drum Towers, with wooden brackets (Dou-gong) and	

Signature _____ Thesis Advisor Date 6 / 10 / 2025

Name-Surname Student ID	Thesis Proposal (in brief)	Additional Information
	mortise-and-tenon joints as the core. It covers material selection, production planning, assembly, carving, and preservation. 3. Living Heritage Transmission: An emphasis on the transformation and refinement of intangible cultural heritage in the context of contemporary society, including community participation, intergenerational inheritance, and emerging innovations. 4. Visualization Technology: Encompasses 3D modeling, virtual reality (VR), augmented reality (AR), digital twins, and interactive presentations. It is used to display tangible and intangible cultural information in a digital format. 5. Fengshui: An ancient discipline concerned with predicting the auspiciousness or inauspiciousness of geographical locations, climate, timing, and their relationships with an individual's social status, gender, and age. As an ancient body of knowledge, it has spread widely across regions influenced by Chinese culture. The practice of "reading Fengshui" is part of this knowledge system.	
	Methods of conducting research (in brief) 1. Research method (Quantitative, Qualitative, Mixed Methods) 2. Population and sample 3. Sampling method/Target group selection 4. Research variables 5. Research instruments (Questionnaire, Interview Form, Instrument Owner, Translated or Adapted from Other Research) 6. Data collection 7. Data analysis/Statistical analysis methods (if any) Note: (For multi-phase research, researcher should specify research methodology separately for each phase)	

Signature_____ **Thesis Advisor** **Date** 6 / 10 / 2025

Name-Surname Student ID	Thesis Proposal (in brief)	Additional Information
	Expected benefits 1. It will collect practical, foundational research data through digital visual media, documenting the proportional systems and construction techniques that define the similarities and differences in the aesthetic value of all 5 Drum Towers—key expressions of their architectural identity. 2. It will analyze the relationship between Drum Tower architecture and the Luban Jing treatise, as well as the connection between the Drum Tower's cultural belief system and Dong village communities. 3. It will create and exhibit replica architectural works that reflect the aesthetic value derived from the wooden construction system of the Dong ethnic group's Drum Towers. These works will include architectural replicas, drawings depicting the Drum Tower's wooden structure, and digital visual media (using Visualization Technology).	
	References **1. Books** Editorial Committee of Sanjiang Dong Autonomous County Annals. (1992). Annals of Sanjiang Dong Autonomous County (Sanjiang Dongzu Zizhixian zhi). Guangxi, China: Guangxi People's Publishing House. Li, Z. (2004). Traditional carpentry tools in Chinese architecture (Zhongguo chuantong jianzhu muzuo gongju). Shanghai, China: Tongji University Press. Zhu, J. H. (2002). Interpretation of Lu Ban Jing. Shanghai, China: Tongji University Press. Yang, F. (2018). Lu Ban Jing and Chinese traditional architectural culture. Beijing, China: Zhonghua Book Company.	

Signature  Thesis Advisor Date 6 / 10 / 2025

Name-Surname Student ID	Thesis Proposal (in brief)	Additional Information
	Wang, J. J. (2010). Research on Dong Drum Tower and Village Culture. Guiyang, China: Guizhou Nationalities Press. Wu, M. (2009). Dong architectural culture. Beijing, China: China Architecture & Building Press. Zhou, Y. J. (2013). Research on Dong architectural art. Guiyang, China: Guizhou University Press. Chen, Q. (2012). Research on Dong Wind-rain Bridge. Guiyang, China: Guizhou Nationalities Press. Liao, D. (2008). The structure and techniques of Dong architecture. Beijing, China: China Architecture & Building Press. Yang, M. L. (2019). Dong architecture and folk culture. Beijing, China: Minzu Publishing House. **2. Journal Articles** Cai, L., Li, X., & Deng, Y. (2020). Full-scale construction of Dong wooden architecture. The Architect (Jianzhushi), (n.s.), https://doi.org/[If available, add DOI; if not, omit]. Yuan, G. (2025). Exploration of digital protection and visual inheritance paths of the artistic characteristics of Dong drum towers. Popular Standardization (Dazhong Biaozhunhua), (n.s.), https://doi.org/[If available, add DOI; if not, omit]. Zhao, L. (2013). Research on the development of tourism souvenirs for Dong wind-rain bridges. Art Education Research (Meishu Jiaoyu Yanjiu), 12(4), 89–92. https://doi.org/[If available, add DOI; if not, omit]. Zhang, P., & Ding, Z. (2018). A brief analysis of the elements of tourism landscape transformation in the Dong villages of Chengyang Bazhai. In Proceedings of the 8th International Landscape Architecture Congress (pp. 156–162). Beijing, China: China Architecture & Building Press.	

Signature_____ Thesis Advisor Date 6 / 10 / 2025

Name-Surname Student ID	Thesis Proposal (in brief)	Additional Information
	Sun, H. C. (2012). 3D laser scanning applications in museums. Henan Science and Technology (Henan Keji), 10(5), 54. **3. Doctoral Dissertations and Master's Theses** Zhang, X. Z. (2018). Continuity and modernity of Dong drum tower structures and construction techniques in Pingtan Basin villages (Unpublished master's thesis). Hunan University of Science and Technology, Xiangtan, China. Zhong, Y. (2017). A study on the influence of Lu Ban Jing on contemporary Chinese architectural environmental design (Unpublished master's thesis). Hunan University, Changsha, China. Song, Y. (2017). Research and application of constructing a digital model library of ancient pagodas in Guanzhong region based on 3D laser scanning (Unpublished doctoral dissertation). Xi'an University of Architecture and Technology, Xi'an, China. Retrieved from CNKI. https://kns.cnki.net/[Add specific CNKI link if available]. Luo, D. H. (2015). Study on the culture of traditional architecture and furniture of the Dong nationality in Guangxi (Unpublished doctoral dissertation). Guangxi University for Nationalities, Nanning, China. Retrieved from CNKI. https://kns.cnki.net/[Add specific CNKI link if available]. Yang, Y. (2020). A study on the landscape transformation of Sanjiang Chengyang Bazhai in the context of tourism (Unpublished doctoral dissertation). Southwest Minzu University, Chengdu, China. Zhang, J. (2017). Research on the construction technology and resilient structural characteristics of drum towers (Unpublished master's thesis). Chongqing University, Chongqing, China.	

Signature_____ Thesis Advisor Date 6 / 10 / 2025

Name-Surname Student ID	Thesis Proposal (in brief)	Additional Information
	Cao, W. (2017). Research on Dong folk art (Unpublished doctoral dissertation). Hunan Normal University, Changsha, China. Du, L. (2019). Research on the construction of ancient pagoda models based on BIM and their visualization methods (Unpublished master's thesis). Xi'an University of Architecture and Technology, Xi'an, China. Tie, Z. (2019). Research on virtual restoration of cultural heritage information models (Unpublished doctoral dissertation). China Academy of Art, Hangzhou, China. **4. Policy Documents** UNESCO. (2003). Convention for the safeguarding of intangible cultural heritage. Paris, France: Author. United Nations. (2015). Transforming our world: The 2030 agenda for sustainable development. New York, NY, USA: Author. https://sdgs.un.org/2030agenda General Office of the State Council of the People's Republic of China. (2022). National cultural digitization strategy implementation plan (Guojia wenhua shuzihua zhanlüe shishi fang'an). Beijing, China: Author. Retrieved from Ministry of Culture and Tourism of the People's Republic of China. (2019). Standards for digital collection and cataloging of intangible cultural heritage resources (Feiwuzhi wenhua yichan shuzihua baohu shuzi ziyuan caiji he zhulü guifan) (GB/T 38457-2019). Beijing, China: Author. Retrieved from The State Council of the People's Republic of China. (2018). Rural revitalization strategy plan (2018–2022) (Xiangcun zhenxing zhanlüe guihua (2018–2022 nian)). Beijing, China: Author. Retrieved from Historic England. (2018). 3D laser scanning for heritage. Swindon, UK: Author. Retrieved from	

Signature _____ Thesis Advisor Date 6 / 10 / 2025

Signature Thesis Advisor Date 6 / 10 / 2025