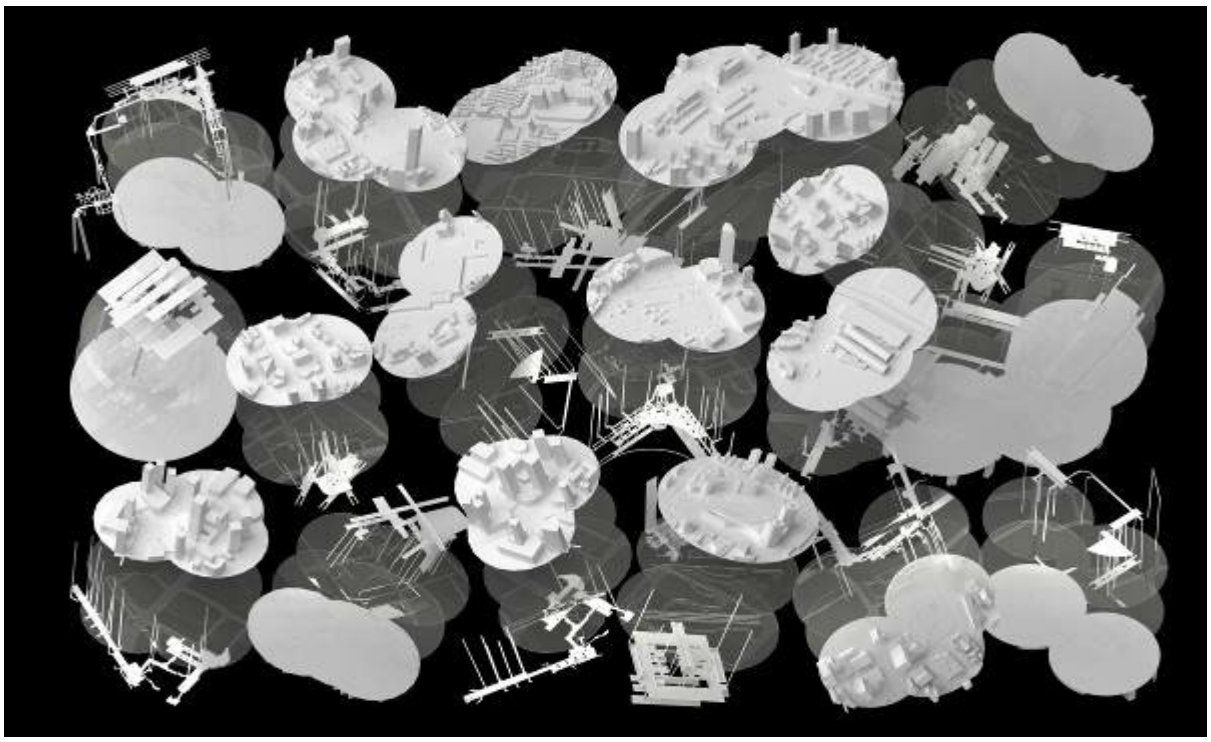
@Shanghai LAB
2025AW M.Arch Design Course IV, College of Architecture and Urban planning- **CAUP**
Tongji University

Rethinking Shanghai Regeneration
City, Architecture and Infrastructure

Course Director: Prof. Liu kan
Teaching Team: Prof. Liu Kan, Prof. Hua Xiahong
International Support: Prof. Clark Llewellyn（University of Hawaii, United States），Prof. Angela Million (TU-Berlin, Germany)，Dr. Andi Brück（TU-Berlin, Germany），Dr. Caterina Pietra（University of Pavia, Italy），Prof. Chung Jaehoon (PNU, Korea), Prof. Yuka Himeno (Oita University, Japan)
Class Schedule: Monday，8:00 - 11:35，4 X 16 weeks
Language of Teaching: English
Venue: Building E, Room 307



Overview:

The level of integration of high-density urban spaces in current megacities and super-large cities remains low. The limitations of central place theory in explaining transit-oriented urban networks are becoming increasingly apparent, given that it emphasises hierarchical spatial relationships. Within these networks, city, architecture and infrastructure are shifting from isolated development towards coordinated integration,

forming complex networks. How can we achieve sustained quality improvement and efficiency gains through innovative regeneration mechanisms and spatial design methodologies? It is crucial to develop a scientific understanding of architecture and urban regeneration within the context of complex urban systems. The 2025 Shanghai LAB will bring together teaching faculty from architecture schools in Europe, America, and Asia with extensive practical experience. Courses will explore experimental topics centred on ' city, architecture and infrastructure as complex systems', investigating regeneration mechanisms and design methods for integrated urban-architectural development in Shanghai's high-density central urban areas. Course will involve urban experiences, observations and discoveries, guiding students through a layered process of understanding urban space. Design will reshape spatial quality to enhance the vital value and significance of liveable city. The design research perspective focuses on achieving self-regeneration through intrinsic spatial transformation. In the context of China's urban regeneration, the focus is on coupling function and space within the urban structure, as well as enabling people to achieve a more liveable spatial quality within an acceptable timeframe. It also examines the spatio-temporal mechanisms for equitable access to a variety of urban spatial resources.

Introduction：

Phase One: @Arch(i)nfrastructure (Scale-Cycle-Place Sensing, 3 weeks)

Learning Objectives: Observe and experience how energy infrastructure feeds back into and participates in the dynamic mechanisms of architectural and urban spaces within a circular economy context. Design Exercise I: In collaboration with Envision Energy, conceptualize solutions for recovering resources from end-of-life (EOL) wind turbine blades. Understand how circular economy principles operate within new-generation wind turbines. Explore how infrastructure materials can be cyclically reintroduced into architectural and urban placemaking after exceeding their service life and assess the feasibility of local utilization. Schedule: September 2025 (presentations on the 15th, 22nd, and 29th).

Phase II: @Cit(i)nfrastructure (Transportation, Networks,15-Minute City, 4 weeks)

Learning Objectives: Experience how high-density, networked urban transportation systems influence and shape the spatial organization of city blocks. Design Exercise II: Explore urban subway commuting experiences to understand the interaction between urban spaces and people in daily life. Identify the mechanisms linking spatial efficiency to spatial quality. Students must fully immerse themselves in the experience and rapidly define effective and rational living and working spaces. Using multiple stations along Shanghai Metro Lines 4 and 10 as case studies, complete a research report. Schedule: October 2025 (presentations on the 13th, 20th, and 27th).

Phase III: Complex Systems-Oriented Urban Regeneration (Integration and Verticalization, Preservation and Renewal)

Learning Objectives: Conduct urban regeneration design research within complex urban systems. Design Exercise III: Topic 1, Urban renewal around the Xujiahui Metro Station area in Shanghai ; Topic 2, Urban renewal around the Fuxingdao Metro Station area

in Shanghai. Students will analyze the surrounding urban spatial characteristics of the selected topics. From a human-space perspective, students will investigate the spatial relationships among commercial, residential, lifestyle, cultural, and educational elements within high-density urban blocks situated within complex transportation infrastructure and non-motorized transport systems. Through specific design research, students will propose urban renewal design solutions based on deep urban design principles. Schedule: November 2025 (presentations on the 3rd, 10th, 17th, and 24th).

Phase IV: Complex Systems-Oriented Architecture Renewal (Materials and Structures, Space and Circulation, 4 weeks)

Learning Objectives: Conduct architecture renewal design research within complex urban systems. Design Practice IV: Topic 1: Building renewal around the Shanghai Xujiahui metro station area ; Topic 2: Building renewal around the Shanghai Fuxingdao metro station area. Conduct an integrated architecture renewal design within the assigned area and align tasks with urban design guidelines. Develop architectural design briefs and complete the corresponding design assignments to systematically construct practical design solutions for integrated architecture and urban spatial renewal. Experimentally explore spatial composite renovation models oriented toward transit-oriented and slow-paced living experiences within complex urban networks. Schedule: December 2025 (presentations on the 1st, 8th, 15th, and 22nd).

Phase Five: Final Presentation (Date: December 29, 2025)

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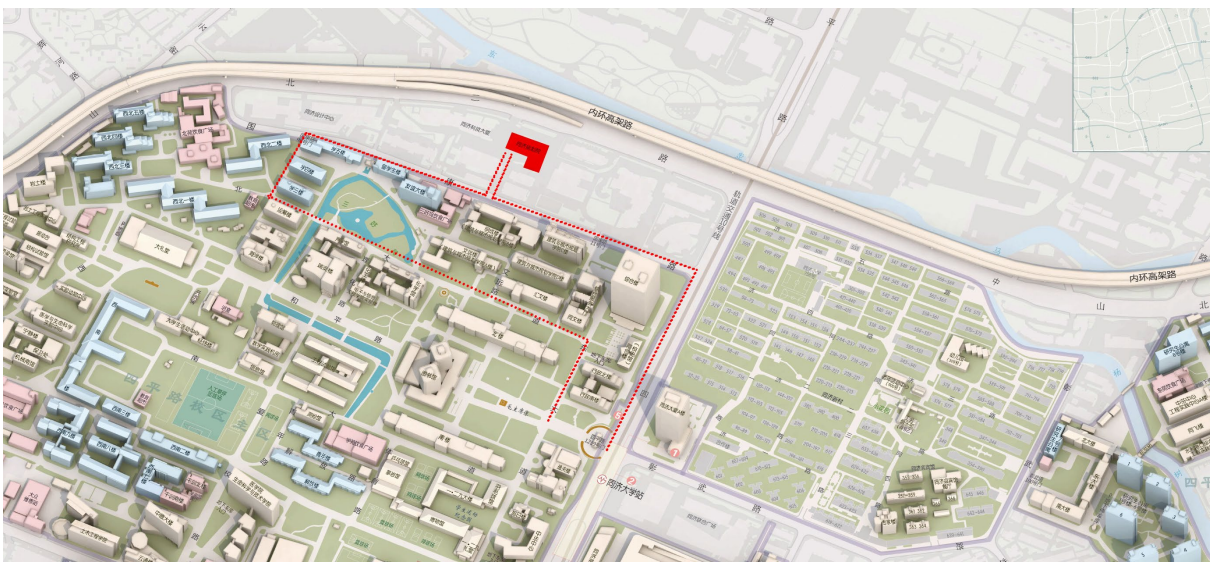

■ Classroom Location Map