

Spring 2027: CP6053 Applied Planning Studio (Urban Design) / ARCH6050 Design and Research Studio II
School of City and Regional Planning. School of Architecture. College of Design
Georgia Institute of Technology, a joint studio with the University of Tokyo

Tokyo Smart City Studio 2027: Kanda - Nihonbashi

Perry P J Yang, Professor & Director of Eco Urban Lab, Georgia Tech: perry.yang@design.gatech.edu
Co-instructors: **Akito Murayama**, Professor; **Takahiro Yoshida**, Associate Professor, Department of Urban Engineering/ CSIS, the University of Tokyo; Studio venue: Eco Urban Lab@ Arch East 304

Urban planners and architects tend to design cities as frozen in time. Yet cities are perceived environments, experienced through dynamic processes across complex urban systems. Human perceptions of urban space, which are temporal, sequential and situational, are now further augmented by AI-driven data analytics and sensor networks that fuse digital and physical experience in real time. This transformation gives rise to key questions: How are AI and big data changing the ways humans perceive, sense, and navigate their urban environments? What critical urban problems can we identify from high-frequency data analytics in seconds and minutes in near real time facing increasing climate-induced urban risks such as urban heat and energy resilience? How do we manage decision processes from data analytics, performance evaluation, predictive modeling, scenario generations to urban design and development to transform cities into better resilience that take years and decades to revitalize built environment and infrastructural systems? **Urban systems design** offers an approach to designing new forms of sustainable, resilient and socially responsible urban communities, in which creative design integrates data analytics, system thinking and digital technologies (Yang and Yamagata, 2020). Drawing on the ten-year experiment of Tokyo Smart City Studio, the studio this year introduces a district-scale, design-led, multi-stakeholder framework from urban design to urban digital twins for shaping sustainable, resilient and socially inclusive communities. The Tokyo smart city project is an international collaboration between the Eco Urban Lab at Georgia Tech, the University of Tokyo and Keio University from 2017. The 2027 Studio investigates Tokyo's Nihonbashi, with a focus on urban design and redevelopment for resilience. **An international workshop is scheduled during March 7-14 2027 in Tokyo. Students' accommodations during workshop in Tokyo could be arranged by University of Tokyo. Students will participate in regular virtual meetings with Japan partners as a joint studio in planning and design processes.** . *Georgia Tech Tokyo studio was featured by ESRI:* <https://www.esri.com/about/newsroom/blog/georgia-tech-students-smart-city-tokyo/>. . *Previous Tokyo studio reports:* <https://planning.gatech.edu/mcrp-studios> <https://planning.gatech.edu/eco-urban-lab/>



Tokyo Nihonbashi district

Course Outline

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|----------------------|---|
| 1) 1/11 – 1/29 | <i>Reading the city, data visualization and problem formulations</i> |
| 2) 2/1 – 2/19 | <i>Conceptual design and scenario planning, Midterm Review on 2/19</i> |
| 3) 2/22 – 3/5 | <i>Urban systems design, Midterm Report Ready</i> |
| 4) 3/7 – 3/14 | <i>International workshop & field trip to Tokyo, the University of Tokyo</i> |
| 5) 3/22 – 4/23 | <i>Urban design iteration, final production; Final Review on 4/23 (TBA)</i> |

International Workshop

The international field trip will be from March 7 to March 14, 2027 in Tokyo, Japan.

- 3/6 Flight from Atlanta on 3/7
- 3/7 To arrive Tokyo, accommodation at the University Tokyo - Hongo campus

- 3/8 Workshop meeting at the University of Tokyo; Urban observation at Tokyo central area
- 3/9 Problem formulation: meeting stakeholders and field trip at Nihonbashi area, Tokyo
- 3/10 Field work: working on site at Nihonbashi area, Tokyo
- 3/11 Design charrette I at the University of Tokyo
- 3/12 Design charrette II at the University of Tokyo
- 3/13 Final presentation meeting with local representatives at Nihonbashi, Tokyo; Urban and architecture field trip in Tokyo
- 3/14 Flight from Tokyo to Atlanta

Reference

1. Lynch, Kevin, 1981, Ch2, 6-11, Good City Form, MIT Press.
2. Koolhaas, Rem, Obrist H U, 2012, *Project Japan: Metabolism Talks*, Taschen.
3. Maki, Fumihiko et al., 2018, City with a Hidden Past, Kajima Institute Publishing Co., Tokyo, Japan
4. Yang, Perry P J, Yamagata, Yoshiki., 2020, Ch1 in *Urban Systems Design: Creating Sustainable Smart Cities in the Internet of Things Era*, Yamagata and Yang eds., Elsevier.