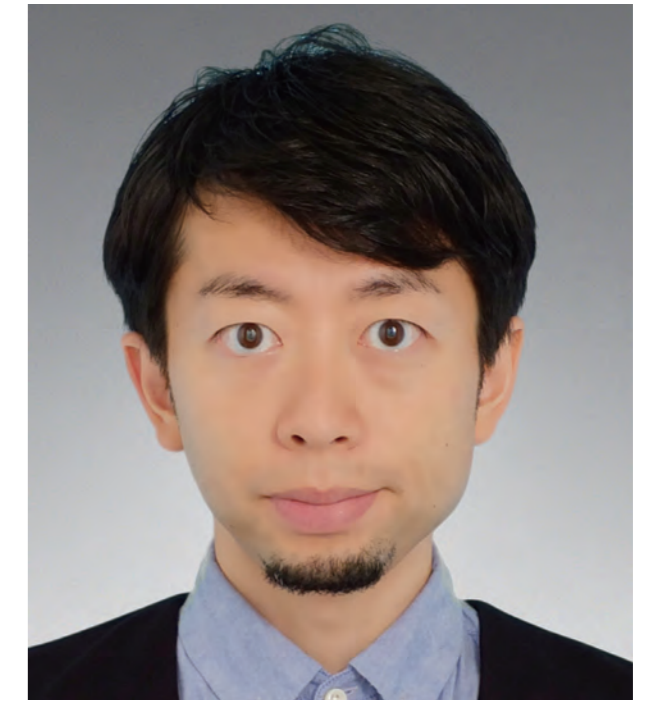


# K. HONMA LAB.

## Mathematical Engineering of Spatial Design



Department of Human and Social Systems  
Design-Led X Platform

Architecture

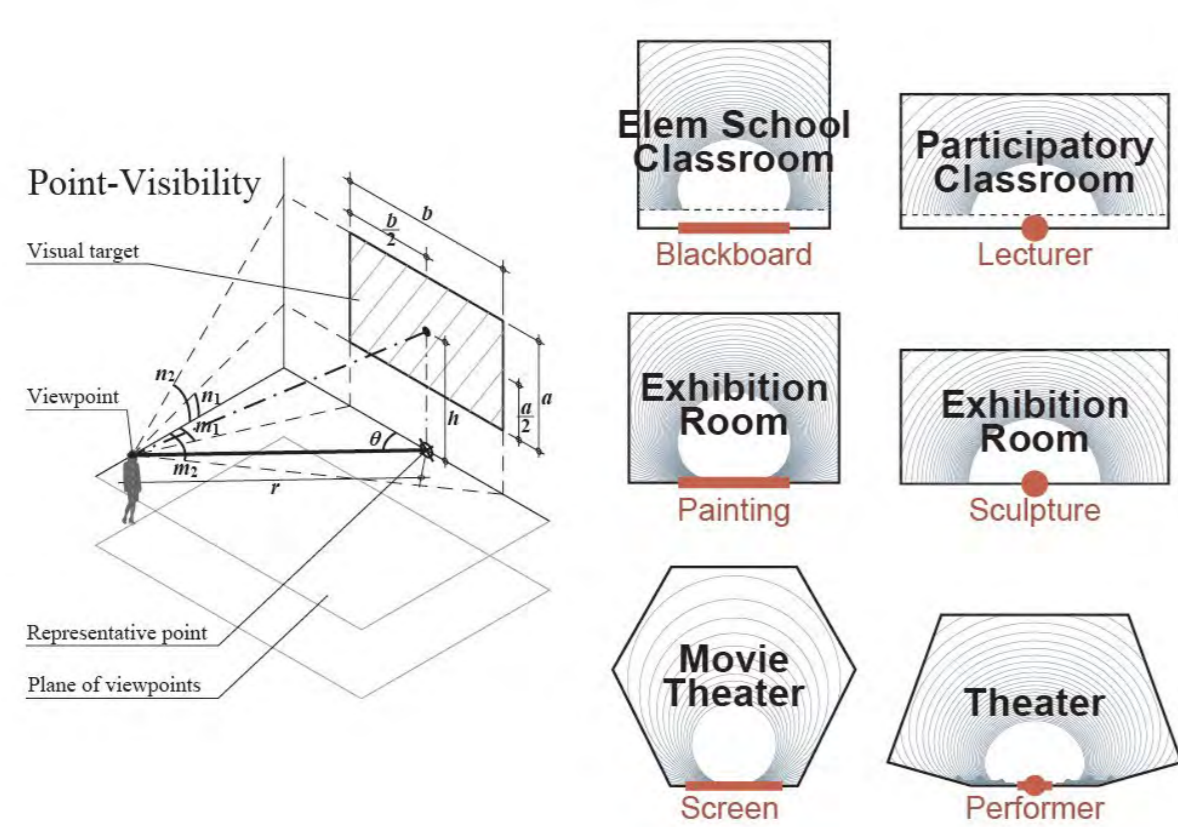
Department of Architecture, Graduate School of Engineering

<http://hnm.iis.u-tokyo.ac.jp/>

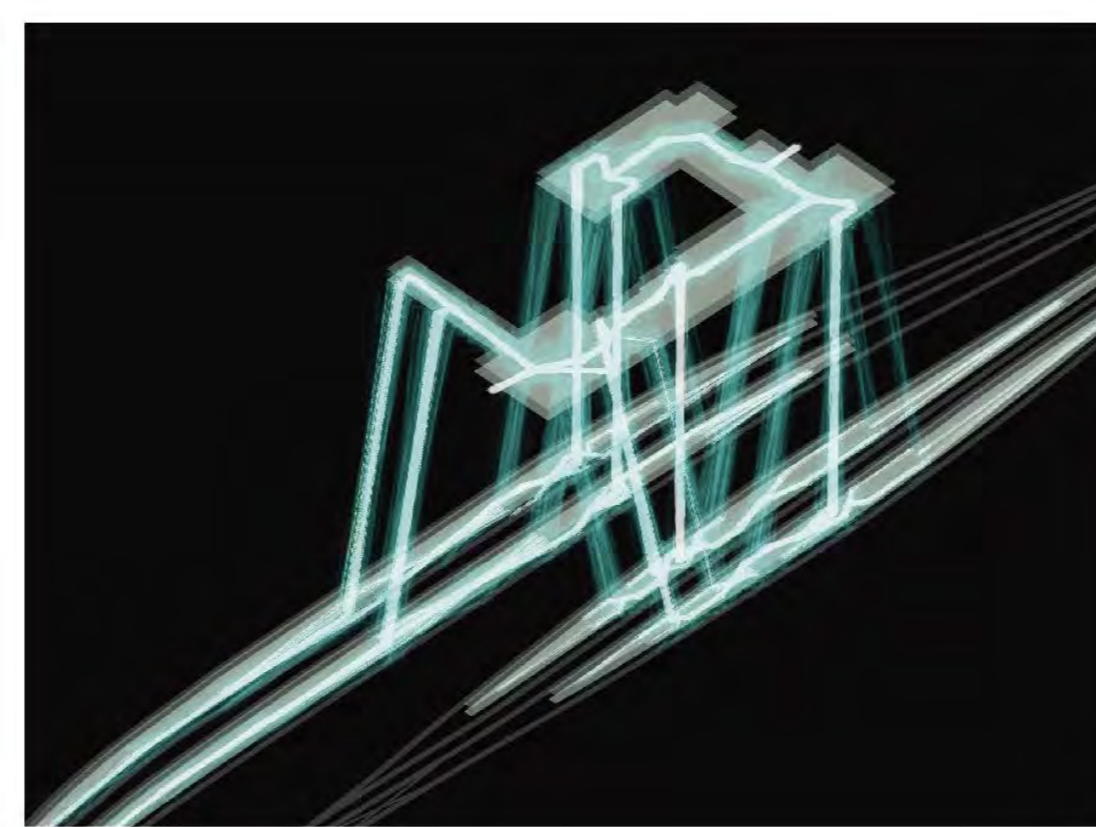
We aim at "fusion of design and engineering" in architectural and urban planning.

Toward this future goal, we are conducting the following research in recent years:

- (1) Development of new spatial analysis methods for architectural and urban design
- (2) Innovative architectural and urban design driven by the developed spatial analysis methods
- (3) Urban analysis using geographic big-data
- (4) Theoretical research on facility allocation and urban growth based on behavioral choice model
- (5) Activities of "Design-Led X"



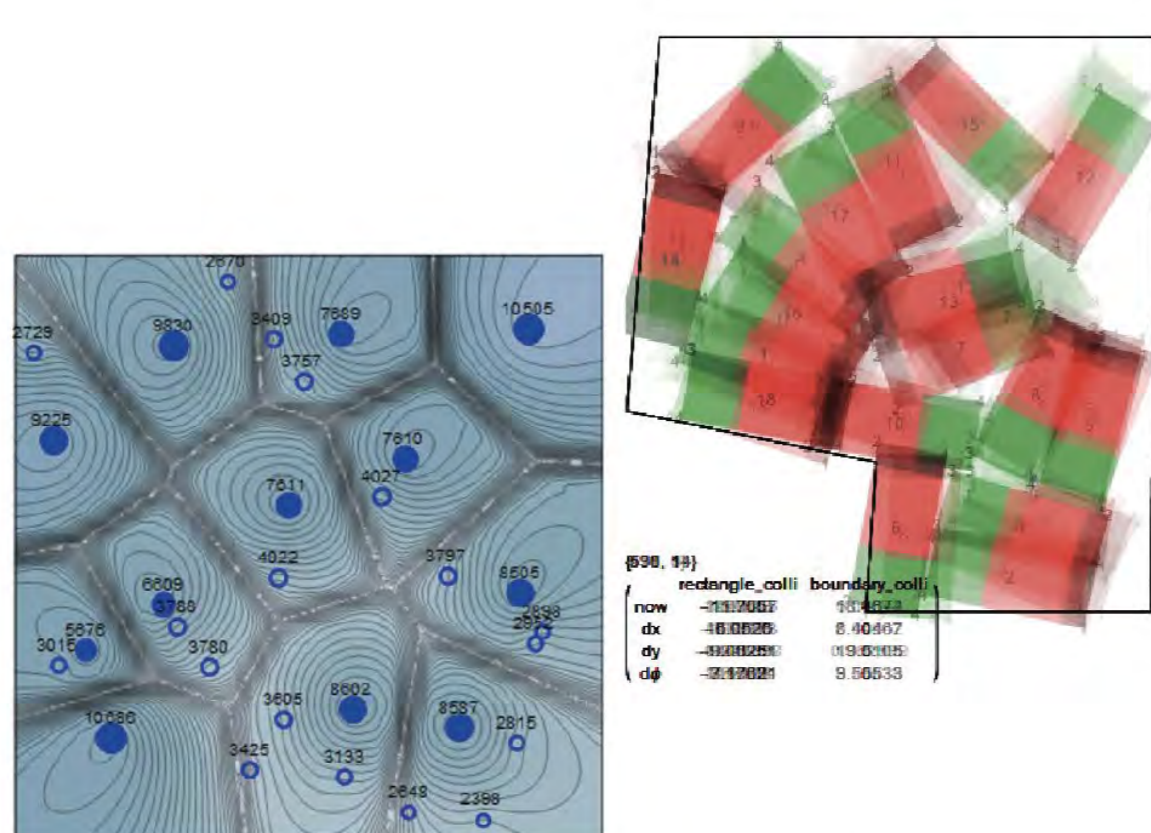
Room shape optimization



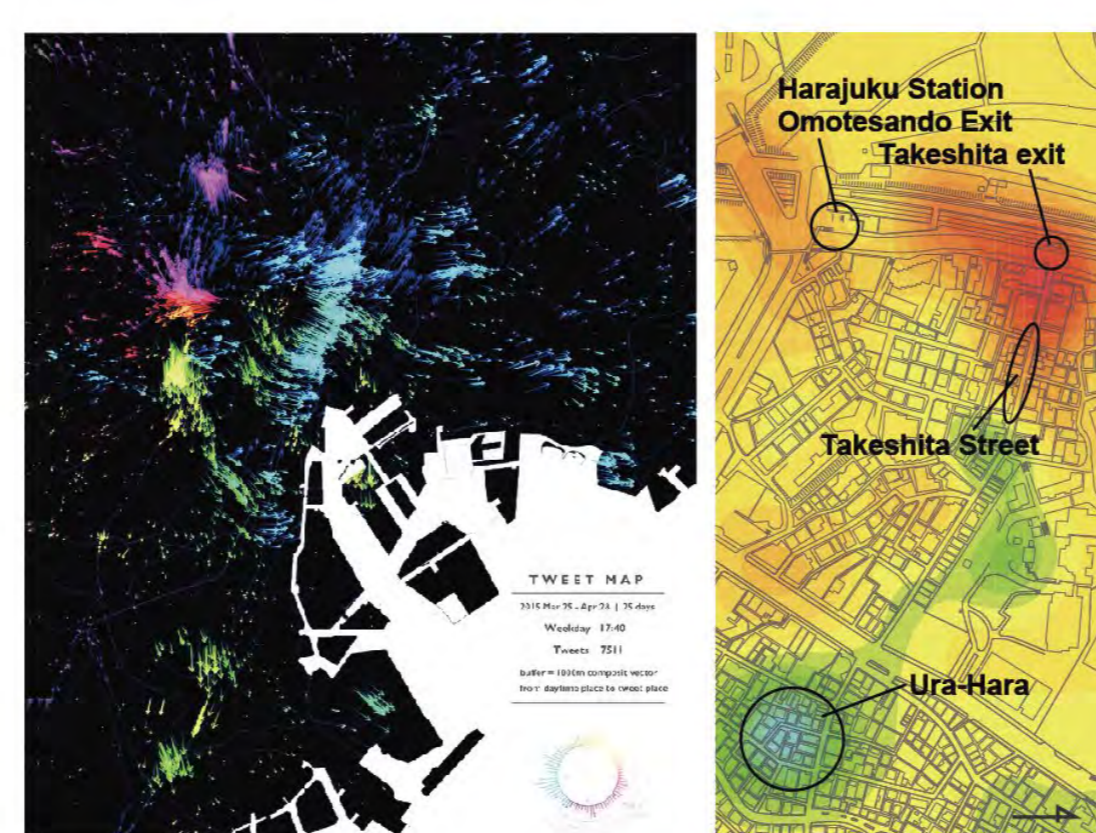
Planning based on network analysis



Architectural design



Optimal allocation problem



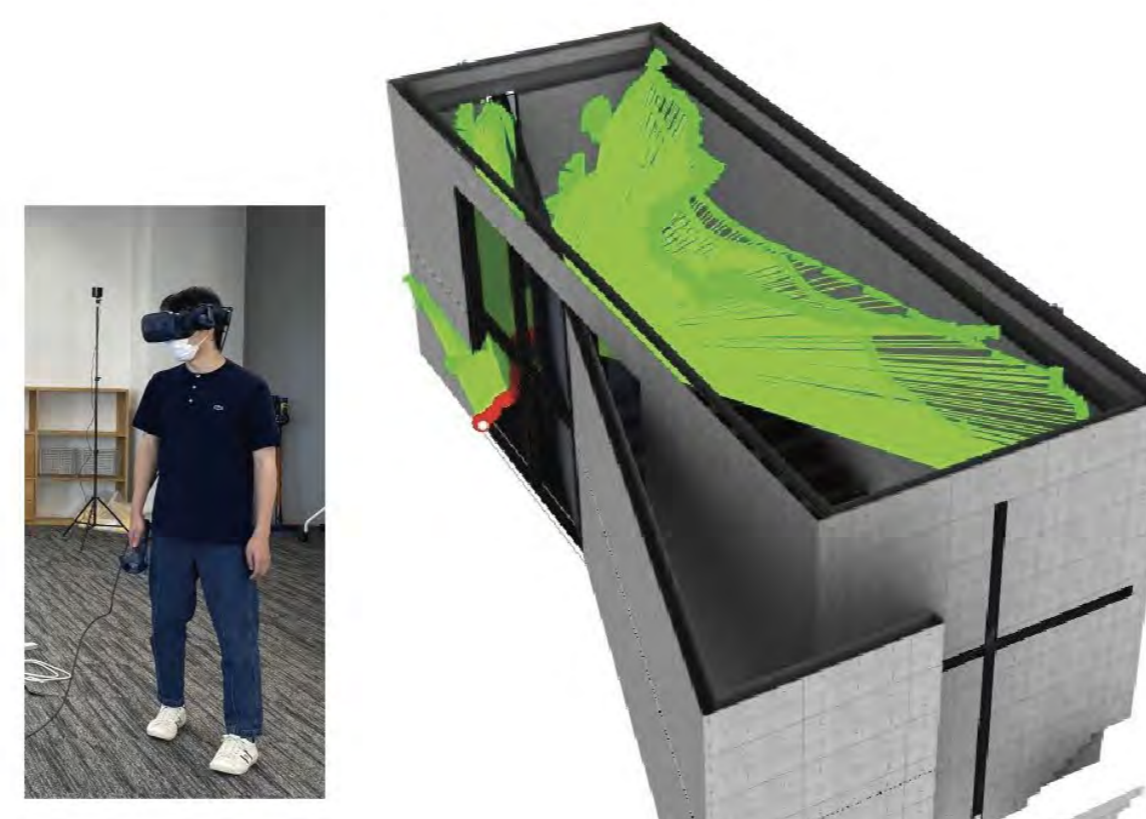
Urban analysis using big-data



Design of changeable space



Spatial analysis using 3D isovist



Quantification of spatial experience



Activities of "Design-Led X"