## K. Honma LAB.

## [Mathematical Engineering of Spatial Design]



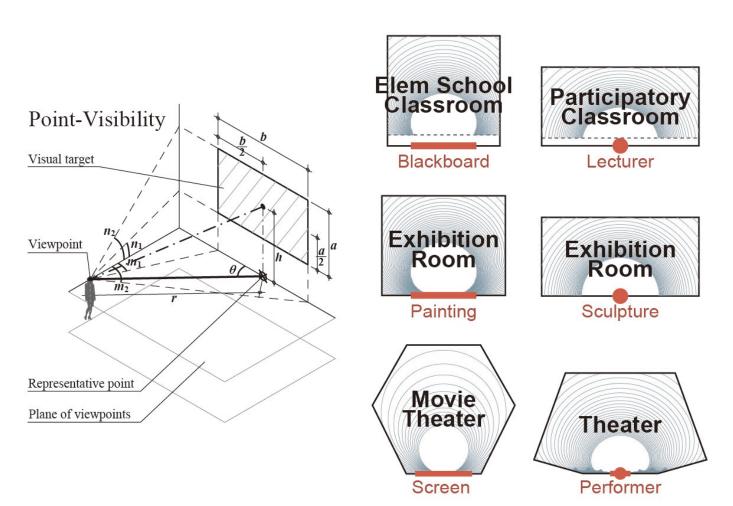
Department of Human and Social Systems / Design-Led X Platform

Department of Architecture

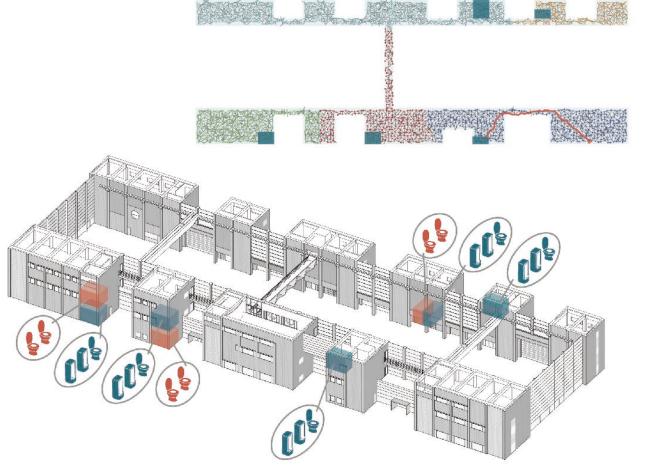
http://hnm.iis.u-tokyo.ac.jp/

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"



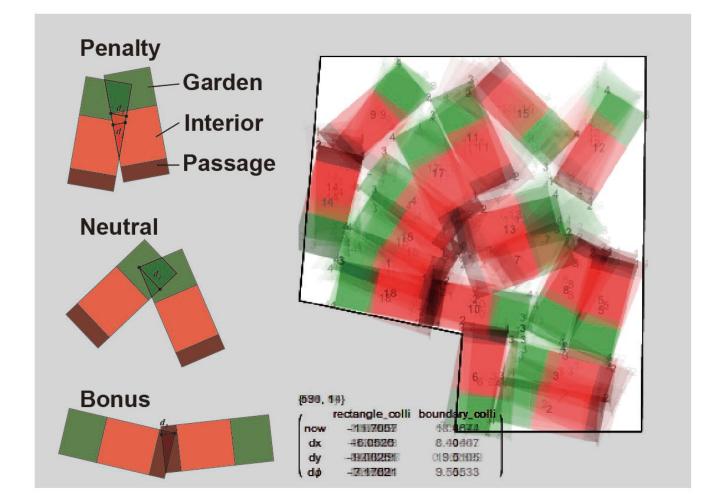
Room shape optimization



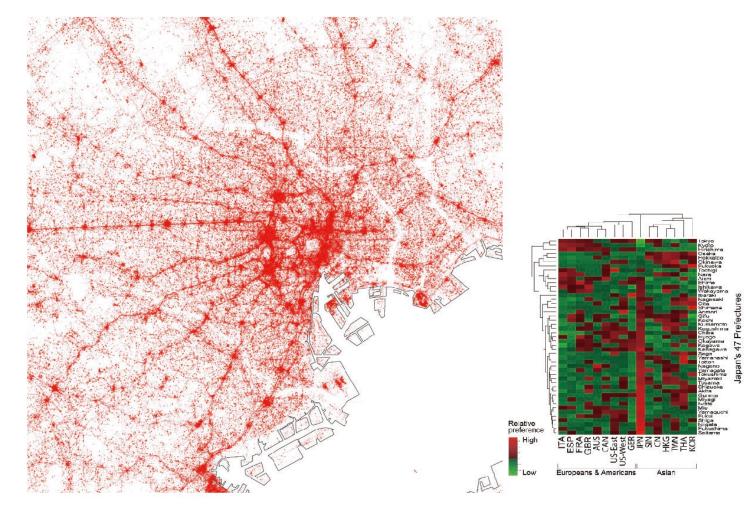
Room allocation optimization



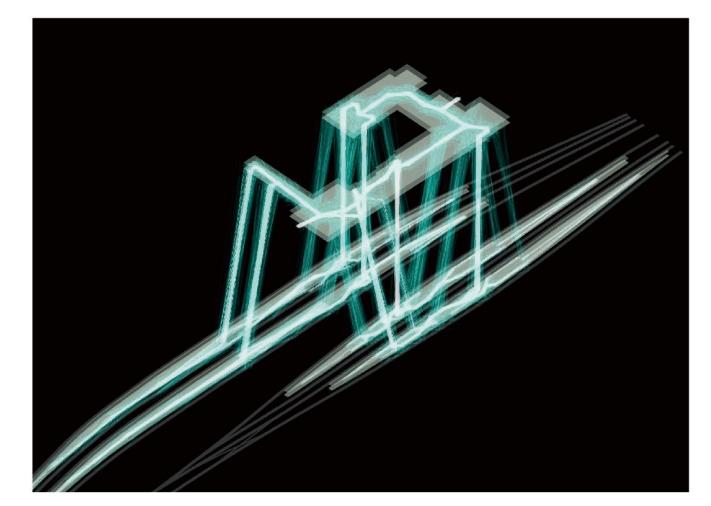
Architectural design



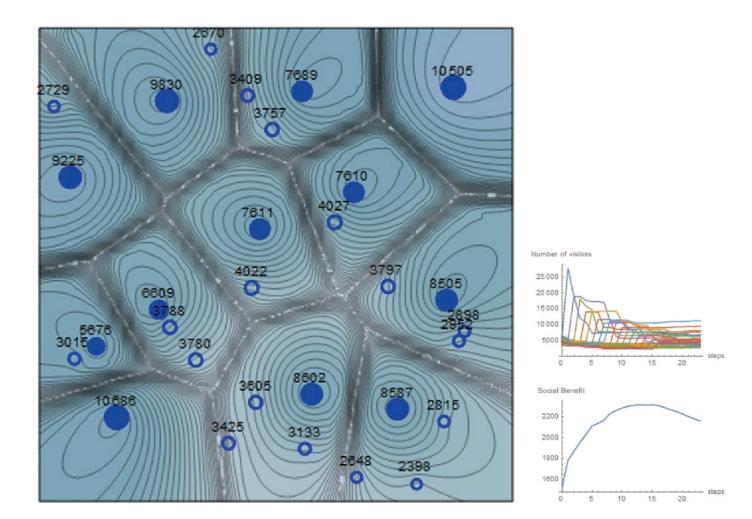
Packing problem of dwelling units



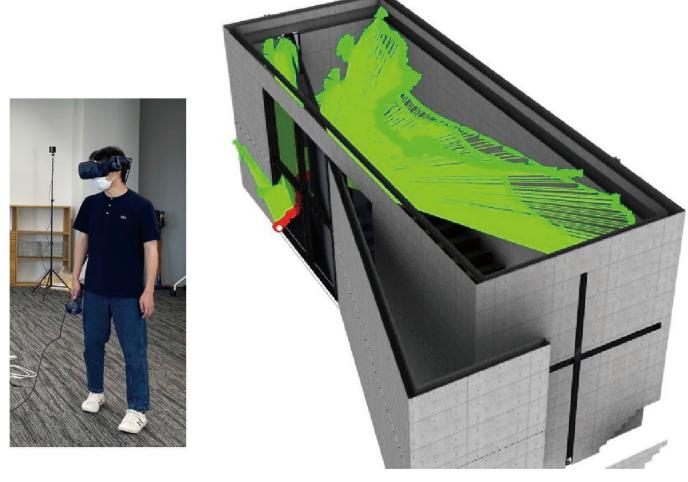
Urban analysis using big-data



Planning based on network analysis



Facility location problem



Quantification of spatial experience



Activities of "Design-Led X"

