Y. HONMA LAB.

Design of Future Social Systems

Center for Social Complex Systems

Due to globalization in recent years, the cities in which we live and work have become more complex. In this laboratory, we are developing "visualization of essential features" using mathematical models and "mathematical techniques for designing social systems" based on them, so that rapidly changing social systems can develop sustainably.

Infrastructure Vision for Alternative Fuel Society

In order for historic buildings to be preserved sustainably, their economic rationale is important. In this study, we combine detailed interviews with mathematical technique to identify their common parameters and design preservation schemes.

Large-scale, High-precision Composite Shadow Analysis

Optimal Location of Roadside Stations for Various Users

Roadside Stations are expected to serve as hubs for wide-area transportation, local residents, and disaster prevention. This study analyzes the optimal locations of such facilities based on a multi-objective optimization method.

Visualization of Public Space by Enumerating Convex Space

Rational Scheme for Historic Building Preservation

In architectural spaces such as museums, people stand at a good distance from each other. In this research, based on the visibility relationship between people and people, the optimal positions are analyzed to evaluate spaces.

Learning Video Materials Produced with Japan Airlines

Appreciator’s Positions in Architectural Space

Collections presented by famous brands are important information to know the latest trends. We are analyzing the trends from a vast amount of collection photos in collaboration with Fashion Press, one of the most popular web sites in Japan.