Mathematical Engineering for **Complex Social Systems in Future**

[Mathematical Engineering for Complex Social Systems]

Social Cooperation Programs, Institute of Industrial Science

Mathematical Theory for Modelling Complex Systems Architectural Engineering Based on Project Management

Mathematical Engineering for Complex Social Problems

The Social Cooperation Program "Mathematical Engineering for Complex Social Systems in Future" was established in Feb. 2016 in cooperation between the Institute of Industrial Science and Kozo Keikaku Engineering Inc. We study basic research of mathematical engineering for complex social systems in the future based on mathematical theory for modelling complex systems and architectural engineering based on project management. We also focus on the applications of the mathematical engineering to complex problems with great social importance. (Participating Labs: Aihara Lab and Yashiro Lab)

Mathematical Engineering

Applied mathematics originally developed in Japan.

Mathematical Theory for Modelling Complex Systems

complex systems, chaos, dynamical systems theory, statistics, complex networks, control theory, time series analysis, machine learning.

Architectural Engineering Based on Project Management

Complex Social Systems in Future

Designing a safe and secure society, Realizing and maintaining a sustainable society, Policy evaluation and institutional design for the future, Revitalization of the economy and industry for business creation, Innovation in the energy market, Initiatives in a wireless society, Contribution to the socially weak.

Applied Study

Applications of mathematical engineering to complex problems with great social importance.

[Research]



We especially focus on big data analysis for disaster prevention and its social application.



