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)

[Research]

We especially focus on big data analysis for disaster prevention.

- Flood prediction based on nonlinear time series analysis
- Aftershock forecasting based on Bayesian statistics