

Mathematical Theory for Modelling Complex Systems and its Transdisciplinary Applications in Science and Technology



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Abstract

This project studies mathematical theory of modelling complex systems and its wide-ranging transdisciplinary applications in science and technology from the viewpoint of mathematical engineering.

We aim not only to systematize methodology for modelling complex systems mathematically on the basis of advanced control theory of complex systems, complex networks theory, and nonlinear time series analysis [1,2], but also to provide solutions for complex problems with high importance and urgency for society, such as innovative treatment strategies for cancer [3–12], countermeasures for pandemic influenza, and developing novel nonlinear electronic technology.

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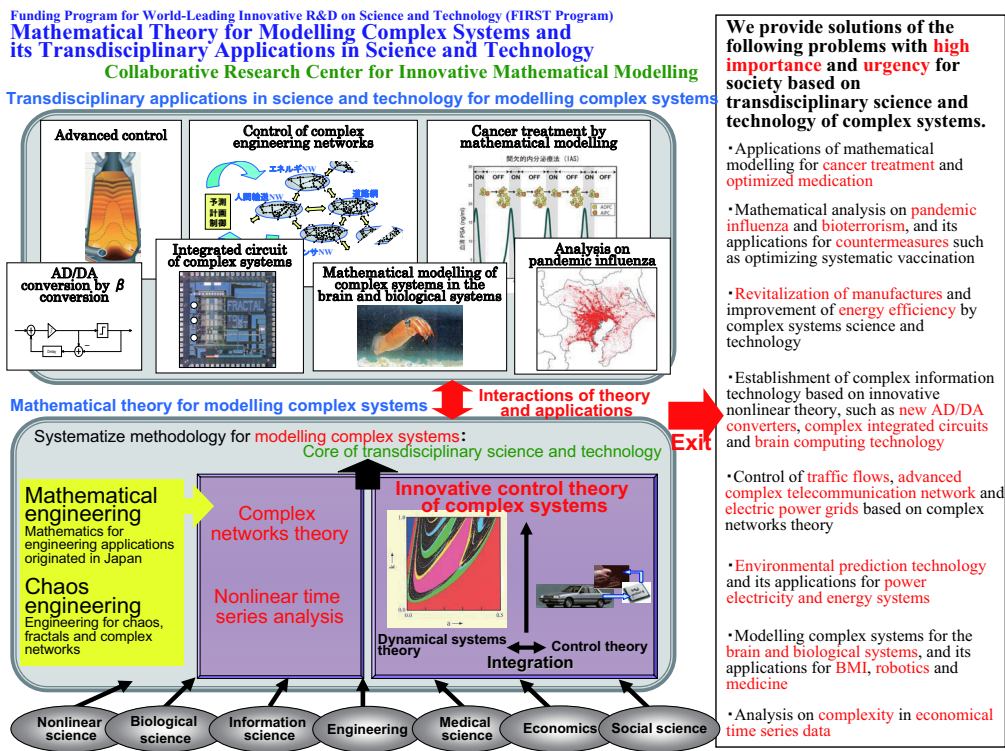


Figure 1: Scope of FIRST Aihara Innovative Mathematical Modelling Project

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