

Academic-Industrial Innovation Lecture 産学連携数理レクチャー

Transforming Industries and Society:

The Power of Advanced Math and Al Technologies

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In this talk, we will review the history and the latest trends in artificial intelligence (AI) and mathematical technologies in recent years. We will also introduce various real-world problem-solving efforts that utilize state-of-the-art mathematics and artificial intelligence technology. Additionally, we will explore the role of mathematical and AI technologies and the social value they bring, while providing examples of their applications in a wide range of fields, such as manufacturing, disaster prevention, medical care, and institutional design in society. Furthermore, we will consider the thinking and skills required to address industrial and social issues using mathematical and AI technologies. The technologies that will be discussed in this talk include the following keywords: mathematical modeling, simulation, optimization, deep learning, topological data analysis, causal discovery, game theory, matching theory, and social mathematics.



