Differential Equations and Laplace Transform: How Was the Operator Method Born?

1. **Instructor**: Professor Kohju Ikago

   Phone: 022-752-2116, e-mail: koju.ikago.e8@tohoku.ac.jp

2. **The date of the first class:** 16:20 pm on Friday, October 4

3. **Classroom**

Exercise Room A, International Research Institute of Disaster Science

This course discusses the theory of ordinary differential equations and their solution methods to understand the fundamentals of vibration and its control in engineering. The operator method, devised by Oliver Heaviside in the late 19th century, is a practical method to solve ordinary differential equations algebraically. However, later mathematicians examined its rigor and systematized it as the Laplace transform. This shows that the Laplace transform has a practical aspect. In this class, emphasis is put on devising and learning practical solution methods rather than mathematical rigor.