

Shigefumi Mori



The Joy and Beauty of Mathematics

Nagoya University Lecture

2025.12.21 (SUN)

13:30–16:10

[Toyoda Auditorium]

Director-General, Kyoto University
Institute for Advanced Study/
Distinguished Professor

Shigefumi Mori

He was awarded the Fields Medal in 1990 for his work in algebraic geometry. Besides being only the third Japanese to receive the medal, he also became the first Asian mathematician to receive the award while based in Japan. He was awarded with the Order of Culture in 2021.



For details and registration,
please check the website.



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The Joy and Beauty of Mathematics

What is the joy of mathematics? It may be fun because you receive praise when you solve a mathematics problem. However, perhaps it could be described more simply as the pleasure of having solved something, or, to analyze it further, the feeling that as soon as you change your perspective, something that was previously a mystery suddenly becomes clear, like the fog has lifted. In fact, the feelings that students experience while studying mathematics can be said to be the driving force behind research, continuing even after they decide to pursue mathematical research as their lifelong career.

Now, what is the beauty of mathematics? You might respond by asking whether such a thing exists. However, there is a beauty in mathematics that is common to other fields and even the arts. The beauty of mathematics is not just something to be displayed and admired; for researchers, it is something of vital importance that is inextricably linked to the correctness of mathematical research.

In my lecture, I will talk about these issues with concrete examples, looking back on my memories from high school and my experiences since becoming a researcher.

Director-General, Kyoto University Institute for Advanced Study/
Distinguished Professor

Shigefumi Mori

Born in Nagoya in 1951. After receiving his master's degree at the Graduate School of Science, Kyoto University, he served as an assistant at the Faculty of Science, Kyoto University, an assistant professor at Harvard University in the United States, a visiting professor at Columbia University in the United States, and a professor at Nagoya University, before becoming a professor at the Research Institute for Mathematical Sciences, Kyoto University, in 1990. In 2010, he was awarded the title of Distinguished Professor by Nagoya University in recognition of his achievements, including receiving the Fields Medal. From 2011, he served as Director of the Research Institute for Mathematical Sciences, Kyoto University for three years. He has also served on numerous important committees both domestically and internationally, including those related to the International Mathematical Union.

His specialty is algebraic geometry. His paper that solved the Hartshorne conjecture became a milestone in the history of mathematics, and in 1990 he became only the third Japanese to win the Fields Medal for his work on the "Mori theory" (a theory of minimal models of algebraic varieties), which was based on this paper. In the same year, he was selected as a Person of Cultural Merit by the Japanese government and received many prestigious awards, including the American Mathematical Society's Cole Prize and the Japan Academy Prize. He was awarded with the Order of Culture in 2021.

