

LECTURE SERIES

Mathematical Science Literature

May 4, 2020

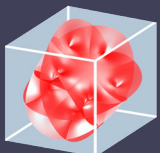
1:00pm - *Virtually*

"Rationality questions in algebraic geometry"



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Abstract: Over the course of the history of algebraic geometry, rationality questions – motivated by both geometric and arithmetic problems – have often driven the subject forward. The rationality or irrationality of cubic hypersurfaces in particular have led to the development of abelian integrals (dimension one), birational geometry (dimension two) and Hodge theory (dimension 3). But there is still much we don't understand about the condition of rationality – we don't know the answer for cubic fourfolds, for example; and it's not known whether rationality is an open condition or a closed condition in families. In this talk I'll try to give an overview of the history of rationality and the current state of our knowledge.



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