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Kummer surfaces: 200 years of study. (English) Zbl 1466.14045


This note provides a historical overview of the discoveries and developments in the theory of Kummer surfaces. Since the first example, considered by Fresnel in 1822 while studying the propagation of light in certain lenses, Kummer surfaces have undergone 200 years of study, and now play a central role in modern research, at the intersection of geometry and physics. The author guides the reader through the fundamental ideas that have made the study of Kummer surfaces so prolific, and then frames and places them inside the modern framework of $K3$ surfaces. Some recent important results about $K3$ surfaces are then recalled in the last part of the note.

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14J28 $K3$ surfaces and Enriques surfaces
14-03 History of algebraic geometry
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