

Founding document of mathematics published in digital form for the first time

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The oldest surviving manuscript of Euclid's *Elements*, probably the most influential work in the history of mathematics, has been published in digital form for the first time thanks to a collaboration between the Bodleian Library, the Clay Mathematics Institute and Octavo Corporation.

Picture: The oldest surviving manuscript of Euclid's Elements. Credit: Octavo Corporation.

To mark the occasion a conference at St Catherine's College on 7-8 October will bring together leading mathematicians, historians, classicists and philosophers from around the world to take a fresh look at Euclid and his work.



Around 300BC the Greek mathematician Euclid wrote the *Elements*, in which he summarized the preceding two centuries of mathematical research. Now known as the founding document of mathematics, the *Elements* was the standard textbook for mathematical education in ancient times, in the Islamic world, and in Europe through the Middle Ages, the Renaissance, and until almost the present day. The system of thought presented by the *Elements*, in which knowledge was distilled in the form of theorems and then given a written proof, inspired fields as diverse as law and physics. Indeed, Newton's *Principia*, which marked the beginning of modern physics, took Euclid's work as its intellectual and stylistic model.

The oldest surviving copy of Euclid's *Elements*, handwritten in 888AD on parchment, has been housed in the Bodleian Library since 1804. Few people have ever seen the manuscript, but this is about to change now that it has been published for the first time in digital form online. In 2004 the Clay Mathematics Institute discussed with the Bodleian Library and Octavo Corporation, one of the leading firms in highest-quality rare book digitisation, a proposal to produce a digital edition of this earliest of Euclid manuscripts. The result, just over a year later, is a complete digital edition of the manuscript which students, scholars, mathematicians, and members of the public can consult online at Octavo's website.

Richard Ovenden, Keeper of Special Collections and Western Manuscripts at the Bodleian Library, said: 'We were delighted to work with Octavo and the Clay Mathematics Institute to make the oldest surviving manuscript of Euclid's *Elements* available to all in digital form. The result is access to this most important document unequalled at any time in history. Those who examine the manuscript may find that its physical beauty is as great as its historical value.'

Source: University of Oxford



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