The main objective of the project is to give access to the work of thinkers belonging to the so-called Oxford School of Calculators for specialists in history of science and other people interested in medieval science. The project also aims at showing the importance of the School in the formation of fundaments of Newtonian physics through its influence on the works of Galileo. These goals will be attained in the publication of the project team's research results in two monographs presenting the history of mathematical philosophy of nature in the School, its achievements and influence on fifteenth and sixteenth philosophers. The monographs will supplement the critical editions of the most important works of the Calculators, which until now are available only in manuscripts, and therefore are inaccessible to most specialists.

The research project team will take up a novel research comprising first of all a thorough analysis of those natural philosophy works of the Oxford School which contain mathematical approach to description of motion. The knowledge gained in this way will make it possible to present the development of mathematical physics in the period, obscure to many historians of science, yet critical for the transition from medieval Aristotelian scholastics to the scientific advance of modern times. It will, therefore, expand our historical knowledge concerning the progress of civilization in its scientific aspect.

Historians of science have been pondering over the mechanisms of scientific progress for decades. Most of them follow Kuhn in his conviction that the transition from medieval scholastics to modern science had a revolutionary character. This revolution was a change of the paradigm, a complete rejection of Aristotelianism, which was no longer able to provide a satisfactory explanation for natural phenomena. Severing the ties with scholastic physics was said to manifest in the introduction of mathematics in the description of local motion and in the use of experiments. On the other hand, starting with Duhem historians of medieval natural philosophy point that the development of science in the period predating the Renaissance was a sequence of small, but continuous an important changes, gradually dismantling the Aristotelian qualitative description of nature and replacing it with a mathematical, quantitative approach, rather than a revolution. This is also shown in the growing role of experiments, even though they were predominantly mental ones (Galileo used them later too).

Historians of medieval philosophy point at the fourteenth century thinkers of the Oxford School of Calculators as those, who succeeded in building a new physics by applying mathematical methods within the Aristotelian theory of motion in the form of the theory of proportions, which enabled them to reformulate the so-called rules of motion from Aristotle's Physics. The Calculators' works drew interest of scholars well into the sixteenth century and some of them were printed in Italy then. Among them a singular place is occupied by an anonymous treatise De sex inconvenientibus, which is a veritable compendium of the Calculators' achievements. Modern historians of science have shown that some of its solutions inspired Galileo to formulate the correct description of motion in free fall, which in turn was the first step to the creation of a new vision of the universe presented by Newton.

Completion of the project will thus allow to show a full and well-grounded picture of the development of mathematical physics in the late Middle Ages and early Modern Times, which will make it possible to verify the opinions concerning its character and mechanisms.