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**SOURCES OF BOSCOVICH'S THEORY –
FROM NEWTON'S, HOOKE'S AND BOYLE'S
LAWS TO BOSCOVICH'S CURVE**

In 1745 Boscovich constructed a curve which describes the single law of forces that exist in nature, based on philosophical considerations of the collision of two bodies and Newton's law of gravitational attraction (1687), Hooke's law according to which the deformation of a body is proportional to the force acting on that body (1675), and Boyle-Mariotte's law that the product of pressure and volume of a gas is constant at a constant temperature (1662). While Newton's laws refer only to the attractive force between bodies or particles of matter, Boscovich also considers the repulsive force and develops the "Theory of Natural Philosophy Reduced to a Single Law of Forces That Exist in Nature". Almost all of his other understandings are the logical consequences of this single law of forces, the elaboration of which leads to a multitude of applications in various fields of physics, chemistry, and other natural sciences. The results of modern science have confirmed the correctness of Boscovich's curve and his theory.

Keywords: Roger Boscovich, Particles interaction, Theory of natural philosophy.