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# System-dimensional analysis of mechanical and gravitational quantities based on their similarities to electromagnetic quantities

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*The author's system of physical quantities and laws (PQ&L), which is successfully applied in the field of electromagnetism, makes it possible to visualize and investigate the system of mechanical and gravitational quantities due to their similarities to electromagnetic quantities. The paper presents visual and systematically possible laws including gravitational quantities similar to electromagnetic ones. In contrast to the latter, field gravitational quantities are real and model-representable (velocity, acceleration, etc.), so it is likely to expect systematic laws with these quantities to be real as well. Based on discovered relations in PQ&L system including gravitational constant, the author gives a gravitational-kinematic description of causes of inertia properties manifestation, momentum and angular momentum conservation laws. So far these two properties were explained by space symmetry in Emmy Noether theorem, and the existence of inertial mass was most frequently related to accelerated motion of electric charges.*

**Keywords:** system of physical quantities, systematic laws, gravitation, inertia, conservation laws, similarity, gravitational and electromagnetic laws.

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