1120-20-31   **Artem Novozhilov*** (`artem.novozhilov@ndsu.edu`), NDSU, Department of Mathematics, PO Box 6050, Fargo, ND 58108, and **Yuri Semenov**. *On Eigen's quasispecies model and isometry groups acting on finite metric spaces.*

A nowadays classical Eigen's or quasispecies model of the virus evolution uses as the underlying geometry the N-dimensional hypercube. The distances between the vertices of this hypercube are measured by the number of edges connecting them. While this geometry has a transparent biological interpretation in terms of sequences composed of zeroes and ones, it is a natural generalization to consider an arbitrary isometry group acting on an abstract metric space to move to a next level of abstraction of the quasispecies model. In this talk we introduce an abstract generalization of Eigen's model such that the sequences are identified with the points of a finite metric space X together with a group of isometries acting transitively on X. In particular, a simplicial analogue of the original quasispecies model is discussed. (Received January 26, 2016)